Same Digits Equality Expressions[1]

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Abstract

*This paper brings numbers in such a way that both sides of the expressions are with the same digits. One side is numbers with powers, while other side just with numbers having same digits, such as, $a^b + c^d + ... = ab + cd + ...$, etc. The the expressions studied are with **positive** and **negative coefficients**. Work is done for 2 to 10 terms expressions. From 5 terms expressions onwards, the results are only for **positive** coefficients.*

Contents

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[1]It is revised and combine version author's works *http://rgmia.org/papers/v20/v20a16.pdf* and *http://rgmia.org/papers/v20/v20a16.pdf* done in 2017.

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1   Introduction

Let write below three different categories of numbers:

1.1   Crazy Representations

Here the number are written in such a way that, when you see, become very curious. Below are examples of two different ways of representations of natural numbers:

1.1.1   First Type

$$999 := 12 \times 3 \times (4+5) + (67+8) \times 9 \quad = 9+8+7+654+321.$$
$$2535 := 1 + 2345 + (6+7+8) \times 9 \quad = 9 + 87 \times (6+5 \times 4 + 3) + 2 + 1.$$
$$2607 := 123 \times 4 \times 5 + 6 + (7+8) \times 9 \quad = 987 + 6 \times 54 \times (3+2) \times 1.$$
$$10958 := 12 \times 3 + \sqrt{4} + 5! \times (67 + 8 \times \sqrt{9}) = (9 + 8 \times 7 \times 65 + 4) \times 3 - 2 + 1.$$
$$11807 := 1 \times 234 \times (5+6\times7) + 89 \quad = -9 + 8 + 7 \times (6+5) \times (4\times3)^2 \times 1.$$

1.1.2   Second Type

$$666 := -2^5 + 3^2 + 4^3 + 5^4.$$
$$786 := -1^4 + 3^6 + 4^3 - 6^1.$$
$$9711 := 1^3 + 2^4 + 3^8 + 4^2 + 5^5 - 8^1.$$
$$9777 := 1^9 + 2^1 + 4^7 - 7^2 - 9^4.$$

$$\mathbf{11110} := 1^1 + 2^2 + 3^9 - 5^6 + 6^5 - 9^3.$$

$$\mathbf{11111} := -1^1 + 2^7 + 3^8 - 4^2 + 7^3 + 8^4.$$

For more details refer author's work written as a summary of other works [24].

1.2 Selife Numbers

In this category, the numbers are written in such a way that both sides of the expressions are with same digits. One side is just with number and other side is same digits with operations. More details of this type of numbers are explained in section 2.

1.3 Same Digits Equality Expressions

This category is very much similar to **selfie numbers**, but the difference is that in place of numbers on one side, there are expressions on both sides, i.e., **same digits equality expressions**. We may call it as **selfie expressions**. Below are two different ways of expressing equalities with same digits on both sides:

$$abcd... \times efgh... = cbad... \times gfhe.. \quad \forall a, b, c, d, e, ... \in \mathrm{N}_+. \tag{1}$$

$$a^b + c^d + ... = ab + cd + ..., \quad \forall a, b, c, d, .. \in \mathrm{N}. \tag{2}$$

In (1) and (2), both sides are with same digits. There are much more categories of this kind, but we have written only two.

In this paper, we study extensively, the numbers of type (2). More details are in section 3. For type (1) refer [27].

2 Selife Numbers

Recently, author studied different ways of expressing numbers in such a way that there are same digits on both side of the expression. One side is with number, and other side is an expression formed by same digits with some operations. These types of numbers we call **selfie number**, i.e., numbers represented by their own digits by use of certain operations. This may be either digit's order or reverse order of digits. There are may ways to do it. See below some different ideas.

2.1 Selfie Numbers with Factorial and Square-Root

This subsection brings selfie numbers with use of factorial and/or square-root. See below some examples:

$$\mathbf{936} := (\sqrt{9})!^3 + 6!$$

$$\mathbf{1296} := \sqrt{(1+2)!^9/6}$$

$$\mathbf{2896} := 2 \times (8 + (\sqrt{9})!! + 6!)$$

$$\mathbf{936} := 6! + (3!)^{\sqrt{9}}$$

$$\mathbf{1296} := 6^{(\sqrt{9}+2-1)}$$

$$\mathbf{2896} := (6! + (\sqrt{9})!! + 8) \times 2$$

Examples above are with **factorial** and **square-root** [18, 19]. First column expressions are in **digit's order** and second columns numbers are in **reverse order of digits**. For details refer author's work [7, 8, 9, 10, 11, 12]. Still, one can have interesting results just with factorial [12], see below:

$$1463 := -1! + 4! + 6! + 3!!$$
$$10077 := -1! - 0! - 0! + 7! + 7!$$
$$40585 := 4! + 0! + 5! + 8! + 5!$$
$$80518 := 8! - 0! - 5! - 1! + 8!$$
$$317489 := -3! - 1! - 7! - 4! - 8! + 9!$$
$$352797 := -3! + 5 - 2! - 7! + 9! - 7!$$
$$357592 := -3! - 5! - 7! - 5! + 9! - 2!$$
$$357941 := 3! + 5! - 7! + 9! - 4! - 1!$$

$$361469 := 3! - 6! - 1! + 4! - 6! + 9!$$
$$364292 := 3!! + 6! - 4! - 2! + 9! - 2!$$
$$397584 := -3!! + 9! - 7! + 5! + 8! + 4!$$
$$398173 := 3! + 9! + 8! + 1! - 7! + 3!$$
$$408937 := -4! + 0! + 8! + 9! + 3!! + 7!$$
$$715799 := -7! - 1! + 5! - 7! + 9! + 9!$$
$$720599 := -7! - 2! + 0! - 5! + 9! + 9!$$

$$145 := 1! + 4! + 5!$$
$$733 := 7 + 3!! + 3!$$
$$5177 := 5! + 17 + 7!$$

$$363239 := 36 + 323 + 9!$$
$$363269 := 363 + 26 + 9!$$
$$403199 := 40319 + 9!$$

2.2 Fibonacci Sequence and Selfie Numbers

The examples given in subsection 2.1 are with **factorial** and **square-root**. Still, one can have similar kind of examples, using **Fibonacci sequence** values [32]. See below:

$$235 := 2 + F(F(F(3) + 5))$$
$$256 := 2^5 \times F(6)$$
$$4427 := (F(4) + 4^2) \times F(F(7))$$
$$46493 := F(4 \times 6) + (-4 + 9)^3$$

$$63 := 3 \times F(F(6))$$
$$882 := 2 \times F(8) \times F(8)$$
$$1631 := F(13) \times (6 + 1)$$
$$54128 := 8 \times (F(2) + F(1 \times 4 \times 5))$$

First columns expressions are in **digit's order** and second columns expressions are in **reverse order of digits**. Results in **Pascal's triangle values** and **binomial expressions** can be seen in [30] and [31] respectively.

2.3 Permutable Power Selfie Numbers

Below are examples of **permutable power selfie numbers**, where powers and bases are with same digits of number [29]:

$$23 := -2^2 + 3^3$$
$$1654 := -1^6 + 6^1 + 5^4 + 4^5$$
$$3435 := 3^3 + 4^4 + 3^3 + 5^5$$
$$4355 := 4^5 + 3^4 + 5^3 + 5^5$$

$$39339 := -3^3 + 9^3 + 3^9 + 3^9 - 9^3$$
$$46360 := 4^0 + 6^6 - 3^4 - 6^3 + 0^6$$

$$397612 := 3^2 + 9^1 + 7^6 + 6^7 + 1^9 + 2^3$$
$$423858 := 4^3 + 2^8 + 3^4 + 8^2 + 5^8 + 8^5$$

$$637395 := 6^5 + 3^3 + 7^3 + 3^9 + 9^6 + 5^7$$

$$758014 := 7^7 + 5^1 + 8^0 + 0^5 + 1^4 - 4^8$$

$$778530 := 7^7 + 7^3 + 8^5 - 5^7 + 3^0 + 0^8$$

$$804637 := 8^0 + 0^4 - 4^8 + 6^6 - 3^3 + 7^7$$

2.4 Selfie Fraction

Selfie fractions are formed in such a way that numerator and denominator are with same digits. One side is number and another side with same digits with basic operations [13, 14, 15]. See below some examples:

$$\frac{182}{6734} := \frac{18+2}{6+734}$$

$$\frac{416}{728} := \frac{4 \times 16}{7 \times 2 \times 8}$$

$$\frac{4980}{5312} := \frac{4-9+80}{5 \times (3+1)^2}$$

$$\frac{3249}{5168} := \frac{(3+2^4) \times 9}{(5-1) \times 68}$$

Still, one can have *equivalent selfie fractions* with same properties [16, 17]. See examples below:

$$\frac{284}{639} := \frac{2 \times 8 + 4}{6 + 39} = \frac{28+4}{6 \times (3+9)}$$

$$\frac{302}{8154} := \frac{30 \times 2}{81 \times 5 \times 4} = \frac{3+02}{81+54} = \frac{3-02}{81-54}$$

$$\frac{73842}{90516} := \frac{7 - 3 \times (8-4^2)}{9 \times 05 - 1 - 6} = \frac{7 \times (3+8) + 4^2}{90 + (5-1) \times 6} = \frac{738 + 4 + 2}{905 + 1 + 6}$$

2.5 Narcissistic-Type Selfie Numbers

In case of **narcissistic number**, it is not necessary that both sides of the expression are of same digits, for example,

$$153 = 1^3 + 5^3 + 3^3$$

$$1634 = 1^4 + 6^4 + 3^4 + 4^4$$

Here, both sides are with same digits, but with extra digit as powers 3, 4 etc. Powers are fixed in case of narcissistic numbers, but still, one can have these kind of numbers with flexible power and also with positive negative sign. This we call as **narcissistic-type selfie numbers** [33]. See below few examples,

$$24 := 2^3 + 4^2$$

$$48 := -4^2 + 8^2$$

$$267 := 2^1 + 6^3 + 7^2$$

$$2345 := 2^5 + 3^7 + 4^0 + 5^3$$

$$2352 := 2^3 + 3^7 + 5^3 + 2^5$$

$$2374 := -2^1 - 3^2 + 7^4 - 4^2$$

$$10693 := 1^1 + 0^1 + 6^5 + 9^3 + 3^7$$

$$10846 := -1^1 - 0^0 + 8^4 - 4^5 + 6^5$$

These numbers are different from the one given in subsection 2.3. In subsection 2.3, the powers and bases are with same digits, while, here the powers don't have any relations with bases. For more details refer Taneja [33].

Following same idea as above, one can have **narcissistic-type selfie numbers with division** [34]. See examples below. These are divided in two types. The first column is with fixed powers and second column with variable powers:

$$2464 := \frac{2^5 + 4^5 + 6^5 + 4^5}{2^0 + 4^0 + 6^0 + 4^0}$$

$$4714 := \frac{4^5 + 7^5 + 1^5 + 4^5}{4^0 + 7^0 + 1^0 + 4^0}$$

$$5247 := \frac{5^5 + 2^5 + 4^5 + 7^5}{5^0 + 2^0 + 4^0 + 7^0}$$

$$8200 := \frac{8^5 + 2^5 + 0^5 + 0^5}{8^0 + 2^0 + 0^0 + 0^0}.$$

$$353 := \frac{-3^5 - 5^2 + 3^9}{3^1 + 5^2 + 3^3}$$

$$1337 := \frac{1^0 + 3^1 + 3^1 + 7^6}{-1^0 + 3^0 + 3^4 + 7^1}$$

$$10954 := \frac{-1^0 - 0^0 + 9^3 + 5^2 + 4^9}{1^0 + 0^0 + 9^0 + 5^1 + 4^2}$$

$$10958 := \frac{-1^0 + 0^0 + 9^2 + 5^2 + 8^5}{-1^0 + 0^0 + 9^0 + 5^0 + 8^0}.$$

It is understood that $a^0 := 0, a \neq 0$ and $0^0 := 1$.

2.6 Semi-Selfie Numbers

This is a simplified form of subsection 2.5. Here the expressions are with same digits on both sides, except, the power. See examples below:

$$2025 := (20 + 25)^2$$

$$3025 := (30 + 25)^2$$

$$314432 := (31 - 4 + 43 - 2)^3$$

$$893025 := (8 + 930 + 2 + 5)^2$$

$$494209 := (494 + 209)^2$$

$$1656369 := (1656 - 369)^2$$

$$1860496 := (1860 - 496)^2$$

$$4941729 := (494 + 1729)^2$$

For detailed study refer Taneja [28]. These numbers are extensions of the one studied by Madachy [5], p.167 - 170. Also see Heinz [3]. Madachy's work is just with single digit and positive sign.

3 Same Digits Equality Expressions

In section 2, we explained idea of *selfie numbers* in different categories. Here, the aim is little different, i.e., we want to write expressions with same digits both sides. A little idea is given in section 1(iii). The following subsections give same idea with examples.

3.1 Multiplication

Below are are examples written in such a way that both sides, and each block separated by multiplication are with same digits.

$$2017 \times 3404 := 1702 \times 4034$$

$$2017 \times 6808 := 1702 \times 8068$$

$$1729 \times 3584 := 1792 \times 3458$$

$$1729 \times 3854 := 1927 \times 3458$$

$$1729 \times 4358 := 2179 \times 3458$$

$$1729 \times 4732 := 2197 \times 3724$$

$$1729 \times 5438 := 2719 \times 3458$$

$$1729 \times 5781 := 1927 \times 5187$$

More study of this kind number shall be dealt elsewhere. Few examples can be seen at [4].

3.2   Power and Addition

Recently, author wrote the numbers 2017 and 1729 [20, 21] in the following way:

$$\begin{aligned}
\textbf{2017} &:= 4^4 + 41^2 + 77^0 + 79^1 & &:= 44 + 412 + 770 + 791 \\
&:= 1^4 + 44^2 + 77^0 + 79^1 & &:= 14 + 442 + 770 + 791 \\
&:= 2^4 + 2^8 + 4^2 + 12^3 + 180^0 & &:= 24 + 28 + 42 + 123 + 1800 \\
&:= 1^1 + 3^6 + 5^4 + 5^4 + 6^2 + 180^0 & &:= 11 + 36 + 54 + 54 + 62 + 1800 \\
\textbf{1729} &:= 2^7 + 40^2 + 130^0 & &:= 27 + 402 + 1300 \\
&:= 2^6 + 40^2 + 64^1 + 66^0 & &:= 26 + 402 + 641 + 660 \\
&:= 1^6 + 41^2 + 46^1 + 84^0 & &:= 16 + 412 + 461 + 840
\end{aligned} \tag{3}$$

The sections 3.1 and 3.2 are still not studied extensively. In section 3.1, we use only multiplicative factors to have same digits on both sides. In section 3.2, the expressions are separated by equality signs, but uses same digits on both sides in little different way than 3.1. First side we have expressions with powers and additions, and the second side just with numbers and addition. The quantity of numbers separated by addition are same on both sides. Few results of this kind can also be seen at [2], where, the power and bases both are bigger than one. Moreover, the results are just for three terms sum. See below

$$\begin{aligned}
\textbf{81} &:= 2^3 + 2^6 + 3^2 & &:= 23 + 26 + 32 & \qquad \textbf{266} &:= 4^2 + 9^2 + 13^2 & &:= 42 + 92 + 132 \\
\textbf{99} &:= 2^3 + 3^3 + 4^3 & &:= 23 + 33 + 43 & \textbf{286} &:= 6^2 + 9^2 + 13^2 & &:= 62 + 92 + 132 \\
\textbf{121} &:= 2^3 + 2^6 + 7^2 & &:= 23 + 26 + 72 & \textbf{306} &:= 8^2 + 11^2 + 11^2 & &:= 82 + 112 + 112 \\
\textbf{170} &:= 2^6 + 5^2 + 9^2 & &:= 26 + 52 + 92 & &:= 9^2 + 9^2 + 12^2 & &:= 92 + 92 + 122 \\
\textbf{246} &:= 2^2 + 11^2 + 11^2 & &:= 22 + 112 + 112 \\
&:= 5^2 + 5^2 + 14^2 & &:= 52 + 52 + 142
\end{aligned} \tag{4}$$

By *three terms sum, it is understand that the equality expressions are formed by three terms on both sides*. In this way, we can say that the representations of 2017 and 1729 are with *different terms expressions*, while the numbers given in (2) [2] are only of three terms. This kind of study is not very much developed. The expressions given in (2) are for powers and bases bigger than 1, while in (3), there is no restriction of this kind. Moreover, the results given in (3) and (4) are only with positive signs.

In this paper, our aim is to work with *2 to 10 terms equality expressions*. For 2 to 4 terms the results are for positive and negative coefficients, while for the terms 5 to 10, the results are only for positive coefficients. Also, in some cases the bases are considered 1, and powers with 0 and 1. This work is revised and combined versions of author's previous two works [20, 21] done in 2017. For study on numbers from historical point of view refer [1, 3, 5, 6].

4   Two Terms Equalities

This section brings expressions similar to one given in subsection 3.2 with two terms equality expressions. The results are divided in subsections with positive, positive-negative, and different situations with powers and bases.

4.1   Positive Expressions with Powers Zeros or One

We don't have results similar to (4) for two terms equalities for powers and bases are bigger than 1. If we allow at least one of the power with 0 and/or 1, there are many results with positive sign. See below examples:

$122 := 1^0 + 11^2 \qquad = 10 + 112$

$173 := 4^1 + 13^2 \qquad = 41 + 132$

$233 := 8^1 + 15^2 \qquad = 81 + 152$

$266 := 3^5 + 23^1 \qquad = 35 + 231$

$362 := 17^0 + 19^2 \qquad = 170 + 192$

$442 := 21^2 + 23^0 \qquad = 212 + 230$

$513 := 22^2 + 29^1 \qquad = 222 + 291$

$:= 8^3 + 43^0 \qquad = 83 + 430$

$613 := 24^2 + 37^1 \qquad = 242 + 371$

$842 := 29^2 + 55^0 \qquad = 292 + 550$

$962 := 31^2 + 65^0 \qquad = 312 + 650$

$1025 := 4^5 + 98^0 \qquad = 45 + 980$

$1033 := 31^2 + 72^1 \qquad = 312 + 721$

$1173 := 33^2 + 84^1 \qquad = 332 + 841$

$1522 := 39^2 + 113^0 \qquad = 392 + 1130$

$1682 := 41^2 + 127^0 \qquad = 412 + 1270$

$1733 := 40^2 + 133^1 \qquad = 402 + 1331$

$1913 := 42^2 + 149^1 \qquad = 422 + 1491$

$2402 := 49^2 + 191^0 \qquad = 492 + 1910$

$2602 := 51^2 + 209^0 \qquad = 512 + 2090$

$2613 := 49^2 + 212^1 \qquad = 492 + 2121$

$2833 := 51^2 + 232^1 \qquad = 512 + 2321$

$3466 := 5^5 + 341^1 \qquad = 55 + 3411$

$3482 := 59^2 + 289^0 \qquad = 592 + 2890$

$3673 := 58^2 + 309^1 \qquad = 582 + 3091$

$3722 := 61^2 + 311^0 \qquad = 612 + 3110$

$3933 := 60^2 + 333^1 \qquad = 602 + 3331$

$4762 := 69^2 + 407^0 \qquad = 692 + 4070$

$4913 := 67^2 + 424^1 \qquad = 672 + 4241$

$5042 := 71^2 + 433^0 \qquad = 712 + 4330$

$5213 := 69^2 + 452^1 \qquad = 692 + 4521$

$5833 := 18^3 + 565^0 \qquad = 183 + 5650$

$6242 := 79^2 + 545^0 \qquad = 792 + 5450$

$6333 := 76^2 + 557^1 \qquad = 762 + 5571$

$6562 := 81^2 + 575^0 \qquad = 812 + 5750$

$6673 := 78^2 + 589^1 \qquad = 782 + 5891$

$7922 := 89^2 + 703^0 \qquad = 892 + 7030$

$7933 := 85^2 + 708^1 \qquad = 852 + 7081$

$8282 := 91^2 + 737^0 \qquad = 912 + 7370$

$8313 := 87^2 + 744^1 \qquad = 872 + 7441$

$9713 := 94^2 + 877^1 \qquad = 942 + 8771$

$9802 := 99^2 + 881^0 \qquad = 992 + 8810$

$10133 := 96^2 + 917^1 \qquad = 962 + 9171$

$10202 := 101^2 + 919^0 \qquad = 1012 + 9190$

$11673 := 103^2 + 1064^1 \qquad = 1032 + 10641$

$11882 := 109^2 + 1079^0 \qquad = 1092 + 10790$

$12133 := 105^2 + 1108^1 \qquad = 1052 + 11081$

$12322 := 111^2 + 1121^0 \qquad = 1112 + 11210$

$13813 := 112^2 + 1269^1 \qquad = 1122 + 12691$

$14162 := 119^2 + 1297^0 \qquad = 1192 + 12970$

$14313 := 114^2 + 1317^1 \qquad = 1142 + 13171$

$14642 := 121^2 + 1343^0 \qquad = 1212 + 13430$

$15626 := 5^6 + 1557^0 \qquad = 56 + 15570$

$16133 := 121^2 + 1492^1 \qquad = 1212 + 14921$

$16255 := 11^4 + 1614^1 \qquad = 114 + 16141$

$16642 := 129^2 + 1535^0 \qquad = 1292 + 15350$

$16673 := 123^2 + 1544^1 \qquad = 1232 + 15441$

$17162 := 131^2 + 1585^0 \qquad = 1312 + 15850$

$18633 := 130^2 + 1733^1 \qquad = 1302 + 17331$

$18666 := 7^5 + 1859^1 \qquad = 75 + 18591$

$19213 := 132^2 + 1789^1 \qquad = 1322 + 17891$

$19322 := 139^2 + 1793^0 \qquad = 1392 + 17930$

$19882 := 141^2 + 1847^0 \qquad = 1412 + 18470$

$21313 := 139^2 + 1992^1 \qquad = 1392 + 19921$

$21933 := 141^2 + 2052^1 \qquad = 1412 + 20521$

$21953 := 28^3 + 2167^0 \qquad = 283 + 21670$

$22202 := 149^2 + 2071^0 \qquad = 1492 + 20710$

$22802 := 151^2 + 2129^0 \qquad = 1512 + 21290$

$24173 := 148^2 + 2269^1 \qquad = 1482 + 22691$

$24833 := 150^2 + 2333^1 \quad = 1502 + 23331$

$25282 := 159^2 + 2369^0 \quad = 1592 + 23690$

$25922 := 161^2 + 2431^0 \quad = 1612 + 24310$

$27213 := 157^2 + 2564^1 \quad = 1572 + 25641$

$27913 := 159^2 + 2632^1 \quad = 1592 + 26321$

$28562 := 169^2 + 2687^0 \quad = 1692 + 26870$

$29242 := 171^2 + 2753^0 \quad = 1712 + 27530$

$30433 := 166^2 + 2877^1 \quad = 1662 + 28771$

$31173 := 168^2 + 2949^1 \quad = 1682 + 29491$

$32042 := 179^2 + 3025^0 \quad = 1792 + 30250$

$32762 := 181^2 + 3095^0 \quad = 1812 + 30950$

$33833 := 175^2 + 3208^1 \quad = 1752 + 32081$

$34613 := 177^2 + 3284^1 \quad = 1772 + 32841$

$35722 := 189^2 + 3383^0 \quad = 1892 + 33830$

$36482 := 191^2 + 3457^0 \quad = 1912 + 34570$

$37413 := 184^2 + 3557^1 \quad = 1842 + 35571$

$38233 := 186^2 + 3637^1 \quad = 1862 + 36371$

$39602 := 199^2 + 3761^0 \quad = 1992 + 37610$

$40402 := 201^2 + 3839^0 \quad = 2012 + 38390$

$41173 := 193^2 + 3924^1 \quad = 1932 + 39241$

$42033 := 195^2 + 4008^1 \quad = 1952 + 40081$

$43682 := 209^2 + 4159^0 \quad = 2092 + 41590$

$44522 := 211^2 + 4241^0 \quad = 2112 + 42410$

$45113 := 202^2 + 4309^1 \quad = 2022 + 43091$

$46013 := 204^2 + 4397^1 \quad = 2042 + 43971$

$47962 := 219^2 + 4577^0 \quad = 2192 + 45770$

$48842 := 221^2 + 4663^0 \quad = 2212 + 46630$

$49233 := 211^2 + 4712^1 \quad = 2112 + 47121$

$50173 := 213^2 + 4804^1 \quad = 2132 + 48041$

$52442 := 229^2 + 5015^0 \quad = 2292 + 50150$

$53362 := 231^2 + 5105^0 \quad = 2312 + 51050$

$53533 := 220^2 + 5133^1 \quad = 2202 + 51331$

$54513 := 222^2 + 5229^1 \quad = 2222 + 52291$

$54873 := 38^3 + 5449^0 \quad = 383 + 54490$

$57122 := 239^2 + 5473^0 \quad = 2392 + 54730$

$58013 := 229^2 + 5572^1 \quad = 2292 + 55721$

$58082 := 241^2 + 5567^0 \quad = 2412 + 55670$

$59033 := 231^2 + 5672^1 \quad = 2312 + 56721$

$62002 := 249^2 + 5951^0 \quad = 2492 + 59510$

$62673 := 238^2 + 6029^1 \quad = 2382 + 60291$

$63002 := 251^2 + 6049^0 \quad = 2512 + 60490$

$63733 := 240^2 + 6133^1 \quad = 2402 + 61331$

$67082 := 259^2 + 6449^0 \quad = 2592 + 64490$

$67513 := 247^2 + 6504^1 \quad = 2472 + 65041$

$68122 := 261^2 + 6551^0 \quad = 2612 + 65510$

$68613 := 249^2 + 6612^1 \quad = 2492 + 66121$

$72362 := 269^2 + 6967^0 \quad = 2692 + 69670$

$72533 := 256^2 + 6997^1 \quad = 2562 + 69971$

$73442 := 271^2 + 7073^0 \quad = 2712 + 70730$

$73673 := 258^2 + 7109^1 \quad = 2582 + 71091$

$77733 := 265^2 + 7508^1 \quad = 2652 + 75081$

$77842 := 279^2 + 7505^0 \quad = 2792 + 75050$

$78913 := 267^2 + 7624^1 \quad = 2672 + 76241$

$78962 := 281^2 + 7615^0 \quad = 2812 + 76150$

$83113 := 274^2 + 8037^1 \quad = 2742 + 80371$

$83522 := 289^2 + 8063^0 \quad = 2892 + 80630$

$84333 := 276^2 + 8157^1 \quad = 2762 + 81571$

$84682 := 291^2 + 8177^0 \quad = 2912 + 81770$

$88673 := 283^2 + 8584^1 \quad = 2832 + 85841$

$89402 := 299^2 + 8641^0 \quad = 2992 + 86410$

$89933 := 285^2 + 8708^1 \quad = 2852 + 87081$

$90602 := 301^2 + 8759^0 \quad = 3012 + 87590$

$94413 := 292^2 + 9149^1 \quad = 2922 + 91491$

$95482 := 309^2 + 9239^0 \quad = 3092 + 92390$

$95713 := 294^2 + 9277^1 \quad = 2942 + 92771$

$96722 := 311^2 + 9361^0 \quad = 3112 + 93610$

$100333 := 301^2 + 9732^1 \quad = 3012 + 97321$

$101673 := 303^2 + 9864^1 \quad = 3032 + 98641$

$101762 := 319^2 + 9857^0 \quad = 3192 + 98570$

$103042 := 321^2 + 9983^0 \quad = 3212 + 99830$

$106433 := 310^2 + 10333^1 = 3102 + 103331$

$107813 := 312^2 + 10469^1 = 3122 + 104691$

$108242 := 329^2 + 10495^0 = 3292 + 104950$

$109562 := 331^2 + 10625^0 = 3312 + 106250$

$110593 := 48^3 + 11011^0 \ = 483 + 110110$

$112713 := 319^2 + 10952^1 = 3192 + 109521$

$114133 := 321^2 + 11092^1 = 3212 + 110921$

$114922 := 339^2 + 11153^0 = 3392 + 111530$

$116282 := 341^2 + 11287^0 = 3412 + 112870$

$119173 := 328^2 + 11589^1 = 3282 + 115891$

$120633 := 330^2 + 11733^1 = 3302 + 117331$

$121802 := 349^2 + 11831^0 = 3492 + 118310$

$123202 := 351^2 + 11969^0 = 3512 + 119690$

$125813 := 337^2 + 12244^1 = 3372 + 122441$

$127313 := 339^2 + 12392^1 = 3392 + 123921$

$128882 := 359^2 + 12529^0 = 3592 + 125290$

$130322 := 361^2 + 12671^0 = 3612 + 126710$

$132633 := 346^2 + 12917^1 = 3462 + 129171$

$134173 := 348^2 + 13069^1 = 3482 + 130691$

$136162 := 369^2 + 13247^0 = 3692 + 132470$

$137642 := 371^2 + 13393^0 = 3712 + 133930$

$139633 := 355^2 + 13608^1 = 3552 + 136081$

$141213 := 357^2 + 13764^1 = 3572 + 137641$

$143642 := 379^2 + 13985^0 = 3792 + 139850$

$145162 := 381^2 + 14135^0 = 3812 + 141350$

$146813 := 364^2 + 14317^1 = 3642 + 143171$

$148433 := 366^2 + 14477^1 = 3662 + 144771$

$151322 := 389^2 + 14743^0 = 3892 + 147430$

$152882 := 391^2 + 14897^0 = 3912 + 148970$

$154173 := 373^2 + 15044^1 = 3732 + 150441$

$155833 := 375^2 + 15208^1 = 3752 + 152081$

$159202 := 399^2 + 15521^0 = 3992 + 155210$

$160802 := 401^2 + 15679^0 = 4012 + 156790$

$161713 := 382^2 + 15789^1 = 3822 + 157891$

$163413 := 384^2 + 15957^1 = 3842 + 159571$

$167282 := 409^2 + 16319^0 = 4092 + 163190$

$168922 := 411^2 + 16481^0 = 4112 + 164810$

$169433 := 391^2 + 16552^1 = 3912 + 165521$

$171173 := 393^2 + 16724^1 = 3932 + 167241$

$175562 := 419^2 + 17137^0 = 4192 + 171370$

$177242 := 421^2 + 17303^0 = 4212 + 173030$

$177333 := 400^2 + 17333^1 = 4002 + 173331$

$177755 := 20^4 + 17755^1 \ = 204 + 177551$

$179113 := 402^2 + 17509^1 = 4022 + 175091$

$184042 := 429^2 + 17975^0 = 4292 + 179750$

$185413 := 409^2 + 18132^1 = 4092 + 181321$

$185762 := 431^2 + 18145^0 = 4312 + 181450$

$187233 := 411^2 + 18312^1 = 4112 + 183121$

$192722 := 439^2 + 18833^0 = 4392 + 188330$

$193673 := 418^2 + 18949^1 = 4182 + 189491$

$194482 := 441^2 + 19007^0 = 4412 + 190070$

$195113 := 58^3 + 19453^0 \ = 583 + 194530$

$195533 := 420^2 + 19133^1 = 4202 + 191331$

$201602 := 449^2 + 19711^0 = 4492 + 197110$

$202113 := 427^2 + 19784^1 = 4272 + 197841$

$203402 := 451^2 + 19889^0 = 4512 + 198890$

$204013 := 429^2 + 19972^1 = 4292 + 199721$

$210682 := 459^2 + 20609^0 = 4592 + 206090$

$210733 := 436^2 + 20637^1 = 4362 + 206371$

$212522 := 461^2 + 20791^0 = 4612 + 207910$

$212673 := 438^2 + 20829^1 = 4382 + 208291$

4.2 Positive-Negative Expressions

4.2.1 Powers Bigger than One

In case of only positive sign, we don't have expressions with powers bigger than one, i.e., there is at least one term, where powers are zero or one. Below are examples of positive and negative sign expressions, with only powers bigger than one.

$$3 := -1^9 + 2^2 \quad = -19 + 22$$
$$7 := -1^6 + 2^3 \quad = -16 + 23$$
$$63 := -1^9 + 8^2 \quad = -19 + 82$$
$$80 := -1^2 + 9^2 \quad = -12 + 92$$
$$20 := -4^2 + 6^2 \quad = -42 + 62$$

$$40 := -3^2 + 7^2 \quad = -32 + 72$$
$$60 := -2^2 + 8^2 \quad = -22 + 82$$
$$469 := -15^3 + 62^2 = -153 + 622$$

4.2.2 Powers Zero and One

Examples below are with positive negative signs and powers only zeros or ones. Obviously, all sums are ending in 1.

$$1 := -2^0 + 2^1 \quad = -20 + 21$$

$$11 := -11^0 + 12^1 \quad = -110 + 121$$
$$21 := -20^0 + 22^1 \quad = -200 + 221$$
$$31 := -29^0 + 32^1 \quad = -290 + 321$$
$$41 := -38^0 + 42^1 \quad = -380 + 421$$
$$51 := -47^0 + 52^1 \quad = -470 + 521$$
$$61 := -56^0 + 62^1 \quad = -560 + 621$$
$$71 := -65^0 + 72^1 \quad = -650 + 721$$
$$81 := -74^0 + 82^1 \quad = -740 + 821$$
$$91 := -83^0 + 92^1 \quad = -830 + 921$$

$$101 := -92^0 + 102^1 \quad = -920 + 1021$$
$$111 := -101^0 + 112^1 \quad = -1010 + 1121$$
$$121 := -110^0 + 122^1 \quad = -1100 + 1221$$
$$131 := -119^0 + 132^1 \quad = -1190 + 1321$$
$$141 := -128^0 + 142^1 \quad = -1280 + 1421$$
$$151 := -137^0 + 152^1 \quad = -1370 + 1521$$
$$161 := -146^0 + 162^1 \quad = -1460 + 1621$$
$$171 := -155^0 + 172^1 \quad = -1550 + 1721$$
$$181 := -164^0 + 182^1 \quad = -1640 + 1821$$
$$191 := -173^0 + 192^1 \quad = -1730 + 1921$$
$$201 := -182^0 + 202^1 \quad = -1820 + 2021$$
$$211 := -191^0 + 212^1 \quad = -1910 + 2121$$
$$221 := -200^0 + 222^1 \quad = -2000 + 2221$$
$$231 := -209^0 + 232^1 \quad = -2090 + 2321$$
$$241 := -218^0 + 242^1 \quad = -2180 + 2421$$
$$251 := -227^0 + 252^1 \quad = -2270 + 2521$$

$$261 := -236^0 + 262^1 \quad = -2360 + 2621$$
$$271 := -245^0 + 272^1 \quad = -2450 + 2721$$
$$281 := -254^0 + 282^1 \quad = -2540 + 2821$$
$$291 := -263^0 + 292^1 \quad = -2630 + 2921$$
$$301 := -272^0 + 302^1 \quad = -2720 + 3021$$
$$311 := -281^0 + 312^1 \quad = -2810 + 3121$$
$$321 := -290^0 + 322^1 \quad = -2900 + 3221$$
$$331 := -299^0 + 332^1 \quad = -2990 + 3321$$
$$341 := -308^0 + 342^1 \quad = -3080 + 3421$$
$$351 := -317^0 + 352^1 \quad = -3170 + 3521$$
$$361 := -326^0 + 362^1 \quad = -3260 + 3621$$
$$371 := -335^0 + 372^1 \quad = -3350 + 3721$$
$$381 := -344^0 + 382^1 \quad = -3440 + 3821$$
$$391 := -353^0 + 392^1 \quad = -3530 + 3921$$
$$401 := -362^0 + 402^1 \quad = -3620 + 4021$$
$$411 := -371^0 + 412^1 \quad = -3710 + 4121$$
$$421 := -380^0 + 422^1 \quad = -3800 + 4221$$
$$431 := -389^0 + 432^1 \quad = -3890 + 4321$$
$$441 := -398^0 + 442^1 \quad = -3980 + 4421$$
$$451 := -407^0 + 452^1 \quad = -4070 + 4521$$
$$461 := -416^0 + 462^1 \quad = -4160 + 4621$$
$$471 := -425^0 + 472^1 \quad = -4250 + 4721$$
$$481 := -434^0 + 482^1 \quad = -4340 + 4821$$
$$491 := -443^0 + 492^1 \quad = -4430 + 4921$$
$$501 := -452^0 + 502^1 \quad = -4520 + 5021$$
$$511 := -461^0 + 512^1 \quad = -4610 + 5121$$
$$521 := -470^0 + 522^1 \quad = -4700 + 5221$$

$531 := -479^0 + 532^1 \quad = -4790 + 5321$

$541 := -488^0 + 542^1 \quad = -4880 + 5421$

$551 := -497^0 + 552^1 \quad = -4970 + 5521$

$561 := -506^0 + 562^1 \quad = -5060 + 5621$

$571 := -515^0 + 572^1 \quad = -5150 + 5721$

$581 := -524^0 + 582^1 \quad = -5240 + 5821$

$591 := -533^0 + 592^1 \quad = -5330 + 5921$

$601 := -542^0 + 602^1 \quad = -5420 + 6021$

$611 := -551^0 + 612^1 \quad = -5510 + 6121$

$621 := -560^0 + 622^1 \quad = -5600 + 6221$

$631 := -569^0 + 632^1 \quad = -5690 + 6321$

$641 := -578^0 + 642^1 \quad = -5780 + 6421$

$651 := -587^0 + 652^1 \quad = -5870 + 6521$

$661 := -596^0 + 662^1 \quad = -5960 + 6621$

$671 := -605^0 + 672^1 \quad = -6050 + 6721$

$681 := -614^0 + 682^1 \quad = -6140 + 6821$

$691 := -623^0 + 692^1 \quad = -6230 + 6921$

$701 := -632^0 + 702^1 \quad = -6320 + 7021$

$711 := -641^0 + 712^1 \quad = -6410 + 7121$

$721 := -650^0 + 722^1 \quad = -6500 + 7221$

$731 := -659^0 + 732^1 \quad = -6590 + 7321$

$741 := -668^0 + 742^1 \quad = -6680 + 7421$

$751 := -677^0 + 752^1 \quad = -6770 + 7521$

$761 := -686^0 + 762^1 \quad = -6860 + 7621$

$771 := -695^0 + 772^1 \quad = -6950 + 7721$

$781 := -704^0 + 782^1 \quad = -7040 + 7821$

$791 := -713^0 + 792^1 \quad = -7130 + 7921$

$801 := -722^0 + 802^1 \quad = -7220 + 8021$

$811 := -731^0 + 812^1 \quad = -7310 + 8121$

$821 := -740^0 + 822^1 \quad = -7400 + 8221$

$831 := -749^0 + 832^1 \quad = -7490 + 8321$

$841 := -758^0 + 842^1 \quad = -7580 + 8421$

$851 := -767^0 + 852^1 \quad = -7670 + 8521$

$861 := -776^0 + 862^1 \quad = -7760 + 8621$

$871 := -785^0 + 872^1 \quad = -7850 + 8721$

$881 := -794^0 + 882^1 \quad = -7940 + 8821$

$891 := -803^0 + 892^1 \quad = -8030 + 8921$

$901 := -812^0 + 902^1 \quad = -8120 + 9021$

$911 := -821^0 + 912^1 \quad = -8210 + 9121$

$921 := -830^0 + 922^1 \quad = -8300 + 9221$

$931 := -839^0 + 932^1 \quad = -8390 + 9321$

$941 := -848^0 + 942^1 \quad = -8480 + 9421$

$951 := -857^0 + 952^1 \quad = -8570 + 9521$

$961 := -866^0 + 962^1 \quad = -8660 + 9621$

$971 := -875^0 + 972^1 \quad = -8750 + 9721$

$981 := -884^0 + 982^1 \quad = -8840 + 9821$

$991 := -893^0 + 992^1 \quad = -8930 + 9921$

$1001 := -902^0 + 1002^1 \quad = -9020 + 10021$

$1011 := -911^0 + 1012^1 \quad = -9110 + 10121$

$1021 := -920^0 + 1022^1 \quad = -9200 + 10221$

$1031 := -929^0 + 1032^1 \quad = -9290 + 10321$

$1041 := -938^0 + 1042^1 \quad = -9380 + 10421$

$1051 := -947^0 + 1052^1 \quad = -9470 + 10521$

$1061 := -956^0 + 1062^1 \quad = -9560 + 10621$

$1071 := -965^0 + 1072^1 \quad = -9650 + 10721$

$1081 := -974^0 + 1082^1 \quad = -9740 + 10821$

$1091 := -983^0 + 1092^1 \quad = -9830 + 10921$

$1101 := -992^0 + 1102^1 \quad = -9920 + 11021$

$1111 := -1001^0 + 1112^1 = -10010 + 11121$

$1121 := -1010^0 + 1122^1 = -10100 + 11221$

$1131 := -1019^0 + 1132^1 = -10190 + 11321$

$1141 := -1028^0 + 1142^1 = -10280 + 11421$

$1151 := -1037^0 + 1152^1 = -10370 + 11521$

$1161 := -1046^0 + 1162^1 = -10460 + 11621$

$1171 := -1055^0 + 1172^1 = -10550 + 11721$

$1181 := -1064^0 + 1182^1 = -10640 + 11821$

$1191 := -1073^0 + 1192^1 = -10730 + 11921$

$1201 := -1082^0 + 1202^1 = -10820 + 12021$

$1211 := -1091^0 + 1212^1 = -10910 + 12121$

$1221 := -1100^0 + 1222^1 = -11000 + 12221$

$1231 := -1109^0 + 1232^1 = -11090 + 12321$

$1241 := -1118^0 + 1242^1 = -11180 + 12421$

$1251 := -1127^0 + 1252^1 = -11270 + 12521$

$1261 := -1136^0 + 1262^1 = -11360 + 12621$

$1271 := -1145^0 + 1272^1 = -11450 + 12721$

$1281 := -1154^0 + 1282^1 = -11540 + 12821$

$1291 := -1163^0 + 1292^1 = -11630 + 12921$

$1301 := -1172^0 + 1302^1 = -11720 + 13021$

$1311 := -1181^0 + 1312^1 = -11810 + 13121$

$1321 := -1190^0 + 1322^1 = -11900 + 13221$

$1331 := -1199^0 + 1332^1 = -11990 + 13321$

$1341 := -1208^0 + 1342^1 = -12080 + 13421$

$1351 := -1217^0 + 1352^1 = -12170 + 13521$

$1361 := -1226^0 + 1362^1 = -12260 + 13621$

$1371 := -1235^0 + 1372^1 = -12350 + 13721$

$1381 := -1244^0 + 1382^1 = -12440 + 13821$

$1391 := -1253^0 + 1392^1 = -12530 + 13921$

$1401 := -1262^0 + 1402^1 = -12620 + 14021$

$1411 := -1271^0 + 1412^1 = -12710 + 14121$

$1421 := -1280^0 + 1422^1 = -12800 + 14221$

$1431 := -1289^0 + 1432^1 = -12890 + 14321$

$1441 := -1298^0 + 1442^1 = -12980 + 14421$

$1451 := -1307^0 + 1452^1 = -13070 + 14521$

$1461 := -1316^0 + 1462^1 = -13160 + 14621$

$1471 := -1325^0 + 1472^1 = -13250 + 14721$

$1481 := -1334^0 + 1482^1 = -13340 + 14821$

$1491 := -1343^0 + 1492^1 = -13430 + 14921$

$1501 := -1352^0 + 1502^1 = -13520 + 15021$

$1511 := -1361^0 + 1512^1 = -13610 + 15121$

$1521 := -1370^0 + 1522^1 = -13700 + 15221$

$1531 := -1379^0 + 1532^1 = -13790 + 15321$

$1541 := -1388^0 + 1542^1 = -13880 + 15421$

$1551 := -1397^0 + 1552^1 = -13970 + 15521$

$1561 := -1406^0 + 1562^1 = -14060 + 15621$

$1571 := -1415^0 + 1572^1 = -14150 + 15721$

$1581 := -1424^0 + 1582^1 = -14240 + 15821$

$1591 := -1433^0 + 1592^1 = -14330 + 15921$

$1601 := -1442^0 + 1602^1 = -14420 + 16021$

$1611 := -1451^0 + 1612^1 = -14510 + 16121$

$1621 := -1460^0 + 1622^1 = -14600 + 16221$

$1631 := -1469^0 + 1632^1 = -14690 + 16321$

$1641 := -1478^0 + 1642^1 = -14780 + 16421$

$1651 := -1487^0 + 1652^1 = -14870 + 16521$

$1661 := -1496^0 + 1662^1 = -14960 + 16621$

$1671 := -1505^0 + 1672^1 = -15050 + 16721$

$1681 := -1514^0 + 1682^1 = -15140 + 16821$

$1691 := -1523^0 + 1692^1 = -15230 + 16921$

$1701 := -1532^0 + 1702^1 = -15320 + 17021$

$1711 := -1541^0 + 1712^1 = -15410 + 17121$

$1721 := -1550^0 + 1722^1 = -15500 + 17221$

$1731 := -1559^0 + 1732^1 = -15590 + 17321$

$1741 := -1568^0 + 1742^1 = -15680 + 17421$

$1751 := -1577^0 + 1752^1 = -15770 + 17521$

$1761 := -1586^0 + 1762^1 = -15860 + 17621$

$1771 := -1595^0 + 1772^1 = -15950 + 17721$

$1781 := -1604^0 + 1782^1 = -16040 + 17821$

$1791 := -1613^0 + 1792^1 = -16130 + 17921$

$1801 := -1622^0 + 1802^1 = -16220 + 18021$

$1811 := -1631^0 + 1812^1 = -16310 + 18121$

$1821 := -1640^0 + 1822^1 = -16400 + 18221$

$1831 := -1649^0 + 1832^1 = -16490 + 18321$

$1841 := -1658^0 + 1842^1 = -16580 + 18421$

$1851 := -1667^0 + 1852^1 = -16670 + 18521$

$1861 := -1676^0 + 1862^1 = -16760 + 18621$

$1871 := -1685^0 + 1872^1 = -16850 + 18721$

$1881 := -1694^0 + 1882^1 = -16940 + 18821$

$1891 := -1703^0 + 1892^1 = -17030 + 18921$

$1901 := -1712^0 + 1902^1 = -17120 + 19021$

$1911 := -1721^0 + 1912^1 = -17210 + 19121$

$1921 := -1730^0 + 1922^1 = -17300 + 19221$

$1931 := -1739^0 + 1932^1 = -17390 + 19321$

$1941 := -1748^0 + 1942^1 = -17480 + 19421$

$1951 := -1757^0 + 1952^1 = -17570 + 19521$

$1961 := -1766^0 + 1962^1 = -17660 + 19621$

$1971 := -1775^0 + 1972^1 = -17750 + 19721$

$1981 := -1784^0 + 1982^1 = -17840 + 19821$

$1991 := -1793^0 + 1992^1 = -17930 + 19921$

$2001 := -1802^0 + 2002^1 = -18020 + 20021$

$2011 := -1811^0 + 2012^1 = -18110 + 20121$

$2021 := -1820^0 + 2022^1 = -18200 + 20221$

$2031 := -1829^0 + 2032^1 = -18290 + 20321$

$2041 := -1838^0 + 2042^1 = -18380 + 20421$

$2051 := -1847^0 + 2052^1 = -18470 + 20521$

$2061 := -1856^0 + 2062^1 = -18560 + 20621$

$2071 := -1865^0 + 2072^1 = -18650 + 20721$

$2081 := -1874^0 + 2082^1 = -18740 + 20821$

$2091 := -1883^0 + 2092^1 = -18830 + 20921$

$2101 := -1892^0 + 2102^1 = -18920 + 21021$

$2111 := -1901^0 + 2112^1 = -19010 + 21121$

$2121 := -1910^0 + 2122^1 = -19100 + 21221$

$2131 := -1919^0 + 2132^1 = -19190 + 21321$

$2141 := -1928^0 + 2142^1 = -19280 + 21421$

$2151 := -1937^0 + 2152^1 = -19370 + 21521$

$2161 := -1946^0 + 2162^1 = -19460 + 21621$

$2171 := -1955^0 + 2172^1 = -19550 + 21721$

$2181 := -1964^0 + 2182^1 = -19640 + 21821$

$2191 := -1973^0 + 2192^1 = -19730 + 21921$

$2201 := -1982^0 + 2202^1 = -19820 + 22021$

$2211 := -1991^0 + 2212^1 = -19910 + 22121$

$2221 := -2000^0 + 2222^1 = -20000 + 22221$

$2231 := -2009^0 + 2232^1 = -20090 + 22321$

$2241 := -2018^0 + 2242^1 = -20180 + 22421$

$2251 := -2027^0 + 2252^1 = -20270 + 22521$

$2261 := -2036^0 + 2262^1 = -20360 + 22621$

$2271 := -2045^0 + 2272^1 = -20450 + 22721$

$2281 := -2054^0 + 2282^1 = -20540 + 22821$

$2291 := -2063^0 + 2292^1 = -20630 + 22921$

$2301 := -2072^0 + 2302^1 = -20720 + 23021$

$2311 := -2081^0 + 2312^1 = -20810 + 23121$

$2321 := -2090^0 + 2322^1 = -20900 + 23221$

$2331 := -2099^0 + 2332^1 = -20990 + 23321$

$2341 := -2108^0 + 2342^1 = -21080 + 23421$

$2351 := -2117^0 + 2352^1 = -21170 + 23521$

$2361 := -2126^0 + 2362^1 = -21260 + 23621$

$2371 := -2135^0 + 2372^1 = -21350 + 23721$

$2381 := -2144^0 + 2382^1 = -21440 + 23821$

$2391 := -2153^0 + 2392^1 = -21530 + 23921$

$2401 := -2162^0 + 2402^1 = -21620 + 24021$

$2411 := -2171^0 + 2412^1 = -21710 + 24121$

$2421 := -2180^0 + 2422^1 = -21800 + 24221$

$2431 := -2189^0 + 2432^1 = -21890 + 24321$

$2441 := -2198^0 + 2442^1 = -21980 + 24421$

$2451 := -2207^0 + 2452^1 = -22070 + 24521$

$2461 := -2216^0 + 2462^1 = -22160 + 24621$

$2471 := -2225^0 + 2472^1 = -22250 + 24721$

$2481 := -2234^0 + 2482^1 = -22340 + 24821$

$2491 := -2243^0 + 2492^1 = -22430 + 24921$

$2501 := -2252^0 + 2502^1 = -22520 + 25021$

$2511 := -2261^0 + 2512^1 = -22610 + 25121$

$2521 := -2270^0 + 2522^1 = -22700 + 25221$

$2531 := -2279^0 + 2532^1 = -22790 + 25321$

$2541 := -2288^0 + 2542^1 = -22880 + 25421$

$2551 := -2297^0 + 2552^1 = -22970 + 25521$

$2561 := -2306^0 + 2562^1 = -23060 + 25621$

$2571 := -2315^0 + 2572^1 = -23150 + 25721$

$2581 := -2324^0 + 2582^1 = -23240 + 25821$

$2591 := -2333^0 + 2592^1 = -23330 + 25921$

$2601 := -2342^0 + 2602^1 = -23420 + 26021$

$2611 := -2351^0 + 2612^1 = -23510 + 26121$

$2621 := -2360^0 + 2622^1 = -23600 + 26221$

$2631 := -2369^0 + 2632^1 = -23690 + 26321$

$2641 := -2378^0 + 2642^1 = -23780 + 26421$

$2651 := -2387^0 + 2652^1 = -23870 + 26521$

$2661 := -2396^0 + 2662^1 = -23960 + 26621$

$2671 := -2405^0 + 2672^1 = -24050 + 26721$

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$6041 := -5438^0 + 6042^1 = -54380 + 60421$

$6051 := -5447^0 + 6052^1 = -54470 + 60521$

$6061 := -5456^0 + 6062^1 = -54560 + 60621$

$6071 := -5465^0 + 6072^1 = -54650 + 60721$

$6081 := -5474^0 + 6082^1 = -54740 + 60821$

$6091 := -5483^0 + 6092^1 = -54830 + 60921$

$6101 := -5492^0 + 6102^1 = -54920 + 61021$

$6111 := -5501^0 + 6112^1 = -55010 + 61121$

$6121 := -5510^0 + 6122^1 = -55100 + 61221$

$6131 := -5519^0 + 6132^1 = -55190 + 61321$

$6141 := -5528^0 + 6142^1 = -55280 + 61421$

$6151 := -5537^0 + 6152^1 = -55370 + 61521$

$6161 := -5546^0 + 6162^1 = -55460 + 61621$

$6171 := -5555^0 + 6172^1 = -55550 + 61721$

$6181 := -5564^0 + 6182^1 = -55640 + 61821$

$6191 := -5573^0 + 6192^1 = -55730 + 61921$

$6201 := -5582^0 + 6202^1 = -55820 + 62021$

$6211 := -5591^0 + 6212^1 = -55910 + 62121$

$6221 := -5600^0 + 6222^1 = -56000 + 62221$

$6231 := -5609^0 + 6232^1 = -56090 + 62321$

$6241 := -5618^0 + 6242^1 = -56180 + 62421$

$6251 := -5627^0 + 6252^1 = -56270 + 62521$

$6261 := -5636^0 + 6262^1 = -56360 + 62621$

$6271 := -5645^0 + 6272^1 = -56450 + 62721$

$6281 := -5654^0 + 6282^1 = -56540 + 62821$

$6291 := -5663^0 + 6292^1 = -56630 + 62921$

$6301 := -5672^0 + 6302^1 = -56720 + 63021$

$6311 := -5681^0 + 6312^1 = -56810 + 63121$

$6321 := -5690^0 + 6322^1 = -56900 + 63221$

$6331 := -5699^0 + 6332^1 = -56990 + 63321$

$6341 := -5708^0 + 6342^1 = -57080 + 63421$

$6351 := -5717^0 + 6352^1 = -57170 + 63521$

$6361 := -5726^0 + 6362^1 = -57260 + 63621$

$6371 := -5735^0 + 6372^1 = -57350 + 63721$

$6381 := -5744^0 + 6382^1 = -57440 + 63821$

$6391 := -5753^0 + 6392^1 = -57530 + 63921$

$6401 := -5762^0 + 6402^1 = -57620 + 64021$

$6411 := -5771^0 + 6412^1 = -57710 + 64121$

$6421 := -5780^0 + 6422^1 = -57800 + 64221$

$6431 := -5789^0 + 6432^1 = -57890 + 64321$

$6441 := -5798^0 + 6442^1 = -57980 + 64421$

$6451 := -5807^0 + 6452^1 = -58070 + 64521$

$6461 := -5816^0 + 6462^1 = -58160 + 64621$

$6471 := -5825^0 + 6472^1 = -58250 + 64721$

$6481 := -5834^0 + 6482^1 = -58340 + 64821$

$6491 := -5843^0 + 6492^1 = -58430 + 64921$

$6501 := -5852^0 + 6502^1 = -58520 + 65021$

$6511 := -5861^0 + 6512^1 = -58610 + 65121$

$6521 := -5870^0 + 6522^1 = -58700 + 65221$

$6531 := -5879^0 + 6532^1 = -58790 + 65321$

$6541 := -5888^0 + 6542^1 = -58880 + 65421$

$6551 := -5897^0 + 6552^1 = -58970 + 65521$

$6561 := -5906^0 + 6562^1 = -59060 + 65621$

$6571 := -5915^0 + 6572^1 = -59150 + 65721$

$6581 := -5924^0 + 6582^1 = -59240 + 65821$

$6591 := -5933^0 + 6592^1 = -59330 + 65921$

$6601 := -5942^0 + 6602^1 = -59420 + 66021$

$6611 := -5951^0 + 6612^1 = -59510 + 66121$

$6621 := -5960^0 + 6622^1 = -59600 + 66221$

$6631 := -5969^0 + 6632^1 = -59690 + 66321$

$6641 := -5978^0 + 6642^1 = -59780 + 66421$

$6651 := -5987^0 + 6652^1 = -59870 + 66521$

$6661 := -5996^0 + 6662^1 = -59960 + 66621$

$6671 := -6005^0 + 6672^1 = -60050 + 66721$

$6681 := -6014^0 + 6682^1 = -60140 + 66821$

$6691 := -6023^0 + 6692^1 = -60230 + 66921$

$6701 := -6032^0 + 6702^1 = -60320 + 67021$

$6711 := -6041^0 + 6712^1 = -60410 + 67121$

$6721 := -6050^0 + 6722^1 = -60500 + 67221$

$6731 := -6059^0 + 6732^1 = -60590 + 67321$

$6741 := -6068^0 + 6742^1 = -60680 + 67421$

$6751 := -6077^0 + 6752^1 = -60770 + 67521$

$6761 := -6086^0 + 6762^1 = -60860 + 67621$

$6771 := -6095^0 + 6772^1 = -60950 + 67721$

$6781 := -6104^0 + 6782^1 = -61040 + 67821$

$6791 := -6113^0 + 6792^1 = -61130 + 67921$

$6801 := -6122^0 + 6802^1 = -61220 + 68021$

$6811 := -6131^0 + 6812^1 = -61310 + 68121$

$6821 := -6140^0 + 6822^1 = -61400 + 68221$

$6831 := -6149^0 + 6832^1 = -61490 + 68321$

$6841 := -6158^0 + 6842^1 = -61580 + 68421$

$6851 := -6167^0 + 6852^1 = -61670 + 68521$

$6861 := -6176^0 + 6862^1 = -61760 + 68621$

$6871 := -6185^0 + 6872^1 = -61850 + 68721$

$6881 := -6194^0 + 6882^1 = -61940 + 68821$

$6891 := -6203^0 + 6892^1 = -62030 + 68921$

$6901 := -6212^0 + 6902^1 = -62120 + 69021$

$6911 := -6221^0 + 6912^1 = -62210 + 69121$

$6921 := -6230^0 + 6922^1 = -62300 + 69221$

$6931 := -6239^0 + 6932^1 = -62390 + 69321$

$6941 := -6248^0 + 6942^1 = -62480 + 69421$

$6951 := -6257^0 + 6952^1 = -62570 + 69521$

$6961 := -6266^0 + 6962^1 = -62660 + 69621$

$6971 := -6275^0 + 6972^1 = -62750 + 69721$

$6981 := -6284^0 + 6982^1 = -62840 + 69821$

$6991 := -6293^0 + 6992^1 = -62930 + 69921$

$7001 := -6302^0 + 7002^1 = -63020 + 70021$

$7011 := -6311^0 + 7012^1 = -63110 + 70121$

$7021 := -6320^0 + 7022^1 = -63200 + 70221$

$7031 := -6329^0 + 7032^1 = -63290 + 70321$

$7041 := -6338^0 + 7042^1 = -63380 + 70421$

$7051 := -6347^0 + 7052^1 = -63470 + 70521$

$7061 := -6356^0 + 7062^1 = -63560 + 70621$

$7071 := -6365^0 + 7072^1 = -63650 + 70721$

$7081 := -6374^0 + 7082^1 = -63740 + 70821$

$7091 := -6383^0 + 7092^1 = -63830 + 70921$

$7101 := -6392^0 + 7102^1 = -63920 + 71021$

$7111 := -6401^0 + 7112^1 = -64010 + 71121$

$7121 := -6410^0 + 7122^1 = -64100 + 71221$

$7131 := -6419^0 + 7132^1 = -64190 + 71321$

$7141 := -6428^0 + 7142^1 = -64280 + 71421$

$7151 := -6437^0 + 7152^1 = -64370 + 71521$

$7161 := -6446^0 + 7162^1 = -64460 + 71621$

$7171 := -6455^0 + 7172^1 = -64550 + 71721$

$7181 := -6464^0 + 7182^1 = -64640 + 71821$

$7191 := -6473^0 + 7192^1 = -64730 + 71921$

$7201 := -6482^0 + 7202^1 = -64820 + 72021$

$7211 := -6491^0 + 7212^1 = -64910 + 72121$

$7221 := -6500^0 + 7222^1 = -65000 + 72221$

$7231 := -6509^0 + 7232^1 = -65090 + 72321$

$7241 := -6518^0 + 7242^1 = -65180 + 72421$

$7251 := -6527^0 + 7252^1 = -65270 + 72521$

$7261 := -6536^0 + 7262^1 = -65360 + 72621$

$7271 := -6545^0 + 7272^1 = -65450 + 72721$

$7281 := -6554^0 + 7282^1 = -65540 + 72821$

$7291 := -6563^0 + 7292^1 = -65630 + 72921$

$7301 := -6572^0 + 7302^1 = -65720 + 73021$

$7311 := -6581^0 + 7312^1 = -65810 + 73121$

$7321 := -6590^0 + 7322^1 = -65900 + 73221$

$7331 := -6599^0 + 7332^1 = -65990 + 73321$

$7341 := -6608^0 + 7342^1 = -66080 + 73421$

$7351 := -6617^0 + 7352^1 = -66170 + 73521$

$7361 := -6626^0 + 7362^1 = -66260 + 73621$

$7371 := -6635^0 + 7372^1 = -66350 + 73721$

$7381 := -6644^0 + 7382^1 = -66440 + 73821$

$7391 := -6653^0 + 7392^1 = -66530 + 73921$

$7401 := -6662^0 + 7402^1 = -66620 + 74021$

$7411 := -6671^0 + 7412^1 = -66710 + 74121$

$7421 := -6680^0 + 7422^1 = -66800 + 74221$

$7431 := -6689^0 + 7432^1 = -66890 + 74321$

$7441 := -6698^0 + 7442^1 = -66980 + 74421$

$7451 := -6707^0 + 7452^1 = -67070 + 74521$

$7461 := -6716^0 + 7462^1 = -67160 + 74621$

$7471 := -6725^0 + 7472^1 = -67250 + 74721$

$7481 := -6734^0 + 7482^1 = -67340 + 74821$

$7491 := -6743^0 + 7492^1 = -67430 + 74921$

$7501 := -6752^0 + 7502^1 = -67520 + 75021$

$7511 := -6761^0 + 7512^1 = -67610 + 75121$

$7521 := -6770^0 + 7522^1 = -67700 + 75221$

$7531 := -6779^0 + 7532^1 = -67790 + 75321$

$7541 := -6788^0 + 7542^1 = -67880 + 75421$

$7551 := -6797^0 + 7552^1 = -67970 + 75521$

$7561 := -6806^0 + 7562^1 = -68060 + 75621$

$7571 := -6815^0 + 7572^1 = -68150 + 75721$

$7581 := -6824^0 + 7582^1 = -68240 + 75821$

$7591 := -6833^0 + 7592^1 = -68330 + 75921$

$7601 := -6842^0 + 7602^1 = -68420 + 76021$

$7611 := -6851^0 + 7612^1 = -68510 + 76121$

$7621 := -6860^0 + 7622^1 = -68600 + 76221$

$7631 := -6869^0 + 7632^1 = -68690 + 76321$

$7641 := -6878^0 + 7642^1 = -68780 + 76421$

$7651 := -6887^0 + 7652^1 = -68870 + 76521$

$7661 := -6896^0 + 7662^1 = -68960 + 76621$

$7671 := -6905^0 + 7672^1 = -69050 + 76721$

$7681 := -6914^0 + 7682^1 = -69140 + 76821$

$7691 := -6923^0 + 7692^1 = -69230 + 76921$

$7701 := -6932^0 + 7702^1 = -69320 + 77021$

$7711 := -6941^0 + 7712^1 = -69410 + 77121$

$$7721 := -6950^0 + 7722^1 = -69500 + 77221$$
$$7731 := -6959^0 + 7732^1 = -69590 + 77321$$
$$7741 := -6968^0 + 7742^1 = -69680 + 77421$$
$$7751 := -6977^0 + 7752^1 = -69770 + 77521$$
$$7761 := -6986^0 + 7762^1 = -69860 + 77621$$
$$7771 := -6995^0 + 7772^1 = -69950 + 77721$$
$$7781 := -7004^0 + 7782^1 = -70040 + 77821$$
$$7791 := -7013^0 + 7792^1 = -70130 + 77921$$
$$7801 := -7022^0 + 7802^1 = -70220 + 78021$$
$$7811 := -7031^0 + 7812^1 = -70310 + 78121$$
$$7821 := -7040^0 + 7822^1 = -70400 + 78221$$
$$7831 := -7049^0 + 7832^1 = -70490 + 78321$$
$$7841 := -7058^0 + 7842^1 = -70580 + 78421$$
$$7851 := -7067^0 + 7852^1 = -70670 + 78521$$

$$7861 := -7076^0 + 7862^1 = -70760 + 78621$$
$$7871 := -7085^0 + 7872^1 = -70850 + 78721$$
$$7881 := -7094^0 + 7882^1 = -70940 + 78821$$
$$7891 := -7103^0 + 7892^1 = -71030 + 78921$$
$$7901 := -7112^0 + 7902^1 = -71120 + 79021$$
$$7911 := -7121^0 + 7912^1 = -71210 + 79121$$
$$7921 := -7130^0 + 7922^1 = -71300 + 79221$$
$$7931 := -7139^0 + 7932^1 = -71390 + 79321$$
$$7941 := -7148^0 + 7942^1 = -71480 + 79421$$
$$7951 := -7157^0 + 7952^1 = -71570 + 79521$$
$$7961 := -7166^0 + 7962^1 = -71660 + 79621$$
$$7971 := -7175^0 + 7972^1 = -71750 + 79721$$

5 Three Terms Equalities

This section brings expressions similar to one given in Section 3 with threes terms. Here the results are divided in subsections with positive and positive-negative signs expressions.

5.1 Positive Expressions

5.1.1 Powers and Bases Bigger Than One

As we have seen in Section 3, there are only 10 expressions with positive sign of three terms, where the powers are bigger than 1. Below are again the same expressions:

$$81 := 2^3 + 2^6 + 3^2 \quad = 23 + 26 + 32$$
$$99 := 2^3 + 3^3 + 4^3 \quad = 23 + 33 + 43$$

$$121 := 2^3 + 2^6 + 7^2 \quad = 23 + 26 + 72$$
$$170 := 2^6 + 5^2 + 9^2 \quad = 26 + 52 + 92$$
$$266 := 4^2 + 9^2 + 13^2 \quad = 42 + 92 + 132$$

$$246 := 2^2 + 11^2 + 11^2 = 22 + 112 + 112$$

$$:= 5^2 + 5^2 + 14^2 \quad = 52 + 52 + 142$$

$$286 := 6^2 + 9^2 + 13^2 \quad = 62 + 92 + 132$$

$$306 := 8^2 + 11^2 + 11^2 = 82 + 112 + 112$$
$$:= 9^2 + 9^2 + 12^2 \quad = 92 + 92 + 122$$

5.1.2 Only Powers Bigger Than One

$$65 := 1^5 + 2^5 + 2^5 \quad = 15 + 25 + 25$$
$$74 := 1^6 + 2^6 + 3^2 \quad = 16 + 26 + 32$$

$$81 := 1^3 + 2^6 + 4^2 \quad = 13 + 26 + 42$$
$$:= 1^4 + 2^4 + 4^3 \quad = 14 + 24 + 43$$

$90 := 1^2 + 2^6 + 5^2 \quad = 12 + 26 + 52$

$92 := 1^6 + 3^3 + 4^3 \quad = 16 + 33 + 43$

$101 := 1^3 + 2^6 + 6^2 \quad = 13 + 26 + 62$

$114 := 1^6 + 2^6 + 7^2 \quad = 16 + 26 + 72$

$146 := 1^2 + 1^2 + 12^2 \quad = 12 + 12 + 122$

$154 := 1^7 + 2^5 + 11^2 \quad = 17 + 25 + 112$

$161 := 1^5 + 2^4 + 12^2 \quad = 15 + 24 + 122$

$172 := 1^7 + 3^3 + 12^2 \quad = 17 + 33 + 122$

$179 := 1^5 + 3^2 + 13^2 \quad = 15 + 32 + 132$

$186 := 1^2 + 4^2 + 13^2 \quad = 12 + 42 + 132$

$206 := 1^2 + 6^2 + 13^2 \quad = 12 + 62 + 132$

$219 := 1^5 + 7^2 + 13^2 \quad = 15 + 72 + 132$

$226 := 1^2 + 9^2 + 12^2 \quad = 12 + 92 + 122$

$243 := 1^9 + 11^2 + 11^2 = 19 + 112 + 112$

5.2 Positive and Negative Expressions

This subsection deals with three terms expressions with positive and negative signs. This has been divided again in subsections with different categories.

5.2.1 Powers and Bases Bigger Than One

This subsection brings examples of three terms equality expressions with positive and negative signs, where the powers and bases both are bigger than one.

$1 := -2^9 - 6^3 + 9^3 \quad = -29 - 63 + 93$

$\quad := -2^9 - 84^2 + 87^2 \quad = -29 - 842 + 872$

$4 := 2^2 + 2^4 - 4^2 \quad = 22 + 24 - 42$

$5 := -3^5 - 29^2 + 33^2 \quad = -35 - 292 + 332$

$6 := 3^6 + 119^2 - 122^2 \quad = 36 + 1192 - 1222$

$7 := -5^3 - 8^2 + 14^2 \quad = -53 - 82 + 142$

$8 := 2^8 + 61^2 - 63^2 \quad = 28 + 612 - 632$

$13 := 13^3 + 85^2 - 97^2 \quad = 133 + 852 - 972$

$\quad := 4^3 + 7^2 - 10^2 \quad = 43 + 72 - 102$

$\quad := 5^3 + 12^2 - 16^2 \quad = 53 + 122 - 162$

$15 := 2^3 + 2^4 - 3^2 \quad = 23 + 24 - 32$

$\quad := 2^5 + 8^2 - 9^2 \quad = 25 + 82 - 92$

$\quad := 3^5 + 56^2 - 58^2 \quad = 35 + 562 - 582$

$16 := -2^2 - 2^4 + 6^2 \quad = -22 - 24 + 62$

$\quad := -6^4 - 78^2 + 86^2 \quad = -64 - 782 + 862$

$17 := 2^7 + 55^2 - 56^2 \quad = 27 + 552 - 562$

$19 := 2^9 + 246^2 - 247^2 \quad = 29 + 2462 - 2472$

$24 := 2^3 - 2^4 + 2^5 \quad = 23 - 24 + 25$

$\quad := 3^4 + 28^2 - 29^2 \quad = 34 + 282 - 292$

$\quad := 4^4 + 57^2 - 59^2 \quad = 44 + 572 - 592$

$25 := -2^3 - 2^4 + 7^2 \quad = -23 - 24 + 72$

$27 := -10^3 - 33^2 + 46^2 \quad = -103 - 332 + 462$

$\quad := -12^3 - 51^2 + 66^2 \quad = -123 - 512 + 662$

$\quad := -14^3 - 73^2 + 90^2 \quad = -143 - 732 + 902$

$\quad := -16^3 - 99^2 + 118^2 \quad = -163 - 992 + 1182$

$\quad := -18^3 - 129^2 + 150^2 = -183 - 1292 + 1502$

$\quad := -20^3 - 163^2 + 186^2 = -203 - 1632 + 1862$

$\quad := -22^3 - 201^2 + 226^2 = -223 - 2012 + 2262$

$\quad := -24^3 - 243^2 + 270^2 = -243 - 2432 + 2702$

$\quad := -3^2 - 4^3 + 10^2 \quad = -32 - 43 + 102$

$\quad := -6^3 - 9^2 + 18^2 \quad = -63 - 92 + 182$

$\quad := -8^3 - 19^2 + 30^2 \quad = -83 - 192 + 302$

$33 := 2^3 - 12^2 + 13^2 \quad = 23 - 122 + 132$

$$:= 3^4 + 4^2 - 4^3 \qquad = 34 + 42 - 43$$
$$:= 4^3 + 15^2 - 16^2 \qquad = 43 + 152 - 162$$
$$:= 5^3 + 22^2 - 24^2 \qquad = 53 + 222 - 242$$
$$:= 6^3 + 29^2 - 32^2 \qquad = 63 + 292 - 322$$
$$:= 9^3 + 55^2 - 61^2 \qquad = 93 + 552 - 612$$

$$34 := -3^6 - 51^2 + 58^2 \qquad = -36 - 512 + 582$$
$$41 := -2^9 - 36^2 + 43^2 \qquad = -29 - 362 + 432$$
$$42 := 3^2 - 16^2 + 17^2 \qquad = 32 - 162 + 172$$
$$44 := 2^4 - 6^2 + 8^2 \qquad = 24 - 62 + 82$$

$$45 := -2^2 - 2^5 + 9^2 \qquad = -22 - 25 + 92$$
$$:= -3^5 - 14^2 + 22^2 \qquad = -35 - 142 + 222$$

$$47 := -21^3 - 166^2 + 192^2 \quad = -213 - 1662 + 1922$$
$$:= -8^3 - 15^2 + 28^2 \qquad = -83 - 152 + 282$$

$$53 := 13^3 + 130^2 - 138^2 \qquad = 133 + 1302 - 1382$$
$$:= 14^3 + 145^2 - 154^2 \qquad = 143 + 1452 - 1542$$
$$:= 2^3 - 6^2 + 9^2 \qquad = 23 - 62 + 92$$
$$:= 3^4 - 4^3 + 6^2 \qquad = 34 - 43 + 62$$
$$:= 6^3 + 81^2 - 82^2 \qquad = 63 + 812 - 822$$
$$:= 8^3 + 75^2 - 78^2 \qquad = 83 + 752 - 782$$

$$54 := -3^6 - 39^2 + 48^2 \qquad = -36 - 392 + 482$$
$$56 := -7^4 - 88^2 + 101^2 \qquad = -74 - 882 + 1012$$

$$62 := -3^3 + 4^3 + 5^2 \qquad = -33 + 43 + 52$$
$$:= 5^2 - 18^2 + 19^2 \qquad = 52 - 182 + 192$$

$$64 := 2^4 - 4^2 + 8^2 \qquad = 24 - 42 + 82$$
$$:= 2^6 - 4^6 + 8^4 \qquad = 26 - 46 + 84$$

$$65 := -4^5 - 44^2 + 55^2 \qquad = -45 - 442 + 552$$

$$67 := -16^3 - 79^2 + 102^2 \quad = -163 - 792 + 1022$$
$$:= -2^2 - 5^3 + 14^2 \qquad = -22 - 53 + 142$$

$$73 := 10^3 + 153^2 - 156^2 \quad = 103 + 1532 - 1562$$
$$:= 12^3 + 163^2 - 168^2 \quad = 123 + 1632 - 1682$$
$$:= 13^3 + 174^2 - 180^2 \quad = 133 + 1742 - 1802$$
$$:= 16^3 + 219^2 - 228^2 \quad = 163 + 2192 - 2282$$
$$:= 17^3 + 237^2 - 247^2 \quad = 173 + 2372 - 2472$$
$$:= 2^3 - 4^2 + 9^2 \qquad = 23 - 42 + 92$$
$$:= 8^3 + 219^2 - 220^2 \quad = 83 + 2192 - 2202$$
$$:= 9^3 + 163^2 - 165^2 \quad = 93 + 1632 - 1652$$

$$74 := -3^6 - 31^2 + 42^2 \qquad = -36 - 312 + 422$$
$$76 := -6^4 - 42^2 + 56^2 \qquad = -64 - 422 + 562$$

$$82 := 5^2 - 8^2 + 11^2 \qquad = 52 - 82 + 112$$
$$:= 7^2 - 16^2 + 17^2 \qquad = 72 - 162 + 172$$

$$83 := -2^5 - 3^4 + 14^2 \qquad = -25 - 34 + 142$$

$$93 := 12^3 + 271^2 - 274^2 \quad = 123 + 2712 - 2742$$
$$:= 13^3 + 261^2 - 265^2 \quad = 133 + 2612 - 2652$$

$$94 := -3^4 - 3^4 + 16^2 \qquad = -34 - 34 + 162$$

$$102 := 2^3 - 3^3 + 11^2 \qquad = 23 - 33 + 112$$
$$:= 9^2 - 10^2 + 11^2 \qquad = 92 - 102 + 112$$

$$104 := 2^6 - 3^4 + 11^2 \qquad = 26 - 34 + 112$$
$$107 := -13^3 - 36^2 + 60^2 \quad = -133 - 362 + 602$$
$$111 := -2^4 + 3^3 + 10^2 \qquad = -24 + 33 + 102$$
$$120 := 2^3 - 2^5 + 12^2 \qquad = 23 - 25 + 122$$
$$122 := 13^2 + 23^2 - 24^2 \qquad = 132 + 232 - 242$$
$$125 := -2^4 - 7^3 + 22^2 \qquad = -24 - 73 + 222$$

$$127 := -10^3 - 13^2 + 36^2 \quad = -103 - 132 + 362$$
$$:= -17^3 - 69^2 + 99^2 \quad = -173 - 692 + 992$$

$$133 := 14^3 + 29^3 - 30^3 \qquad = 143 + 293 - 303$$

$$134 := -3^5 - 4^3 + 21^2 \quad = -35 - 43 + 212$$

$$142 := 15^2 + 41^2 - 42^2 \quad = 152 + 412 - 422$$
$$:= 17^2 + 23^2 - 26^2 \quad = 172 + 232 - 262$$
$$:= -2^2 + 5^2 + 11^2 \quad = -22 + 52 + 112$$

$$146 := 2^7 - 7^3 + 19^2 \quad = 27 - 73 + 192$$
$$147 := -21^4 - 22^2 + 58^3 \quad = -214 - 222 + 583$$
$$149 := -2^7 + 3^4 + 14^2 \quad = -27 + 34 + 142$$

$$156 := -2^3 - 8^3 + 26^2 \quad = -23 - 83 + 262$$
$$:= -6^4 - 22^2 + 44^2 \quad = -64 - 222 + 442$$

$$160 := 2^5 - 2^7 + 16^2 \quad = 25 - 27 + 162$$
$$:= -3^4 + 4^2 + 15^2 \quad = -34 + 42 + 152$$

$$162 := 17^2 + 63^2 - 64^2 \quad = 172 + 632 - 642$$
$$:= 6^3 - 7^3 + 17^2 \quad = 63 - 73 + 172$$

$$167 := -25^3 - 167^2 + 209^2 \quad = -253 - 1672 + 2092$$
$$169 := -4^9 + 8^6 + 13^2 \quad = -49 + 86 + 132$$
$$180 := -3^4 + 6^2 + 15^2 \quad = -34 + 62 + 152$$
$$181 := -2^9 - 6^2 + 27^2 \quad = -29 - 62 + 272$$

$$182 := 19^2 + 89^2 - 90^2 \quad = 192 + 892 - 902$$
$$:= 5^3 - 7^3 + 20^2 \quad = 53 - 73 + 202$$

$$187 := -29^3 - 232^2 + 280^2 \quad = -293 - 2322 + 2802$$
$$188 := 2^9 - 10^3 + 26^2 \quad = 29 - 103 + 262$$
$$189 := -2^5 + 10^2 + 11^2 \quad = -25 + 102 + 112$$
$$193 := 6^4 - 12^3 + 25^2 \quad = 64 - 123 + 252$$

$$196 := -2^9 + 8^3 + 14^2 \quad = -29 + 83 + 142$$
$$:= -9^4 - 102^2 + 131^2 \quad = -94 - 1022 + 1312$$

$$201 := -2^9 - 4^2 + 27^2 \quad = -29 - 42 + 272$$

$$202 := 21^2 + 119^2 - 120^2 \quad = 212 + 1192 - 1202$$

$$:= 23^2 + 53^2 - 56^2 \quad = 232 + 532 - 562$$
$$:= 29^2 + 31^2 - 40^2 \quad = 292 + 312 - 402$$

$$211 := 5^2 - 7^3 + 23^2 \quad = 52 - 73 + 232$$
$$:= -5^4 + 8^3 + 18^2 \quad = -54 + 83 + 182$$

$$216 := -6^4 - 13^2 + 41^2 \quad = -64 - 132 + 412$$
$$222 := 23^2 + 153^2 - 154^2 \quad = 232 + 1532 - 1542$$
$$235 := 2^6 - 9^3 + 30^2 \quad = 26 - 93 + 302$$
$$242 := 25^2 + 191^2 - 192^2 \quad = 252 + 1912 - 1922$$
$$256 := -8^4 - 47^2 + 81^2 \quad = -84 - 472 + 812$$

$$262 := 27^2 + 233^2 - 234^2 \quad = 272 + 2332 - 2342$$
$$:= 29^2 + 95^2 - 98^2 \quad = 292 + 952 - 982$$
$$:= 35^2 + 49^2 - 58^2 \quad = 352 + 492 - 582$$

$$263 := -4^7 - 253^2 + 284^2 \quad = -47 - 2532 + 2842$$
$$282 := 29^2 + 279^2 - 280^2 \quad = 292 + 2792 - 2802$$
$$289 := -4^6 + 16^3 + 17^2 \quad = -46 + 163 + 172$$
$$300 := 5^2 - 5^4 + 30^2 \quad = 52 - 54 + 302$$
$$302 := 43^2 + 53^2 - 66^2 \quad = 432 + 532 - 662$$
$$307 := -21^3 - 66^2 + 118^2 \quad = -213 - 662 + 1182$$

$$322 := 35^2 + 149^2 - 152^2 \quad = 352 + 1492 - 1522$$
$$:= 41^2 + 71^2 - 80^2 \quad = 412 + 712 - 802$$
$$:= 45^2 + 59^2 - 72^2 \quad = 452 + 592 - 722$$

$$342 := 45^2 + 71^2 - 82^2 \quad = 452 + 712 - 822$$
$$349 := 2^2 - 4^5 + 37^2 \quad = 22 - 45 + 372$$
$$360 := -5^4 + 12^2 + 29^2 \quad = -54 + 122 + 292$$

$$367 := -21^3 - 54^2 + 112^2 \quad = -213 - 542 + 1122$$
$$:= -5^2 - 14^3 + 56^2 \quad = -52 - 143 + 562$$

$$382 := 41^2 + 215^2 - 218^2 \quad = 412 + 2152 - 2182$$
$$:= 47^2 + 97^2 - 106^2 \quad = 472 + 972 - 1062$$

$389 := -6^7 + 22^2 + 23^4 \quad = -67 + 222 + 234$

$400 := -5^4 + 20^2 + 25^2 \quad = -54 + 202 + 252$

$407 := -11^2 - 16^3 + 68^2 \quad = -112 - 163 + 682$

$409 := -4^5 + 8^2 + 37^2 \quad = -45 + 82 + 372$

$422 := 53^2 + 103^2 - 114^2 = 532 + 1032 - 1142$

$434 := -3^4 - 7^4 + 54^2 \quad = -34 - 74 + 542$

$442 := 53^2 + 127^2 - 136^2 = 532 + 1272 - 1362$

$487 := -20^3 - 27^2 + 96^2 \quad = -203 - 272 + 962$

$502 := 59^2 + 161^2 - 170^2 = 592 + 1612 - 1702$

$:= 77^2 + 87^2 - 114^2 \quad = 772 + 872 - 1142$

$527 := -22^3 - 37^2 + 112^2 = -223 - 372 + 1122$

$:= -33^3 - 169^2 + 255^2 = -333 - 1692 + 2552$

$529 := -6^6 + 23^2 + 36^3 \quad = -66 + 232 + 363$

$536 := -3^3 - 17^3 + 74^2 \quad = -33 - 173 + 742$

$556 := -14^3 - 16^3 + 86^2 \quad = -143 - 163 + 862$

$560 := -3^8 + 4^6 + 55^2 \quad = -38 + 46 + 552$

$562 := 65^2 + 199^2 - 208^2 \quad = 652 + 1992 - 2082$

$:= 67^2 + 173^2 - 184^2 \quad = 672 + 1732 - 1842$

$:= 69^2 + 155^2 - 168^2 \quad = 692 + 1552 - 1682$

$:= 89^2 + 95^2 - 128^2 \quad = 892 + 952 - 1282$

$567 := -21^3 - 24^2 + 102^2 \quad = -213 - 242 + 1022$

$582 := 71^2 + 165^2 - 178^2 \quad = 712 + 1652 - 1782$

$600 := 5^3 - 5^5 + 60^2 \quad = 53 - 55 + 602$

$607 := -26^3 - 61^2 + 148^2 \quad = -263 - 612 + 1482$

$616 := -11^4 - 68^2 + 141^2 \quad = -114 - 682 + 1412$

$622 := 71^2 + 241^2 - 250^2 \quad = 712 + 2412 - 2502$

$642 := 75^2 + 221^2 - 232^2 \quad = 752 + 2212 - 2322$

$647 := -28^3 - 75^2 + 168^2 \quad = -283 - 752 + 1682$

$682 := 95^2 + 141^2 - 168^2 \quad = 952 + 1412 - 1682$

$693 := 71^3 + 243^3 - 245^3 \quad = 713 + 2433 - 2453$

$707 := -32^3 - 111^2 + 214^2 = -323 - 1112 + 2142$

$720 := -7^4 + 39^2 + 40^2 \quad = -74 + 392 + 402$

$722 := 95^2 + 169^2 - 192^2 \quad = 952 + 1692 - 1922$

$727 := -32^3 - 107^2 + 212^2 = -323 - 1072 + 2122$

$762 := 41^3 - 42^3 + 77^2 \quad = 413 - 423 + 772$

$762 := 99^2 + 185^2 - 208^2 \quad = 992 + 1852 - 2082$

$767 := -34^3 - 125^2 + 236^2 = -343 - 1252 + 2362$

$776 := -14^4 - 167^2 + 259^2 = -144 - 1672 + 2592$

$827 := -34^3 - 113^2 + 230^2 = -343 - 1132 + 2302$

$862 := 113^2 + 207^2 - 234^2 \quad = 1132 + 2072 - 2342$

$:= 119^2 + 185^2 - 218^2 \quad = 1192 + 1852 - 2182$

$865 := -7^5 - 47^2 + 141^2 \quad = -75 - 472 + 1412$

$882 := 135^2 + 161^2 - 208^2 \quad = 1352 + 1612 - 2082$

$896 := -14^4 - 137^2 + 241^2 = -144 - 1372 + 2412$

$900 := 3^3 - 6^5 + 93^2 \quad = 33 - 65 + 932$

$902 := 149^2 + 151^2 - 210^2 \quad = 1492 + 1512 - 2102$

$909 := -4^8 + 9^5 + 86^2 \quad = -48 + 95 + 862$

$916 := -3^8 + 9^2 + 86^2 \quad = -38 + 92 + 862$

$920 := -9^4 + 16^2 + 85^2 \quad = -94 + 162 + 852$

$967 := -7^2 - 25^3 + 129^2 \quad = -72 - 253 + 1292$

$1000 := 10^3 - 10^6 + 100^3 \quad = 103 - 106 + 1003$

$1007 := -3^2 - 25^3 + 129^2 \quad = -32 - 253 + 1292$

$1047 := -33^3 - 65^2 + 203^2 \quad = -333 - 652 + 2032$

$1049 := -6^5 + 19^2 + 92^2 \quad = -65 + 192 + 922$

$1102 := 157^2 + 227^2 - 274^2 = 1572 + 2272 - 2742$

$:= 7^3 - 25^3 + 128^2 \quad = 73 - 253 + 1282$

$1131 := 23^2 - 23^3 + 113^2 \quad = 232 - 233 + 1132$

$1176 := -13^4 - 48^2 + 179^2 \quad = -134 - 482 + 1792$

$1202 := 5^5 - 7^5 + 122^2 \quad = 55 - 75 + 1222$

$1214 := -3^5 - 28^3 + 153^2 \quad = -35 - 283 + 1532$

$1229 := -6^5 + 46^2 + 83^2 \quad = -65 + 462 + 832$

$1253 := 138^3 + 253^3 - 266^3 = 1383 + 2533 - 2663$

$1369 := -25^9 + 37^2 + 125^6 \quad = -259 + 372 + 1256$

$1414 := -21^5 - 48^4 + 211^3 \quad = -215 - 484 + 2113$

$1502 := 59^3 - 61^3 + 152^2 \quad = 593 - 613 + 1522$

$1525 := -8^5 - 26^2 + 187^2 \quad = -85 - 262 + 1872$

$1567 := -41^3 - 79^2 + 277^2 \quad = -413 - 792 + 2772$

$1582 := 5^3 - 32^3 + 185^2 \quad = 53 - 323 + 1852$

$1591 := -25^3 + 80^2 + 104^2 \quad = -253 + 802 + 1042$

$1662 := 93^3 - 94^3 + 167^2 \quad = 933 - 943 + 1672$

$1696 := -14^4 - 17^2 + 201^2 \quad = -144 - 172 + 2012$

$1940 := -12^4 + 76^2 + 130^2 \quad = -124 + 762 + 1302$

$2102 := 32^3 - 43^3 + 221^2 \quad = 323 - 433 + 2212$

$2334 := -11^4 - 15^4 + 260^2 \quad = -114 - 154 + 2602$

$2511 := 26^2 - 41^3 + 266^2 \quad = 262 - 413 + 2662$

$2521 := -4^3 - 4^8 + 261^2 \quad = -43 - 48 + 2612$

$2542 := 27^3 - 45^3 + 272^2 \quad = 273 - 453 + 2722$

$2991 := -41^3 + 86^2 + 254^2 \quad = -413 + 862 + 2542$

$3049 := -9^5 + 77^2 + 237^2 \quad = -95 + 772 + 2372$

$3300 := -16^4 + 106^2 + 240^2 \quad = -164 + 1062 + 2402$

$3540 := -17^4 + 90^2 + 281^2 \quad = -174 + 902 + 2812$

5.2.2   Only Powers Bigger than One

This subsection brings examples of three term expressions with positive and negative signs, where only powers are bigger than one
In each example, at least there is one term with base one.

$1 := 1^7 + 2^8 - 4^4 \quad = 17 + 28 - 44$

$\quad := 1^8 + 2^6 - 4^3 \quad = 18 + 26 - 43$

$\quad := 1^9 + 2^4 - 4^2 \quad = 19 + 24 - 42$

$6 := 1^4 + 2^5 - 3^3 \quad = 14 + 25 - 33$

$7 := -1^2 - 1^3 + 3^2 \quad = -12 - 13 + 32$

$\quad := -1^2 - 2^3 + 4^2 \quad = -12 - 23 + 42$

$8 := 1^6 + 2^4 - 3^2 \quad = 16 + 24 - 32$

$14 := -1^2 - 1^6 + 4^2 \quad = -12 - 16 + 42$

$\quad := -1^3 - 1^5 + 4^2 \quad = -13 - 15 + 42$

$\quad := -1^4 - 1^4 + 4^2 \quad = -14 - 14 + 42$

$16 := -1^3 - 2^3 + 5^2 \quad = -13 - 23 + 52$

$17 := 1^6 - 2^4 + 2^5 \quad = 16 - 24 + 25$

$19 := 1^8 - 3^2 + 3^3 \quad = 18 - 32 + 33$

$\quad := -1^9 - 2^4 + 6^2 \quad = -19 - 24 + 62$

$21 := -1^8 - 3^3 + 7^2 \quad = -18 - 33 + 72$

$22 := 1^2 - 10^2 + 11^2 \quad = 12 - 102 + 112$

$23 := -1^2 - 1^7 + 5^2 \quad = -12 - 17 + 52$

$\quad := -1^3 - 1^6 + 5^2 \quad = -13 - 16 + 52$

$\quad := -1^4 - 1^5 + 5^2 \quad = -14 - 15 + 52$

$24 := 1^3 - 2^2 + 3^3 \quad = 13 - 22 + 33$

$\quad := 1^4 - 11^2 + 12^2 \quad = 14 - 112 + 122$

$\quad := 6^4 + 157^2 - 161^2 = 64 + 1572 - 1612$

$26 := 1^6 - 12^2 + 13^2 \quad = 16 - 122 + 132$

$27 := 1^2 - 1^8 + 3^3 \quad = 12 - 18 + 33$

$\quad := -1^2 - 2^3 + 6^2 \quad = -12 - 23 + 62$

$\quad := 1^3 - 1^9 + 3^3 \quad = 13 - 19 + 33$

$28 := 1^8 - 13^2 + 14^2 \quad = 18 - 132 + 142$

$31 := -1^7 + 2^4 + 2^4 \quad = -17 + 24 + 24$

$32 := -1^2 + 1^9 + 2^5 \quad = -12 + 19 + 25$

$\quad := -1^6 - 2^4 + 7^2 \quad = -16 - 24 + 72$

$\quad := -2^8 - 21^2 + 27^2 = -28 - 212 + 272$

$33 := 1^3 - 7^2 + 9^2 \quad = 13 - 72 + 92$

$$:= 1^5 - 2^5 + 4^3 \quad = 15 - 25 + 43$$

$$34 := -1^2 - 1^6 + 6^2 \quad = -12 - 16 + 62$$
$$:= -1^3 - 1^5 + 6^2 \quad = -13 - 15 + 62$$
$$:= -1^4 - 1^4 + 6^2 \quad = -14 - 14 + 62$$
$$:= -1^5 - 6^4 + 11^3 \quad = -15 - 64 + 113$$

$$35 := -1^2 + 2^2 + 2^5 \quad = -12 + 22 + 25$$
$$36 := -1^3 - 3^3 + 8^2 \quad = -13 - 33 + 82$$
$$37 := 1^7 - 8^2 + 10^2 \quad = 17 - 82 + 102$$
$$40 := -1^7 + 2^5 + 3^2 \quad = -17 + 25 + 32$$
$$42 := -1^5 + 2^4 + 3^3 \quad = -15 + 24 + 33$$
$$46 := 1^6 - 6^2 + 9^2 \quad = 16 - 62 + 92$$
$$47 := -1^2 - 1^3 + 7^2 \quad = -12 - 13 + 72$$
$$48 := -1^9 - 2^5 + 9^2 \quad = -19 - 25 + 92$$
$$53 := -1^3 + 3^3 + 3^3 \quad = -13 + 33 + 33$$
$$56 := -1^3 - 4^3 + 11^2 \quad = -13 - 43 + 112$$
$$57 := 1^7 - 5^2 + 9^2 \quad = 17 - 52 + 92$$
$$66 := 1^6 - 4^2 + 9^2 \quad = 16 - 42 + 92$$
$$70 := -1^9 - 5^3 + 14^2 \quad = -19 - 53 + 142$$
$$73 := 1^3 - 3^2 + 9^2 \quad = 13 - 32 + 92$$
$$79 := -1^7 - 2^6 + 12^2 \quad = -17 - 26 + 122$$
$$80 := -1^7 + 2^5 + 7^2 \quad = -17 + 25 + 72$$
$$93 := 1^4 - 2^3 + 10^2 \quad = 14 - 23 + 102$$
$$95 := -1^2 + 2^5 + 8^2 \quad = -12 + 25 + 82$$
$$95 := 1^6 - 3^3 + 11^2 \quad = 16 - 33 + 112$$
$$97 := 1^7 - 2^2 + 10^2 \quad = 17 - 22 + 102$$

$$100 := 1^2 - 1^4 + 10^2 \quad = 12 - 14 + 102$$
$$:= 1^3 - 1^5 + 10^2 \quad = 13 - 15 + 102$$

$$:= 1^4 - 1^6 + 10^2 \quad = 14 - 16 + 102$$
$$:= 1^5 - 1^7 + 10^2 \quad = 15 - 17 + 102$$
$$:= 1^6 - 1^8 + 10^2 \quad = 16 - 18 + 102$$
$$:= 1^7 - 1^9 + 10^2 \quad = 17 - 19 + 102$$

$$106 := 1^7 - 4^3 + 13^2 \quad = 17 - 43 + 132$$
$$:= 1^8 - 2^4 + 11^2 \quad = 18 - 24 + 112$$

$$107 := -1^2 - 6^3 + 18^2 \quad = -12 - 63 + 182$$
$$:= -1^8 + 2^3 + 10^2 \quad = -18 + 23 + 102$$
$$:= -1^8 + 3^3 + 9^2 \quad = -18 + 33 + 92$$

$$113 := 1^6 - 2^5 + 12^2 \quad = 16 - 25 + 122$$
$$129 := -1^5 + 3^2 + 11^2 \quad = -15 + 32 + 112$$
$$133 := 1^7 - 2^6 + 14^2 \quad = 17 - 26 + 142$$
$$136 := -1^8 + 4^2 + 11^2 \quad = -18 + 42 + 112$$
$$143 := -1^5 - 4^4 + 20^2 \quad = -15 - 44 + 202$$
$$145 := -1^9 + 5^2 + 11^2 \quad = -19 + 52 + 112$$
$$146 := 1^7 - 6^3 + 19^2 \quad = 17 - 63 + 192$$
$$156 := -1^8 + 6^2 + 11^2 \quad = -18 + 62 + 112$$
$$162 := 1^7 - 2^7 + 17^2 \quad = 17 - 27 + 172$$
$$163 := -1^6 - 8^3 + 26^2 \quad = -16 - 83 + 262$$
$$169 := -1^5 + 7^2 + 11^2 \quad = -15 + 72 + 112$$
$$174 := -3^6 - 11^2 + 32^2 \quad = -36 - 112 + 322$$
$$180 := -1^4 + 9^2 + 10^2 \quad = -14 + 92 + 102$$
$$186 := 1^8 - 4^4 + 21^2 \quad = 18 - 44 + 212$$
$$233 := 1^4 - 9^3 + 31^2 \quad = 14 - 93 + 312$$
$$346 := 1^9 - 4^5 + 37^2 \quad = 19 - 45 + 372$$
$$836 := 1^2 - 3^8 + 86^2 \quad = 12 - 38 + 862$$

6   Four Terms Equalities

This section deals with four terms expressions. Since the quantity is too high, the results are limited only to positive signs expressions. This is divided in two subsections, one with at least one term with base 1 and other with both powers and bases are bigger than 1.

6.1 Powers and Bases Bigger than One

$96 := 2^3 + 2^3 + 2^4 + 2^6 \qquad = 23 + 23 + 24 + 26$

$221 := 2^2 + 2^5 + 4^2 + 13^2 \qquad = 22 + 25 + 42 + 132$

$107 := 2^4 + 2^5 + 2^5 + 3^3 \qquad = 24 + 25 + 25 + 33$

$\quad := 2^4 + 3^2 + 3^3 + 13^2 \qquad = 24 + 32 + 33 + 132$

$121 := 2^2 + 3^2 + 3^3 + 3^4 \qquad = 22 + 32 + 33 + 34$

$\quad := 3^3 + 3^4 + 7^2 + 8^2 \qquad = 33 + 34 + 72 + 82$

$125 := 2^2 + 2^5 + 2^6 + 5^2 \qquad = 22 + 25 + 26 + 52$

$132 := 2^3 + 3^3 + 3^4 + 4^2 \qquad = 23 + 33 + 34 + 42$

$230 := 2^2 + 3^4 + 8^2 + 9^2 \qquad = 22 + 34 + 82 + 92$

$134 := 2^6 + 3^3 + 3^3 + 4^2 \qquad = 26 + 33 + 33 + 42$

$\quad := 2^4 + 3^2 + 3^2 + 14^2 \qquad = 24 + 32 + 32 + 142$

$152 := 2^3 + 3^3 + 3^4 + 6^2 \qquad = 23 + 33 + 34 + 62$

$154 := 2^6 + 3^3 + 3^3 + 6^2 \qquad = 26 + 33 + 33 + 62$

$232 := 2^2 + 2^6 + 8^2 + 10^2 \qquad = 22 + 26 + 82 + 102$

$159 := 3^2 + 3^2 + 4^2 + 5^3 \qquad = 32 + 32 + 42 + 53$

$\quad := 2^5 + 4^3 + 6^2 + 10^2 \qquad = 25 + 43 + 62 + 102$

$234 := 2^5 + 2^5 + 7^2 + 11^2 \qquad = 25 + 25 + 72 + 112$

$161 := 2^2 + 3^3 + 3^4 + 7^2 \qquad = 22 + 33 + 34 + 72$

$\quad := 2^3 + 4^3 + 4^3 + 5^2 \qquad = 23 + 43 + 43 + 52$

$239 := 4^2 + 5^3 + 7^2 + 7^2 \qquad = 42 + 53 + 72 + 72$

$\quad := 5^2 + 5^2 + 5^3 + 8^2 \qquad = 52 + 52 + 53 + 82$

$163 := 2^5 + 3^4 + 5^2 + 5^2 \qquad = 25 + 34 + 52 + 52$

$170 := 2^2 + 2^2 + 3^4 + 9^2 \qquad = 22 + 22 + 34 + 92$

$241 := 2^2 + 2^5 + 6^2 + 13^2 \qquad = 22 + 25 + 62 + 132$

$172 := 2^2 + 2^2 + 2^6 + 10^2 \qquad = 22 + 22 + 26 + 102$

$252 := 2^5 + 3^3 + 7^2 + 12^2 \qquad = 25 + 33 + 72 + 122$

$259 := 5^3 + 6^2 + 7^2 + 7^2 \qquad = 53 + 62 + 72 + 72$

$179 := 2^2 + 5^2 + 5^2 + 5^3 \qquad = 22 + 52 + 52 + 53$

$\quad := 3^2 + 3^2 + 5^3 + 6^2 \qquad = 32 + 32 + 53 + 62$

$261 := 2^2 + 2^5 + 9^2 + 12^2 \qquad = 22 + 25 + 92 + 122$

$\quad := 2^4 + 3^3 + 7^2 + 13^2 \qquad = 24 + 33 + 72 + 132$

$181 := 3^2 + 3^3 + 3^4 + 8^2 \qquad = 32 + 33 + 34 + 82$

$261 := 2^4 + 4^3 + 9^2 + 10^2 \qquad = 24 + 43 + 92 + 102$

$185 := 2^4 + 2^4 + 2^5 + 11^2 \qquad = 24 + 24 + 25 + 112$

$\quad := 2^5 + 2^6 + 5^2 + 8^2 \qquad = 25 + 26 + 52 + 82$

$268 := 2^2 + 2^2 + 8^2 + 14^2 \qquad = 22 + 22 + 82 + 142$

$\quad := 3^2 + 3^2 + 5^2 + 15^2 \qquad = 32 + 32 + 52 + 152$

$194 := 2^5 + 2^5 + 3^2 + 11^2 \qquad = 25 + 25 + 32 + 112$

$199 := 3^2 + 4^2 + 5^3 + 7^2 \qquad = 32 + 42 + 53 + 72$

$270 := 2^2 + 2^4 + 9^2 + 13^2 \qquad = 22 + 24 + 92 + 132$

$201 := 2^3 + 2^3 + 4^3 + 11^2 \qquad = 23 + 23 + 43 + 112$

$\quad := 2^4 + 3^2 + 7^2 + 14^2 \qquad = 24 + 32 + 72 + 142$

$203 := 2^4 + 2^4 + 3^3 + 12^2 \qquad = 24 + 24 + 33 + 122$

$\quad := 3^4 + 5^2 + 8^2 + 10^2 \qquad = 34 + 52 + 82 + 102$

$208 := 2^2 + 2^2 + 2^2 + 14^2 \qquad = 22 + 22 + 22 + 142$

$210 := 2^2 + 3^4 + 5^2 + 10^2 \qquad = 22 + 34 + 52 + 102$

$281 := 2^5 + 4^2 + 8^2 + 13^2 \qquad = 25 + 42 + 82 + 132$

$212 := 2^5 + 3^2 + 3^3 + 12^2 \qquad = 25 + 32 + 33 + 122$

$212 := 2^5 + 4^2 + 4^3 + 10^2 \qquad = 25 + 42 + 43 + 102$

$290 := 2^4 + 3^2 + 11^2 + 12^2 \qquad = 24 + 32 + 112 + 122$

$219 := 3^2 + 5^3 + 6^2 + 7^2 \qquad = 32 + 53 + 62 + 72$

$\quad := 3^4 + 8^2 + 8^2 + 9^2 \qquad = 34 + 82 + 82 + 92$

292 $:= 2^6 + 8^2 + 8^2 + 10^2$ $= 26 + 82 + 82 + 102$ $\qquad := 2^4 + 8^2 + 9^2 + 13^2$ $= 24 + 82 + 92 + 132$

301 $:= 2^5 + 5^2 + 10^2 + 12^2$ $= 25 + 52 + 102 + 122$ $\qquad$ **339** $:= 2^3 + 9^2 + 9^2 + 13^2$ $= 23 + 92 + 92 + 132$
$\quad := 2^5 + 6^2 + 8^2 + 13^2$ $= 25 + 62 + 82 + 132$

348 $:= 2^2 + 10^2 + 10^2 + 12^2 = 22 + 102 + 102 + 122$

308 $:= 2^2 + 4^2 + 12^2 + 12^2$ $= 22 + 42 + 122 + 122$ $\qquad := 3^2 + 7^2 + 11^2 + 13^2$ $= 32 + 72 + 112 + 132$
$\quad := 3^2 + 3^2 + 11^2 + 13^2$ $= 32 + 32 + 112 + 132$ $\qquad := 4^2 + 6^2 + 10^2 + 14^2$ $= 42 + 62 + 102 + 142$
$\quad := 3^2 + 5^2 + 7^2 + 15^2$ $= 32 + 52 + 72 + 152$ $\qquad := 5^2 + 7^2 + 7^2 + 15^2$ $= 52 + 72 + 72 + 152$

310 $:= 2^4 + 5^2 + 10^2 + 13^2$ $= 24 + 52 + 102 + 132$ $\qquad$ **368** $:= 4^2 + 8^2 + 12^2 + 12^2$ $= 42 + 82 + 122 + 122$
$\quad := 2^4 + 7^2 + 7^2 + 14^2$ $= 24 + 72 + 72 + 142$ $\qquad := 6^2 + 6^2 + 10^2 + 14^2$ $= 62 + 62 + 102 + 142$

321 $:= 2^5 + 8^2 + 9^2 + 12^2$ $= 25 + 82 + 92 + 122$ $\qquad$ **388** $:= 5^2 + 11^2 + 11^2 + 11^2 = 52 + 112 + 112 + 112$
$\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad := 6^2 + 8^2 + 12^2 + 12^2$ $= 62 + 82 + 122 + 122$

328 $:= 2^2 + 6^2 + 12^2 + 12^2$ $= 22 + 62 + 122 + 122$ $\qquad := 7^2 + 7^2 + 11^2 + 13^2$ $= 72 + 72 + 112 + 132$
$\quad := 2^2 + 8^2 + 8^2 + 14^2$ $= 22 + 82 + 82 + 142$ $\qquad := 8^2 + 8^2 + 8^2 + 14^2$ $= 82 + 82 + 82 + 142$
$\quad := 4^2 + 4^2 + 10^2 + 14^2$ $= 42 + 42 + 102 + 142$

408 $:= 8^2 + 10^2 + 10^2 + 12^2 = 82 + 102 + 102 + 122$

330 $:= 2^4 + 7^2 + 11^2 + 12^2$ $= 24 + 72 + 112 + 122$

6.2 Only Powers Bigger than One

This subsection bring examples of equality expressions, where at least one term with base 1, but powers are always bigger than one.

67 $:= 1^2 + 1^2 + 1^7 + 2^6$ $= 12 + 12 + 17 + 26$ $\qquad := 1^3 + 1^8 + 1^9 + 3^4$ $= 13 + 18 + 19 + 34$
$\quad := 1^2 + 1^3 + 1^6 + 2^6$ $= 12 + 13 + 16 + 26$ $\qquad := 1^4 + 1^7 + 1^9 + 3^4$ $= 14 + 17 + 19 + 34$
$\quad := 1^2 + 1^4 + 1^5 + 2^6$ $= 12 + 14 + 15 + 26$ $\qquad := 1^4 + 1^8 + 1^8 + 3^4$ $= 14 + 18 + 18 + 34$
$\quad := 1^3 + 1^3 + 1^5 + 2^6$ $= 13 + 13 + 15 + 26$ $\qquad := 1^5 + 1^6 + 1^9 + 3^4$ $= 15 + 16 + 19 + 34$
$\quad := 1^3 + 1^4 + 1^4 + 2^6$ $= 13 + 14 + 14 + 26$ $\qquad := 1^5 + 1^7 + 1^8 + 3^4$ $= 15 + 17 + 18 + 34$
$\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad := 1^6 + 1^6 + 1^8 + 3^4$ $= 16 + 16 + 18 + 34$

74 $:= 1^2 + 1^3 + 2^3 + 2^6$ $= 12 + 13 + 23 + 26$ $\qquad := 1^6 + 1^7 + 1^7 + 3^4$ $= 16 + 17 + 17 + 34$

82 $:= 1^3 + 1^9 + 2^4 + 2^6$ $= 13 + 19 + 24 + 26$ $\qquad$ **85** $:= 1^3 + 2^2 + 2^4 + 2^6$ $= 13 + 22 + 24 + 26$
$\quad := 1^4 + 1^8 + 2^4 + 2^6$ $= 14 + 18 + 24 + 26$
$\quad := 1^5 + 1^7 + 2^4 + 2^6$ $= 15 + 17 + 24 + 26$ $\qquad$ **87** $:= 1^2 + 1^9 + 2^2 + 3^4$ $= 12 + 19 + 22 + 34$
$\quad := 1^6 + 1^6 + 2^4 + 2^6$ $= 16 + 16 + 24 + 26$ $\qquad := 1^3 + 1^8 + 2^2 + 3^4$ $= 13 + 18 + 22 + 34$
$\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad := 1^4 + 1^7 + 2^2 + 3^4$ $= 14 + 17 + 22 + 34$
84 $:= 1^2 + 1^9 + 1^9 + 3^4$ $= 12 + 19 + 19 + 34$ $\qquad := 1^5 + 1^6 + 2^2 + 3^4$ $= 15 + 16 + 22 + 34$

$:= 1^5 + 3^3 + 3^4 + 5^2 \qquad = 15 + 33 + 34 + 52$

$89 := 1^6 + 2^3 + 2^4 + 2^6 \qquad = 16 + 23 + 24 + 26$

$90 := 1^2 + 2^2 + 2^2 + 3^4 \qquad = 12 + 22 + 22 + 34$

$145 := 1^3 + 2^4 + 2^6 + 8^2 \qquad = 13 + 24 + 26 + 82$

$:= 1^6 + 3^3 + 3^4 + 6^2 \qquad = 16 + 33 + 34 + 62$

$91 := 1^5 + 1^9 + 2^3 + 3^4 \qquad = 15 + 19 + 23 + 34$

$:= 1^7 + 4^2 + 4^3 + 4^3 \qquad = 17 + 42 + 43 + 43$

$:= 1^6 + 1^8 + 2^3 + 3^4 \qquad = 16 + 18 + 23 + 34$

$:= 1^7 + 1^7 + 2^3 + 3^4 \qquad = 17 + 17 + 23 + 34$

$147 := 1^2 + 1^7 + 2^6 + 9^2 \qquad = 12 + 17 + 26 + 92$

$:= 1^2 + 1^9 + 3^4 + 8^2 \qquad = 12 + 19 + 34 + 82$

$92 := 1^2 + 1^4 + 3^2 + 3^4 \qquad = 12 + 14 + 32 + 34$

$:= 1^3 + 1^6 + 2^6 + 9^2 \qquad = 13 + 16 + 26 + 92$

$:= 1^3 + 1^3 + 3^2 + 3^4 \qquad = 13 + 13 + 32 + 34$

$:= 1^3 + 1^8 + 3^4 + 8^2 \qquad = 13 + 18 + 34 + 82$

$:= 1^4 + 1^5 + 2^6 + 9^2 \qquad = 14 + 15 + 26 + 92$

$93 := 1^5 + 1^9 + 2^6 + 3^3 \qquad = 15 + 19 + 26 + 33$

$:= 1^4 + 1^7 + 3^4 + 8^2 \qquad = 14 + 17 + 34 + 82$

$:= 1^6 + 1^8 + 2^6 + 3^3 \qquad = 16 + 18 + 26 + 33$

$:= 1^5 + 1^6 + 3^4 + 8^2 \qquad = 15 + 16 + 34 + 82$

$:= 1^7 + 1^7 + 2^6 + 3^3 \qquad = 17 + 17 + 26 + 33$

$:= 1^7 + 2^4 + 3^4 + 7^2 \qquad = 17 + 24 + 34 + 72$

$94 := 1^5 + 2^2 + 2^3 + 3^4 \qquad = 15 + 22 + 23 + 34$

$150 := 1^2 + 2^2 + 3^4 + 8^2 \qquad = 12 + 22 + 34 + 82$

$96 := 1^5 + 2^2 + 2^6 + 3^3 \qquad = 15 + 22 + 26 + 33$

$154 := 1^3 + 2^3 + 2^6 + 9^2 \qquad = 13 + 23 + 26 + 92$

$98 := 1^2 + 1^8 + 2^5 + 4^3 \qquad = 12 + 18 + 25 + 43$

$:= 1^5 + 2^3 + 3^4 + 8^2 \qquad = 15 + 23 + 34 + 82$

$:= 1^3 + 1^7 + 2^5 + 4^3 \qquad = 13 + 17 + 25 + 43$

$:= 1^6 + 4^3 + 4^3 + 5^2 \qquad = 16 + 43 + 43 + 52$

$:= 1^4 + 1^6 + 2^5 + 4^3 \qquad = 14 + 16 + 25 + 43$

$:= 1^5 + 1^5 + 2^5 + 4^3 \qquad = 15 + 15 + 25 + 43$

$156 := 1^5 + 2^6 + 3^3 + 8^2 \qquad = 15 + 26 + 33 + 82$

$:= 1^8 + 2^3 + 2^3 + 3^4 \qquad = 18 + 23 + 23 + 34$

$158 := 1^9 + 3^3 + 3^4 + 7^2 \qquad = 19 + 33 + 34 + 72$

$164 := 1^9 + 1^9 + 3^4 + 9^2 \qquad = 19 + 19 + 34 + 92$

$100 := 1^8 + 2^3 + 2^6 + 3^3 \qquad = 18 + 23 + 26 + 33$

$105 := 1^4 + 2^3 + 2^5 + 4^3 \qquad = 14 + 23 + 25 + 43$

$165 := 1^3 + 2^5 + 2^5 + 10^2 \qquad = 13 + 25 + 25 + 102$

$107 := 1^7 + 2^4 + 3^2 + 3^4 \qquad = 17 + 24 + 32 + 34$

$:= 1^7 + 4^3 + 4^3 + 6^2 \qquad = 17 + 43 + 43 + 62$

$114 := 1^4 + 2^4 + 3^4 + 4^2 \qquad = 14 + 24 + 34 + 42$

$118 := 1^9 + 3^2 + 3^3 + 3^4 \qquad = 19 + 32 + 33 + 34$

$166 := 1^9 + 1^9 + 2^6 + 10^2 \qquad = 19 + 19 + 26 + 102$

$122 := 1^9 + 2^5 + 2^6 + 5^2 \qquad = 19 + 25 + 26 + 52$

$167 := 1^9 + 2^2 + 3^4 + 9^2 \qquad = 19 + 22 + 34 + 92$

$123 := 1^3 + 2^4 + 3^4 + 5^2 \qquad = 13 + 24 + 34 + 52$

$169 := 1^9 + 2^2 + 2^6 + 10^2 \qquad = 19 + 22 + 26 + 102$

$125 := 1^6 + 3^3 + 3^4 + 4^2 \qquad = 16 + 33 + 34 + 42$

$172 := 1^2 + 1^2 + 1^6 + 13^2 \qquad = 12 + 12 + 16 + 132$

$132 := 1^2 + 1^4 + 3^4 + 7^2 \qquad = 12 + 14 + 34 + 72$

$:= 1^2 + 1^3 + 1^5 + 13^2 \qquad = 12 + 13 + 15 + 132$

$:= 1^3 + 1^3 + 3^4 + 7^2 \qquad = 13 + 13 + 34 + 72$

$:= 1^2 + 1^4 + 1^4 + 13^2 \qquad = 12 + 14 + 14 + 132$

$:= 1^3 + 1^3 + 1^4 + 13^2 \qquad = 13 + 13 + 14 + 132$

$134 := 1^4 + 2^4 + 3^4 + 6^2 \qquad = 14 + 24 + 34 + 62$

$:= 1^4 + 3^2 + 3^4 + 9^2 \qquad = 14 + 32 + 34 + 92$

$$:= 1^5 + 1^8 + 3^3 + 13^2 \quad = 15 + 18 + 33 + 132$$

174 $:= 1^4 + 2^6 + 3^2 + 10^2 \quad = 14 + 26 + 32 + 102$

$$:= 1^6 + 1^7 + 3^3 + 13^2 \quad = 16 + 17 + 33 + 132$$

176 $:= 1^9 + 5^2 + 5^2 + 5^3 \quad = 19 + 52 + 52 + 53$

199 $:= 1^9 + 1^9 + 1^9 + 14^2 \quad = 19 + 19 + 19 + 142$

178 $:= 1^2 + 1^9 + 2^5 + 12^2 \quad = 12 + 19 + 25 + 122$

201 $:= 1^4 + 2^2 + 3^3 + 13^2 \quad = 14 + 22 + 33 + 132$

$$:= 1^3 + 1^8 + 2^5 + 12^2 \quad = 13 + 18 + 25 + 122$$

202 $:= 1^9 + 1^9 + 2^2 + 14^2 \quad = 19 + 19 + 22 + 142$

$$:= 1^4 + 1^7 + 2^5 + 12^2 \quad = 14 + 17 + 25 + 122$$

205 $:= 1^7 + 2^3 + 3^3 + 13^2 \quad = 17 + 23 + 33 + 132$

$$:= 1^5 + 1^6 + 2^5 + 12^2 \quad = 15 + 16 + 25 + 122$$

205 $:= 1^9 + 2^2 + 2^2 + 14^2 \quad = 19 + 22 + 22 + 142$

$$:= 1^8 + 2^5 + 4^3 + 9^2 \quad = 18 + 25 + 43 + 92$$

207 $:= 1^4 + 1^9 + 3^2 + 14^2 \quad = 14 + 19 + 32 + 142$

179 $:= 1^2 + 1^2 + 2^3 + 13^2 \quad = 12 + 12 + 23 + 132$

$$:= 1^5 + 1^8 + 3^2 + 14^2 \quad = 15 + 18 + 32 + 142$$

$$:= 1^6 + 1^7 + 3^2 + 14^2 \quad = 16 + 17 + 32 + 142$$

181 $:= 1^2 + 2^2 + 2^5 + 12^2 \quad = 12 + 22 + 25 + 122$

$$:= 1^9 + 3^4 + 5^2 + 10^2 \quad = 19 + 34 + 52 + 102$$

$$:= 1^2 + 2^4 + 4^3 + 10^2 \quad = 12 + 24 + 43 + 102$$

210 $:= 1^2 + 3^4 + 8^2 + 8^2 \quad = 12 + 34 + 82 + 82$

185 $:= 1^5 + 2^3 + 2^5 + 12^2 \quad = 15 + 23 + 25 + 122$

$$:= 1^4 + 2^2 + 3^2 + 14^2 \quad = 14 + 22 + 32 + 142$$

$$:= 2^4 + 2^4 + 2^5 + 11^2 \quad = 24 + 24 + 25 + 112$$

212 $:= 1^4 + 3^4 + 7^2 + 9^2 \quad = 14 + 34 + 72 + 92$

187 $:= 1^2 + 1^9 + 2^4 + 13^2 \quad = 12 + 19 + 24 + 132$

$$:= 1^3 + 1^8 + 2^4 + 13^2 \quad = 13 + 18 + 24 + 132$$

214 $:= 1^2 + 1^8 + 4^2 + 14^2 \quad = 12 + 18 + 42 + 142$

$$:= 1^3 + 1^9 + 4^3 + 11^2 \quad = 13 + 19 + 43 + 112$$

$$:= 1^3 + 1^7 + 4^2 + 14^2 \quad = 13 + 17 + 42 + 142$$

$$:= 1^4 + 1^7 + 2^4 + 13^2 \quad = 14 + 17 + 24 + 132$$

$$:= 1^4 + 1^6 + 4^2 + 14^2 \quad = 14 + 16 + 42 + 142$$

$$:= 1^4 + 1^8 + 4^3 + 11^2 \quad = 14 + 18 + 43 + 112$$

$$:= 1^4 + 2^6 + 7^2 + 10^2 \quad = 14 + 26 + 72 + 102$$

$$:= 1^5 + 1^6 + 2^4 + 13^2 \quad = 15 + 16 + 24 + 132$$

$$:= 1^5 + 1^5 + 4^2 + 14^2 \quad = 15 + 15 + 42 + 142$$

$$:= 1^5 + 1^7 + 4^3 + 11^2 \quad = 15 + 17 + 43 + 112$$

$$:= 1^7 + 2^3 + 3^2 + 14^2 \quad = 17 + 23 + 32 + 142$$

$$:= 1^6 + 1^6 + 4^3 + 11^2 \quad = 16 + 16 + 43 + 112$$

218 $:= 1^9 + 2^5 + 4^2 + 13^2 \quad = 19 + 25 + 42 + 132$

190 $:= 1^2 + 2^2 + 2^4 + 13^2 \quad = 12 + 22 + 24 + 132$

221 $:= 1^4 + 2^3 + 4^2 + 14^2 \quad = 14 + 23 + 42 + 142$

$$:= 1^3 + 2^2 + 4^3 + 11^2 \quad = 13 + 22 + 43 + 112$$

223 $:= 1^2 + 1^7 + 5^2 + 14^2 \quad = 12 + 17 + 52 + 142$

192 $:= 1^4 + 3^3 + 4^3 + 10^2 \quad = 14 + 33 + 43 + 102$

$$:= 1^3 + 1^6 + 5^2 + 14^2 \quad = 13 + 16 + 52 + 142$$

$$:= 1^4 + 1^5 + 5^2 + 14^2 \quad = 14 + 15 + 52 + 142$$

194 $:= 1^5 + 2^3 + 2^4 + 13^2 \quad = 15 + 23 + 24 + 132$

$$:= 1^6 + 2^3 + 4^3 + 11^2 \quad = 16 + 23 + 43 + 112$$

225 $:= 1^8 + 4^2 + 4^3 + 12^2 \quad = 18 + 42 + 43 + 122$

$$:= 2^5 + 2^5 + 3^2 + 11^2 \quad = 25 + 25 + 32 + 112$$

227 $:= 1^7 + 2^6 + 9^2 + 9^2 \quad = 17 + 26 + 92 + 92$

198 $:= 1^4 + 1^9 + 3^3 + 13^2 \quad = 14 + 19 + 33 + 132$

$$:= 1^8 + 2^5 + 5^2 + 13^2 \quad = 18 + 25 + 52 + 132$$

$$:= 1^9 + 3^4 + 8^2 + 9^2 \qquad = 19 + 34 + 82 + 92$$

$$:= 1^4 + 3^3 + 8^2 + 13^2 \qquad = 14 + 33 + 82 + 132$$

$$229 := 1^9 + 2^6 + 8^2 + 10^2 \qquad = 19 + 26 + 82 + 102$$
$$230 := 1^3 + 2^3 + 5^2 + 14^2 \qquad = 13 + 23 + 52 + 142$$

$$234 := 1^2 + 1^8 + 6^2 + 14^2 \qquad = 12 + 18 + 62 + 142$$
$$:= 1^3 + 1^7 + 6^2 + 14^2 \qquad = 13 + 17 + 62 + 142$$
$$:= 1^4 + 1^6 + 6^2 + 14^2 \qquad = 14 + 16 + 62 + 142$$
$$:= 1^5 + 1^5 + 6^2 + 14^2 \qquad = 15 + 15 + 62 + 142$$
$$:= 1^7 + 4^3 + 5^2 + 12^2 \qquad = 17 + 43 + 52 + 122$$
$$:= 2^5 + 2^5 + 7^2 + 11^2 \qquad = 25 + 25 + 72 + 112$$

$$238 := 1^9 + 2^5 + 6^2 + 13^2 \qquad = 19 + 25 + 62 + 132$$

$$241 := 1^2 + 2^5 + 8^2 + 12^2 \qquad = 12 + 25 + 82 + 122$$
$$:= 1^4 + 2^3 + 6^2 + 14^2 \qquad = 14 + 23 + 62 + 142$$

$$245 := 1^8 + 4^3 + 6^2 + 12^2 \qquad = 18 + 43 + 62 + 122$$

$$247 := 1^4 + 1^9 + 7^2 + 14^2 \qquad = 14 + 19 + 72 + 142$$
$$:= 1^5 + 1^8 + 7^2 + 14^2 \qquad = 15 + 18 + 72 + 142$$
$$:= 1^6 + 1^7 + 7^2 + 14^2 \qquad = 16 + 17 + 72 + 142$$

$$250 := 1^2 + 2^4 + 8^2 + 13^2 \qquad = 12 + 24 + 82 + 132$$
$$:= 1^3 + 4^3 + 8^2 + 11^2 \qquad = 13 + 43 + 82 + 112$$
$$:= 1^4 + 2^2 + 7^2 + 14^2 \qquad = 14 + 22 + 72 + 142$$

$$252 := 1^2 + 1^6 + 9^2 + 13^2 \qquad = 12 + 16 + 92 + 132$$
$$:= 1^3 + 1^5 + 9^2 + 13^2 \qquad = 13 + 15 + 92 + 132$$
$$:= 1^4 + 1^4 + 9^2 + 13^2 \qquad = 14 + 14 + 92 + 132$$

$$254 := 1^5 + 2^5 + 10^2 + 11^2 \qquad = 15 + 25 + 102 + 112$$
$$:= 1^7 + 2^3 + 7^2 + 14^2 \qquad = 17 + 23 + 72 + 142$$

$$258 := 1^9 + 2^5 + 9^2 + 12^2 \qquad = 19 + 25 + 92 + 122$$
$$259 := 1^2 + 2^3 + 9^2 + 13^2 \qquad = 12 + 23 + 92 + 132$$

$$261 := 1^3 + 2^4 + 10^2 + 12^2 \qquad = 13 + 24 + 102 + 122$$

$$262 := 1^9 + 1^9 + 8^2 + 14^2 \qquad = 19 + 19 + 82 + 142$$

$$265 := 1^8 + 4^3 + 10^2 + 10^2 \qquad = 18 + 43 + 102 + 102$$
$$:= 1^9 + 2^2 + 8^2 + 14^2 \qquad = 19 + 22 + 82 + 142$$

$$267 := 1^4 + 1^9 + 11^2 + 12^2 \qquad = 14 + 19 + 112 + 122$$
$$:= 1^5 + 1^8 + 11^2 + 12^2 \qquad = 15 + 18 + 112 + 122$$
$$:= 1^6 + 1^7 + 11^2 + 12^2 \qquad = 16 + 17 + 112 + 122$$
$$:= 1^9 + 2^4 + 9^2 + 13^2 \qquad = 19 + 24 + 92 + 132$$

$$270 := 1^3 + 3^3 + 11^2 + 11^2 \qquad = 13 + 33 + 112 + 112$$
$$:= 1^4 + 2^2 + 11^2 + 12^2 \qquad = 14 + 22 + 112 + 122$$
$$:= 1^4 + 3^2 + 8^2 + 14^2 \qquad = 14 + 32 + 82 + 142$$

$$271 := 1^8 + 1^9 + 10^2 + 13^2 \qquad = 18 + 19 + 102 + 132$$
$$272 := 1^5 + 3^3 + 10^2 + 12^2 \qquad = 15 + 33 + 102 + 122$$

$$274 := 1^7 + 2^3 + 11^2 + 12^2 \qquad = 17 + 23 + 112 + 122$$
$$:= 1^8 + 2^2 + 10^2 + 13^2 \qquad = 18 + 22 + 102 + 132$$

$$279 := 1^3 + 3^2 + 10^2 + 13^2 \qquad = 13 + 32 + 102 + 132$$
$$294 := 1^8 + 4^2 + 9^2 + 14^2 \qquad = 18 + 42 + 92 + 142$$
$$303 := 1^7 + 5^2 + 9^2 + 14^2 \qquad = 17 + 52 + 92 + 142$$
$$305 := 1^9 + 4^2 + 12^2 + 12^2 \qquad = 19 + 42 + 122 + 122$$
$$310 := 1^4 + 7^2 + 8^2 + 14^2 \qquad = 14 + 72 + 82 + 142$$

$$314 := 1^8 + 5^2 + 12^2 + 12^2 \qquad = 18 + 52 + 122 + 122$$
$$:= 1^8 + 6^2 + 9^2 + 14^2 \qquad = 18 + 62 + 92 + 142$$

$$319 := 1^3 + 7^2 + 10^2 + 13^2 \qquad = 13 + 72 + 102 + 132$$

$$325 := 1^9 + 6^2 + 12^2 + 12^2 \qquad = 19 + 62 + 122 + 122$$
$$:= 1^9 + 8^2 + 8^2 + 14^2 \qquad = 19 + 82 + 82 + 142$$

$$330 := 1^4 + 8^2 + 11^2 + 12^2 \qquad = 14 + 82 + 112 + 122$$
$$332 := 1^6 + 9^2 + 9^2 + 13^2 \qquad = 16 + 92 + 92 + 132$$

$334 := 1^8 + 8^2 + 10^2 + 13^2 = 18 + 82 + 102 + 132$

$343 := 1^7 + 10^2 + 11^2 + 11^2 = 17 + 102 + 112 + 112$

$345 := 1^9 + 10^2 + 10^2 + 12^2 = 19 + 102 + 102 + 122$

6.3 Positive-Negative Expressions with Powers Bigger Than One

$1 := -2^3 - 2^3 - 2^5 + 7^2 \quad = -23 - 23 - 25 + 72$
$:= 2^4 + 3^6 + 4^4 - 10^3 \quad = 24 + 36 + 44 - 103$
$:= 2^5 + 2^6 + 7^2 - 12^2 \quad = 25 + 26 + 72 - 122$
$:= 2^9 + 10^2 + 17^2 - 30^2 \quad = 29 + 102 + 172 - 302$
$:= 2^9 + 7^2 + 23^2 - 33^2 \quad = 29 + 72 + 232 - 332$

$2 := -2^2 + 3^4 + 37^2 - 38^2 \quad = -22 + 34 + 372 - 382$
$:= -2^3 + 2^6 + 3^3 - 3^4 \quad = -23 + 26 + 33 - 34$
$:= 2^6 - 3^4 - 9^2 + 10^2 \quad = 26 - 34 - 92 + 102$
$:= 2^8 - 3^3 - 3^5 + 4^2 \quad = 28 - 33 - 35 + 42$
$:= -6^2 + 8^4 + 25^3 - 27^3 \quad = -62 + 84 + 253 - 273$

$3 := -2^4 - 5^2 - 5^3 + 13^2 \quad = -24 - 52 - 53 + 132$
$:= -3^4 - 6^3 - 10^2 + 20^2 \quad = -34 - 63 - 102 + 202$

$4 := -2^2 + 3^6 + 15^3 - 16^3 \quad = -22 + 36 + 153 - 163$

$5 := -2^2 - 6^3 - 8^2 + 17^2 \quad = -22 - 63 - 82 + 172$
$:= -2^8 + 9^3 + 36^2 - 42^2 \quad = -28 + 93 + 362 - 422$
$:= -2^9 + 5^4 + 26^2 - 28^2 \quad = -29 + 54 + 262 - 282$
$:= -4^2 - 8^3 - 14^2 + 27^2 \quad = -42 - 83 - 142 + 272$

$6 := 3^2 + 3^4 + 4^2 - 10^2 \quad = 32 + 34 + 42 - 102$
$:= 3^2 + 4^4 + 15^2 - 22^2 \quad = 32 + 44 + 152 - 222$
$:= 5^4 + 9^2 + 18^2 - 32^2 \quad = 54 + 92 + 182 - 322$

$7 := 2^2 - 2^5 - 17^2 + 18^2 \quad = 22 - 25 - 172 + 182$
$:= 2^3 - 3^6 - 10^3 + 12^3 \quad = 23 - 36 - 103 + 123$
$:= 2^5 - 3^8 - 32^3 + 34^3 \quad = 25 - 38 - 323 + 343$
$:= -2^6 + 7^3 + 32^2 - 36^2 \quad = -26 + 73 + 322 - 362$
$:= -2^7 + 12^4 + 23^3 - 32^3 \quad = -27 + 124 + 233 - 323$
$:= -3^6 + 10^3 + 19^2 - 25^2 \quad = -36 + 103 + 192 - 252$
$:= -3^7 + 7^4 + 33^2 - 36^2 \quad = -37 + 74 + 332 - 362$

$7 := -3^8 + 4^8 + 9^2 - 9^5 \quad = -38 + 48 + 92 - 95$
$:= -4^8 + 12^4 + 36^3 - 43^2 \quad = -48 + 124 + 363 - 432$
$:= -6^7 + 23^3 + 24^4 - 40^3 \quad = -67 + 233 + 244 - 403$

$8 := 2^2 + 2^3 + 2^5 - 6^2 \quad = 22 + 23 + 25 - 62$
$:= 2^4 + 4^4 + 19^2 - 25^2 \quad = 24 + 44 + 192 - 252$
$:= 2^6 + 3^2 + 4^2 - 9^2 \quad = 26 + 32 + 42 - 92$
$:= 3^4 + 4^4 + 20^2 - 27^2 \quad = 34 + 44 + 202 - 272$
$:= -3^7 - 5^5 - 8^3 + 18^3 \quad = -37 - 55 - 83 + 183$

$9 := 2^2 - 2^3 - 6^2 + 7^2 \quad = 22 - 23 - 62 + 72$
$:= 2^2 - 3^3 - 7^2 + 9^2 \quad = 22 - 33 - 72 + 92$
$:= 2^2 - 4^3 - 10^2 + 13^2 \quad = 22 - 43 - 102 + 132$
$:= 2^2 - 7^3 - 26^2 + 32^2 \quad = 22 - 73 - 262 + 322$
$:= 2^3 - 2^4 - 8^2 + 9^2 \quad = 23 - 24 - 82 + 92$
$:= -2^4 + 4^3 + 19^2 - 20^2 \quad = -24 + 43 + 192 - 202$
$:= -2^4 + 5^3 + 24^2 - 26^2 \quad = -24 + 53 + 242 - 262$
$:= -2^4 - 2^4 + 2^5 + 3^2 \quad = -24 - 24 + 25 + 32$
$:= 2^4 - 2^5 - 12^2 + 13^2 \quad = 24 - 25 - 122 + 132$
$:= 2^6 - 2^7 - 36^2 + 37^2 \quad = 26 - 27 - 362 + 372$
$:= 3^2 - 3^3 - 13^2 + 14^2 \quad = 32 - 33 - 132 + 142$
$:= 3^2 - 4^3 - 15^2 + 17^2 \quad = 32 - 43 - 152 + 172$
$:= 3^2 - 6^3 - 25^2 + 29^2 \quad = 32 - 63 - 252 + 292$
$:= -3^4 + 5^3 + 17^2 - 18^2 \quad = -34 + 53 + 172 - 182$
$:= 4^2 - 4^3 - 28^2 + 29^2 \quad = 42 - 43 - 282 + 292$
$:= 4^2 - 7^3 - 40^2 + 44^2 \quad = 42 - 73 - 402 + 442$

$10 := 2^5 + 3^5 + 24^2 - 29^2 \quad = 25 + 35 + 242 - 292$
$:= 2^7 + 3^3 + 12^2 - 17^2 \quad = 27 + 33 + 122 - 172$
$:= 2^7 + 9^3 + 33^2 - 44^2 \quad = 27 + 93 + 332 - 442$
$:= 2^8 + 3^2 + 23^2 - 28^2 \quad = 28 + 32 + 232 - 282$
$:= -3^5 - 3^5 - 27^2 + 35^2 \quad = -35 - 35 - 272 + 352$

$11 := -14^2 + 17^3 + 27^3 - 29^3 = -142 + 173 + 273 - 293$

$:= -2^2 + 2^3 - 3^2 + 4^2 \qquad = -22 + 23 - 32 + 42$

$:= -2^2 + 4^3 + 24^2 - 25^2 \qquad = -22 + 43 + 242 - 252$

$:= -2^2 + 6^3 + 32^2 - 35^2 \qquad = -22 + 63 + 322 - 352$

$:= -2^2 + 7^3 + 39^2 - 43^2 \qquad = -22 + 73 + 392 - 432$

$:= 2^4 - 5^3 - 13^2 + 17^2 \qquad = 24 - 53 - 132 + 172$

$:= 2^5 - 3^4 - 14^2 + 16^2 \qquad = 25 - 34 - 142 + 162$

$:= 2^5 - 5^3 - 5^4 + 9^3 \qquad = 25 - 53 - 54 + 93$

$:= 3^5 - 4^4 - 5^2 + 7^2 \qquad = 35 - 44 - 52 + 72$

$:= 5^4 - 9^2 - 9^3 + 14^2 \qquad = 54 - 92 - 93 + 142$

12 $:= -2^3 - 2^4 - 4^3 + 10^2 \qquad = -23 - 24 - 43 + 102$

$:= -2^5 - 6^3 - 8^2 + 18^2 \qquad = -25 - 63 - 82 + 182$

$:= 2^8 + 3^4 + 30^2 - 35^2 \qquad = 28 + 34 + 302 - 352$

$:= -3^5 - 5^3 - 14^2 + 24^2 \qquad = -35 - 53 - 142 + 242$

$:= -3^5 - 8^3 - 23^2 + 36^2 \qquad = -35 - 83 - 232 + 362$

13 $:= 2^6 - 6^3 - 14^2 + 19^2 \qquad = 26 - 63 - 142 + 192$

$:= 2^7 - 4^4 - 22^2 + 25^2 \qquad = 27 - 44 - 222 + 252$

$:= 3^7 - 5^5 - 7^2 + 10^3 \qquad = 37 - 55 - 72 + 103$

14 $:= -2^7 - 2^7 + 3^3 + 3^5 \qquad = -27 - 27 + 33 + 35$

$:= -3^3 - 7^3 - 10^2 + 22^2 \qquad = -33 - 73 - 102 + 222$

$:= -5^2 - 5^3 - 5^3 + 17^2 \qquad = -52 - 53 - 53 + 172$

$:= -5^3 - 10^3 - 25^2 + 42^2 \qquad = -53 - 103 - 252 + 422$

15 $:= -2^7 - 2^8 - 25^2 + 32^2 \qquad = -27 - 28 - 252 + 322$

$:= 2^9 - 5^4 - 14^2 + 18^2 \qquad = 29 - 54 - 142 + 182$

$:= 3^2 + 5^2 + 5^3 - 12^2 \qquad = 32 + 52 + 53 - 122$

$:= 4^2 + 10^3 + 32^2 - 45^2 \qquad = 42 + 103 + 322 - 452$

$:= 6^2 + 8^3 + 14^2 - 27^2 \qquad = 62 + 83 + 142 - 272$

16 $:= 2^2 - 2^5 - 3^4 + 5^3 \qquad = 22 - 25 - 34 + 53$

$:= 2^2 - 2^6 - 18^2 + 20^2 \qquad = 22 - 26 - 182 + 202$

$:= 2^3 - 2^7 - 33^2 + 35^2 \qquad = 23 - 27 - 332 + 352$

$:= -2^6 + 3^2 - 35^2 + 36^2 \qquad = -26 + 32 - 352 + 362$

$:= -2^7 + 6^3 + 17^2 - 19^2 \qquad = -27 + 63 + 172 - 192$

$:= -2^7 + 8^4 + 12^2 - 16^3 \qquad = -27 + 84 + 122 - 163$

$:= -2^7 - 2^7 + 2^8 + 4^2 \qquad = -27 - 27 + 28 + 42$

17 $:= 2^3 + 3^2 + 4^6 - 8^4 \qquad = 23 + 32 + 46 - 84$

$:= 3^3 + 3^3 + 3^3 - 8^2 \qquad = 33 + 33 + 33 - 82$

$:= 3^4 + 5^3 + 10^2 - 17^2 \qquad = 34 + 53 + 102 - 172$

18 $:= -17^4 + 18^2 - 27^4 + 28^4 = -174 + 182 - 274 + 284$

$:= -2^4 + 3^2 - 12^2 + 13^2 \qquad = -24 + 32 - 122 + 132$

$:= -2^5 + 5^3 + 37^2 - 38^2 \qquad = -25 + 53 + 372 - 382$

$:= -2^6 - 3^2 + 3^3 + 4^3 \qquad = -26 - 32 + 33 + 43$

19 $:= 2^4 + 3^5 + 28^2 - 32^2 \qquad = 24 + 35 + 282 - 322$

$:= 2^7 + 4^2 + 10^2 - 15^2 \qquad = 27 + 42 + 102 - 152$

$:= -2^8 - 5^3 - 15^2 + 25^2 \qquad = -28 - 53 - 152 + 252$

$:= 3^3 + 4^6 + 12^3 - 18^3 \qquad = 33 + 46 + 123 - 183$

$:= 3^4 + 3^5 + 28^2 - 33^2 \qquad = 34 + 35 + 282 - 332$

$:= 3^5 + 4^4 + 37^2 - 43^2 \qquad = 35 + 44 + 372 - 432$

20 $:= -10^2 + 13^2 + 24^2 - 25^2 = -102 + 132 + 242 - 252$

$:= -10^2 + 14^2 + 18^2 - 20^2 = -102 + 142 + 182 - 202$

$:= -10^2 + 15^2 + 16^2 - 19^2 = -102 + 152 + 162 - 192$

$:= -12^2 + 16^2 + 22^2 - 24^2 = -122 + 162 + 222 - 242$

$:= -12^2 + 18^2 + 18^2 - 22^2 = -122 + 182 + 182 - 222$

$:= -13^2 + 16^2 + 33^2 - 34^2 = -132 + 162 + 332 - 342$

$:= -13^2 + 17^2 + 24^2 - 26^2 = -132 + 172 + 242 - 262$

$:= -14^2 + 17^2 + 36^2 - 37^2 = -142 + 172 + 362 - 372$

$:= -14^2 + 18^2 + 26^2 - 28^2 = -142 + 182 + 262 - 282$

$:= -15^2 + 18^2 + 39^2 - 40^2 = -152 + 182 + 392 - 402$

$:= -15^2 + 19^2 + 28^2 - 30^2 = -152 + 192 + 282 - 302$

$:= -15^3 + 18^3 + 28^3 - 29^3 = -153 + 183 + 283 - 293$

$:= -16^2 + 19^2 + 42^2 - 43^2 = -162 + 192 + 422 - 432$

$:= -16^2 + 20^2 + 30^2 - 32^2 = -162 + 202 + 302 - 322$

$:= -16^2 + 22^2 + 24^2 - 28^2 = -162 + 222 + 242 - 282$

$:= -18^2 + 22^2 + 34^2 - 36^2 = -182 + 222 + 342 - 362$

$:= -19^2 + 23^2 + 36^2 - 38^2 = -192 + 232 + 362 - 382$

$:= -19^2 + 26^2 + 27^2 - 32^2 = -192 + 262 + 272 - 322$

$:= -2^2 + 3^2 - 7^2 + 8^2 \qquad = -22 + 32 - 72 + 82$

$:= 2^3 - 3^3 - 5^2 + 8^2 \qquad = 23 - 33 - 52 + 82$

$:= 2^3 - 6^3 - 16^2 + 22^2 \qquad = 23 - 63 - 162 + 222$

$:= 2^5 - 3^5 - 37^2 + 40^2 \qquad = 25 - 35 - 372 + 402$

$:= -20^2 + 24^2 + 38^2 - 40^2 = -202 + 242 + 382 - 402$

$:= -20^2 + 26^2 + 30^2 - 34^2 = -202 + 262 + 302 - 342$

$$:= -22^2 + 26^2 + 42^2 - 44^2 = -222 + 262 + 422 - 442$$
$$:= -22^2 + 27^2 + 36^2 - 39^2 = -222 + 272 + 362 - 392$$
$$:= -22^2 + 28^2 + 33^2 - 37^2 = -222 + 282 + 332 - 372$$
$$:= -22^2 + 30^2 + 30^2 - 36^2 = -222 + 302 + 302 - 362$$
$$:= -24^2 + 30^2 + 36^2 - 40^2 = -242 + 302 + 362 - 402$$
$$:= -25^2 + 33^2 + 34^2 - 40^2 = -252 + 332 + 342 - 402$$
$$:= -26^2 + 32^2 + 39^2 - 43^2 = -262 + 322 + 392 - 432$$
$$:= -28^2 + 36^2 + 38^2 - 44^2 = -282 + 362 + 382 - 442$$
$$:= -3^2 + 4^2 - 6^2 + 7^2 = -32 + 42 - 62 + 72$$
$$:= -3^3 + 6^3 + 7^3 - 8^3 = -33 + 63 + 73 - 83$$
$$:= 4^3 - 5^3 - 12^2 + 15^2 = 43 - 53 - 122 + 152$$
$$:= 4^3 - 8^3 - 36^2 + 42^2 = 43 - 83 - 362 + 422$$
$$:= -4^7 + 4^8 - 37^3 + 39^2 = -47 + 48 - 373 + 392$$
$$:= -5^2 + 8^2 + 9^2 - 10^2 = -52 + 82 + 92 - 102$$
$$:= 5^3 - 6^3 - 17^2 + 20^2 = 53 - 63 - 172 + 202$$
$$:= -6^2 + 9^2 + 12^2 - 13^2 = -62 + 92 + 122 - 132$$
$$:= 6^3 - 7^3 - 23^2 + 26^2 = 63 - 73 - 232 + 262$$
$$:= -7^2 + 10^2 + 15^2 - 16^2 = -72 + 102 + 152 - 162$$
$$:= 7^3 - 8^3 - 30^2 + 33^2 = 73 - 83 - 302 + 332$$
$$:= -8^2 + 12^2 + 14^2 - 16^2 = -82 + 122 + 142 - 162$$
$$:= -9^2 + 13^2 + 16^2 - 18^2 = -92 + 132 + 162 - 182$$

$$21 := 2^3 + 2^8 + 39^2 - 42^2 = 23 + 28 + 392 - 422$$
$$:= 2^4 + 2^7 + 19^2 - 22^2 = 24 + 27 + 192 - 222$$
$$:= -2^5 - 3^3 - 4^3 + 12^2 = -25 - 33 - 43 + 122$$
$$:= 2^8 + 5^3 + 27^2 - 33^2 = 28 + 53 + 272 - 332$$
$$:= -7^5 - 9^4 - 10^3 + 29^3 = -75 - 94 - 103 + 293$$

$$22 := 2^5 - 5^3 - 9^2 + 14^2 = 25 - 53 - 92 + 142$$
$$:= 2^6 - 3^3 - 4^3 + 7^2 = 26 - 33 - 43 + 72$$
$$:= 2^6 - 3^4 - 5^2 + 8^2 = 26 - 34 - 52 + 82$$
$$:= 2^8 - 3^3 - 3^5 + 6^2 = 28 - 33 - 35 + 62$$
$$:= -4^2 + 8^4 + 25^3 - 27^3 = -42 + 84 + 253 - 273$$

$$23 := -3^4 - 8^3 - 15^2 + 29^2 = -34 - 83 - 152 + 292$$

$$25 := -2^7 + 3^2 - 35^2 + 37^2 = -27 + 32 - 352 + 372$$
$$:= 2^8 + 2^8 + 5^2 - 8^3 = 28 + 28 + 52 - 83$$
$$:= -2^8 + 4^3 - 8^3 + 9^3 = -28 + 43 - 83 + 93$$

$$:= -2^8 + 8^3 + 37^2 - 40^2 = -28 + 83 + 372 - 402$$
$$:= -2^8 - 2^8 + 2^9 + 5^2 = -28 - 28 + 29 + 52$$
$$:= 2^9 + 3^6 + 8^3 - 12^3 = 29 + 36 + 83 - 123$$
$$:= -3^8 + 4^2 - 17^2 + 19^3 = -38 + 42 - 172 + 193$$

$$26 := 2^3 + 9^3 + 35^2 - 44^2 = 23 + 93 + 352 - 442$$
$$:= 2^9 - 9^2 - 9^3 + 18^2 = 29 - 92 - 93 + 182$$
$$:= 3^2 + 3^4 + 6^2 - 10^2 = 32 + 34 + 62 - 102$$
$$:= 3^3 + 4^2 + 4^3 - 9^2 = 33 + 42 + 43 - 92$$
$$:= 3^3 + 6^3 + 12^2 - 19^2 = 33 + 63 + 122 - 192$$
$$:= 3^3 + 8^3 + 24^2 - 33^2 = 33 + 83 + 242 - 332$$
$$:= 5^2 + 5^4 + 35^2 - 43^2 = 52 + 54 + 352 - 432$$
$$:= 5^3 + 5^3 + 10^2 - 18^2 = 53 + 53 + 102 - 182$$
$$:= 5^3 + 6^3 + 13^2 - 22^2 = 53 + 63 + 132 - 222$$
$$:= 5^4 + 13^2 + 16^2 - 32^2 = 54 + 132 + 162 - 322$$

$$27 := 2^2 - 3^4 - 5^4 + 9^3 = 22 - 34 - 54 + 93$$
$$:= 2^3 - 3^4 - 3^5 + 7^3 = 23 - 34 - 35 + 73$$
$$:= 2^3 - 4^6 - 14^3 + 19^3 = 23 - 46 - 143 + 193$$
$$:= -2^6 + 3^3 - 15^2 + 17^2 = -26 + 33 - 152 + 172$$
$$:= -2^6 + 4^3 - 13^2 + 14^2 = -26 + 43 - 132 + 142$$
$$:= -2^7 + 6^4 + 19^3 - 20^3 = -27 + 64 + 193 - 203$$
$$:= 3^2 - 3^5 - 42^2 + 45^2 = 32 - 35 - 422 + 452$$
$$:= 3^3 - 8^5 - 8^5 + 16^4 = 33 - 85 - 85 + 164$$
$$:= -3^6 + 15^4 + 28^2 - 37^3 = -36 + 154 + 282 - 373$$
$$:= -3^6 + 5^3 - 14^3 + 15^3 = -36 + 53 - 143 + 153$$

$$28 := 2^2 + 2^3 + 2^5 - 4^2 = 22 + 23 + 25 - 42$$
$$:= 2^4 + 3^4 + 10^2 - 13^2 = 24 + 34 + 102 - 132$$
$$:= 2^6 + 3^2 + 6^2 - 9^2 = 26 + 32 + 62 - 92$$
$$:= -2^8 - 4^4 - 22^2 + 32^2 = -28 - 44 - 222 + 322$$
$$:= -2^9 - 3^3 - 27^2 + 36^2 = -29 - 33 - 272 + 362$$
$$:= 3^6 + 12^2 + 26^2 - 39^2 = 36 + 122 + 262 - 392$$

$$29 := 2^2 - 2^3 - 4^2 + 7^2 = 22 - 23 - 42 + 72$$
$$:= 2^2 - 7^3 - 19^2 + 27^2 = 22 - 73 - 192 + 272$$
$$:= -2^3 + 3^2 - 6^2 + 8^2 = -23 + 32 - 62 + 82$$
$$:= 2^4 - 2^5 - 6^2 + 9^2 = 24 - 25 - 62 + 92$$
$$:= 2^4 - 3^5 - 30^2 + 34^2 = 24 - 35 - 302 + 342$$

$$:= 2^6 - 2^7 - 14^2 + 17^2 \qquad = 26 - 27 - 142 + 172$$
$$:= -3^2 - 3^5 + 4^4 + 5^2 \qquad = -32 - 35 + 44 + 52$$
$$:= 3^2 - 5^3 - 12^2 + 17^2 \qquad = 32 - 53 - 122 + 172$$
$$:= -3^3 + 5^2 - 15^2 + 16^2 \qquad = -33 + 52 - 152 + 162$$
$$:= -4^3 + 5^2 - 16^2 + 18^2 \qquad = -43 + 52 - 162 + 182$$
$$:= -4^3 + 6^2 - 28^2 + 29^2 \qquad = -43 + 62 - 282 + 292$$
$$:= -4^4 + 6^3 - 34^2 + 35^2 \qquad = -44 + 63 - 342 + 352$$
$$:= 5^2 - 5^3 - 20^2 + 23^2 \qquad = 52 - 53 - 202 + 232$$
$$:= -5^4 + 9^3 + 37^2 - 38^2 \qquad = -54 + 93 + 372 - 382$$
$$:= 6^2 - 7^3 - 40^2 + 44^2 \qquad = 62 - 73 - 402 + 442$$

30 $:= 2^7 + 7^3 + 28^2 - 35^2 \qquad = 27 + 73 + 282 - 352$

31 $:= -2^2 + 2^3 - 3^2 + 6^2 \qquad = -22 + 23 - 32 + 62$
$$:= 2^4 - 6^3 - 13^2 + 20^2 \qquad = 24 - 63 - 132 + 202$$
$$:= 2^5 - 3^4 - 8^2 + 12^2 \qquad = 25 - 34 - 82 + 122$$
$$:= 2^5 - 4^4 - 23^2 + 28^2 \qquad = 25 - 44 - 232 + 282$$
$$:= 3^4 - 5^2 - 5^3 + 10^2 \qquad = 34 - 52 - 53 + 102$$
$$:= 4^4 - 8^3 - 17^2 + 24^2 \qquad = 44 - 83 - 172 + 242$$

32 $:= 2^3 + 2^9 + 8^3 - 10^3 \qquad = 23 + 29 + 83 - 103$
$$:= 2^4 + 2^4 + 2^8 - 4^4 \qquad = 24 + 24 + 28 - 44$$
$$:= 2^5 + 16^6 + 16^6 - 32^5 \qquad = 25 + 166 + 166 - 325$$
$$:= 2^5 + 2^5 + 2^5 - 4^3 \qquad = 25 + 25 + 25 - 43$$
$$:= 2^6 + 2^6 + 23^2 - 25^2 \qquad = 26 + 26 + 232 - 252$$
$$:= -3^6 - 8^2 - 20^2 + 35^2 \qquad = -36 - 82 - 202 + 352$$

34 $:= -2^9 + 9^3 + 29^2 - 32^2 \qquad = -29 + 93 + 292 - 322$
$$:= -5^2 - 5^3 - 6^3 + 20^2 \qquad = -52 - 53 - 63 + 202$$

35 $:= 2^2 + 4^2 + 4^3 - 7^2 \qquad = 22 + 42 + 43 - 72$
$$:= 2^2 + 7^3 + 23^2 - 29^2 \qquad = 22 + 73 + 232 - 292$$
$$:= 5^2 + 7^3 + 14^2 - 23^2 \qquad = 52 + 73 + 142 - 232$$
$$:= 6^2 + 10^3 + 32^2 - 45^2 \qquad = 62 + 103 + 322 - 452$$

36 $:= 2^2 - 2^6 - 10^2 + 14^2 \qquad = 22 - 26 - 102 + 142$
$$:= -2^6 + 4^2 - 20^2 + 22^2 \qquad = -26 + 42 - 202 + 222$$
$$:= -2^6 + 5^2 - 37^2 + 38^2 \qquad = -26 + 52 - 372 + 382$$
$$:= -2^7 + 4^3 - 24^2 + 26^2 \qquad = -27 + 43 - 242 + 262$$
$$:= -2^7 + 5^3 - 19^2 + 20^2 \qquad = -27 + 53 - 192 + 202$$

$$:= -2^7 - 2^7 + 2^8 + 6^2 \qquad = -27 - 27 + 28 + 62$$
$$:= -2^8 + 4^4 - 8^2 + 10^2 \qquad = -28 + 44 - 82 + 102$$

37 $:= 2^2 + 2^4 + 3^4 - 4^3 \qquad = 22 + 24 + 34 - 43$
$$:= 2^3 + 3^3 + 3^3 - 5^2 \qquad = 23 + 33 + 33 - 52$$
$$:= 2^3 + 3^4 + 12^2 - 14^2 \qquad = 23 + 34 + 122 - 142$$
$$:= 2^4 + 6^3 + 17^2 - 22^2 \qquad = 24 + 63 + 172 - 222$$
$$:= 4^5 + 18^2 + 25^2 - 44^2 \qquad = 45 + 182 + 252 - 442$$

38 $:= -2^2 - 2^6 + 3^4 + 5^2 \qquad = -22 - 26 + 34 + 52$
$$:= 2^2 - 3^4 - 9^2 + 14^2 \qquad = 22 - 34 - 92 + 142$$
$$:= -2^4 + 3^2 - 6^2 + 9^2 \qquad = -24 + 32 - 62 + 92$$
$$:= -2^4 + 3^4 - 3^5 + 6^3 \qquad = -24 + 34 - 35 + 63$$
$$:= -2^4 + 5^2 - 14^2 + 15^2 \qquad = -24 + 52 - 142 + 152$$
$$:= -3^5 + 5^3 - 38^2 + 40^2 \qquad = -35 + 53 - 382 + 402$$
$$:= -3^5 + 6^3 - 32^2 + 33^2 \qquad = -35 + 63 - 322 + 332$$

39 $:= 2^3 + 2^3 + 2^5 - 3^2 \qquad = 23 + 23 + 25 - 32$
$$:= 2^3 + 2^6 + 16^2 - 17^2 \qquad = 23 + 26 + 162 - 172$$
$$:= 2^4 + 2^5 + 4^2 - 5^2 \qquad = 24 + 25 + 42 - 52$$
$$:= 2^5 + 4^4 + 40^2 - 43^2 \qquad = 25 + 44 + 402 - 432$$
$$:= -2^5 - 2^6 - 3^2 + 12^2 \qquad = -25 - 26 - 32 + 122$$
$$:= -2^5 - 3^6 - 35^2 + 45^2 \qquad = -25 - 36 - 352 + 452$$
$$:= 2^6 + 3^3 + 12^2 - 14^2 \qquad = 26 + 33 + 122 - 142$$
$$:= 2^7 + 3^2 + 3^3 - 5^3 \qquad = 27 + 32 + 33 - 53$$

39 $:= 2^7 + 4^2 + 16^2 - 19^2 \qquad = 27 + 42 + 162 - 192$
$$:= 2^7 + 6^2 + 10^2 - 15^2 \qquad = 27 + 62 + 102 - 152$$
$$:= -2^7 - 5^4 - 27^2 + 39^2 \qquad = -27 - 54 - 272 + 392$$
$$:= -2^8 - 9^3 - 24^2 + 40^2 \qquad = -28 - 93 - 242 + 402$$
$$:= -2^9 - 3^2 - 23^2 + 33^2 \qquad = -29 - 32 - 232 + 332$$
$$:= -2^9 - 5^2 - 18^2 + 30^2 \qquad = -29 - 52 - 182 + 302$$
$$:= -2^9 - 8^2 - 13^2 + 28^2 \qquad = -29 - 82 - 132 + 282$$
$$:= 4^4 + 4^4 + 4^4 - 9^3 \qquad = 44 + 44 + 44 - 93$$
$$:= 5^3 + 5^7 + 36^2 - 43^3 \qquad = 53 + 57 + 362 - 433$$

40 $:= -10^2 + 15^2 + 42^2 - 43^2 = -102 + 152 + 422 - 432$
$$:= -10^2 + 16^2 + 28^2 - 30^2 = -102 + 162 + 282 - 302$$
$$:= 10^4 - 14^3 - 20^3 + 28^2 \quad = 104 - 143 - 203 + 282$$
$$:= -12^2 + 18^2 + 34^2 - 36^2 = -122 + 182 + 342 - 362$$

$$:= -12^2 + 20^2 + 25^2 - 29^2 = -122 + 202 + 252 - 292$$
$$:= -12^2 + 22^2 + 22^2 - 28^2 = -122 + 222 + 222 - 282$$
$$:= -13^2 + 19^2 + 37^2 - 39^2 = -132 + 192 + 372 - 392$$
$$:= -13^2 + 22^2 + 25^2 - 30^2 = -132 + 222 + 252 - 302$$

40 $:= 13^4 - 15^4 - 32^3 + 38^3 \quad = 134 - 154 - 323 + 383$
$$:= -14^2 + 20^2 + 40^2 - 42^2 = -142 + 202 + 402 - 422$$
$$:= -14^2 + 22^2 + 29^2 - 33^2 = -142 + 222 + 292 - 332$$
$$:= -15^2 + 22^2 + 35^2 - 38^2 = -152 + 222 + 352 - 382$$
$$:= -15^2 + 25^2 + 27^2 - 33^2 = -152 + 252 + 272 - 332$$
$$:= -16^2 + 24^2 + 33^2 - 37^2 = -162 + 242 + 332 - 372$$
$$:= -17^2 + 25^2 + 35^2 - 39^2 = -172 + 252 + 352 - 392$$
$$:= -17^2 + 28^2 + 29^2 - 36^2 = -172 + 282 + 292 - 362$$
$$:= -18^2 + 25^2 + 42^2 - 45^2 = -182 + 252 + 422 - 452$$
$$:= -18^2 + 27^2 + 34^2 - 39^2 = -182 + 272 + 342 - 392$$
$$:= -18^2 + 28^2 + 32^2 - 38^2 = -182 + 282 + 322 - 382$$
$$:= -19^2 + 27^2 + 39^2 - 43^2 = -192 + 272 + 392 - 432$$

40 $:= -2^2 + 4^2 - 6^2 + 8^2 \quad = -22 + 42 - 62 + 82$
$$:= -2^2 + 5^2 - 9^2 + 10^2 \quad = -22 + 52 - 92 + 102$$
$$:= -2^2 - 2^3 + 3^3 + 5^2 \quad = -22 - 23 + 33 + 52$$
$$:= -23^2 + 35^2 + 37^2 - 45^2 = -232 + 352 + 372 - 452$$
$$:= 3^4 - 4^4 - 19^2 + 24^2 \quad = 34 - 44 - 192 + 242$$
$$:= -4^2 + 10^2 + 10^2 - 12^2 = -42 + 102 + 102 - 122$$
$$:= -4^2 + 9^2 + 12^2 - 13^2 \quad = -42 + 92 + 122 - 132$$
$$:= -4^2 - 4^2 + 6^2 + 6^2 \quad = -42 - 42 + 62 + 62$$
$$:= 4^3 - 6^3 - 13^2 + 19^2 \quad = 43 - 63 - 132 + 192$$
$$:= -5^2 + 10^2 + 17^2 - 18^2 = -52 + 102 + 172 - 182$$
$$:= 5^3 - 8^3 - 27^2 + 34^2 \quad = 53 - 83 - 272 + 342$$

40 $:= -6^2 + 12^2 + 16^2 - 18^2 = -62 + 122 + 162 - 182$
$$:= -6^2 + 13^2 + 14^2 - 17^2 = -62 + 132 + 142 - 172$$
$$:= 6^3 - 9^3 - 36^2 + 43^2 \quad = 63 - 93 - 362 + 432$$
$$:= 6^4 - 8^3 - 10^3 + 16^2 \quad = 64 - 83 - 103 + 162$$
$$:= -7^2 + 12^2 + 27^2 - 28^2 = -72 + 122 + 272 - 282$$
$$:= -7^2 + 15^2 + 15^2 - 19^2 = -72 + 152 + 152 - 192$$
$$:= -8^2 + 13^2 + 32^2 - 33^2 = -82 + 132 + 322 - 332$$
$$:= -8^2 + 14^2 + 22^2 - 24^2 = -82 + 142 + 222 - 242$$
$$:= -9^2 + 14^2 + 37^2 - 38^2 = -92 + 142 + 372 - 382$$

$$:= -9^2 + 15^2 + 25^2 - 27^2 \quad = -92 + 152 + 252 - 272$$
$$:= -9^2 + 17^2 + 19^2 - 23^2 \quad = -92 + 172 + 192 - 232$$

41 $:= -2^4 - 3^5 - 10^2 + 20^2 \quad = -24 - 35 - 102 + 202$
$$:= 2^5 + 2^6 + 27^2 - 28^2 \quad = 25 + 26 + 272 - 282$$
$$:= 2^5 + 2^8 + 3^2 - 4^4 \quad = 25 + 28 + 32 - 44$$
$$:= -2^5 - 3^3 - 5^3 + 15^2 \quad = -25 - 33 - 53 + 152$$
$$:= -2^6 - 7^3 - 9^2 + 23^2 \quad = -26 - 73 - 92 + 232$$
$$:= 2^8 + 4^3 + 4^3 - 7^3 \quad = 28 + 43 + 43 - 73$$

43 $:= 2^2 + 2^8 + 2^9 - 3^6 \quad = 22 + 28 + 29 - 36$

44 $:= 2^8 - 5^4 - 26^2 + 33^2 \quad = 28 - 54 - 262 + 332$

45 $:= -2^4 - 2^7 + 4^3 + 5^3 \quad = -24 - 27 + 43 + 53$
$$:= 2^5 - 2^8 - 3^5 + 8^3 \quad = 25 - 28 - 35 + 83$
$$:= -2^7 + 5^2 - 36^2 + 38^2 \quad = -27 + 52 - 362 + 382$$
$$:= -2^8 + 5^3 - 43^2 + 45^2 \quad = -28 + 53 - 432 + 452$$
$$:= -2^8 + 6^3 - 42^2 + 43^2 \quad = -28 + 63 - 422 + 432$$
$$:= -3^8 + 6^2 - 17^2 + 19^3 \quad = -38 + 62 - 172 + 193$$

46 $:= 2^2 + 3^4 + 19^2 - 20^2 \quad = 22 + 34 + 192 - 202$
$$:= 2^3 + 5^3 + 13^2 - 16^2 \quad = 23 + 53 + 132 - 162$$
$$:= 2^3 + 7^3 + 28^2 - 33^2 \quad = 23 + 73 + 282 - 332$$
$$:= 3^2 + 3^4 + 10^2 - 12^2 \quad = 32 + 34 + 102 - 122$$
$$:= 3^2 + 4^4 + 35^2 - 38^2 \quad = 32 + 44 + 352 - 382$$
$$:= 3^3 + 4^3 + 6^2 - 9^2 \quad = 33 + 43 + 62 - 92$$
$$:= 3^3 + 7^3 + 24^2 - 30^2 \quad = 33 + 73 + 242 - 302$$
$$:= 3^4 + 4^2 + 7^2 - 10^2 \quad = 34 + 42 + 72 - 102$$
$$:= 4^2 + 10^4 + 13^3 - 23^3 \quad = 42 + 104 + 133 - 233$$
$$:= 4^4 + 7^2 + 15^2 - 22^2 \quad = 44 + 72 + 152 - 222$$
$$:= 5^3 + 5^3 + 14^2 - 20^2 \quad = 53 + 53 + 142 - 202$$
$$:= 5^4 + 9^2 + 28^2 - 38^2 \quad = 54 + 92 + 282 - 382$$
$$:= 6^3 + 7^3 + 24^2 - 33^2 \quad = 63 + 73 + 242 - 332$$
$$:= 7^3 + 7^3 + 27^2 - 37^2 \quad = 73 + 73 + 272 - 372$$

47 $:= 2^2 - 2^5 - 5^2 + 10^2 \quad = 22 - 25 - 52 + 102$
$$:= -2^5 + 4^2 - 9^2 + 12^2 \quad = -25 + 42 - 92 + 122$$
$$:= 2^7 - 2^9 - 3^4 + 8^3 \quad = 27 - 29 - 34 + 83$$
$$:= 2^8 + 2^9 + 15^3 - 16^3 \quad = 28 + 29 + 153 - 163$$

$$:= -4^8 + 6^3 - 13^2 + 16^4 \quad = -48 + 63 - 132 + 164$$
$$:= -4^9 + 8^6 - 23^2 + 24^2 \quad = -49 + 86 - 232 + 242$$

48 $:= 2^4 + 3^4 + 24^2 - 25^2 \quad = 24 + 34 + 242 - 252$
$:= 2^4 + 6^5 + 16^2 - 20^3 \quad = 24 + 65 + 162 - 203$
$:= -2^4 - 2^4 - 2^6 + 12^2 \quad = -24 - 24 - 26 + 122$
$:= 2^5 + 3^3 + 5^2 - 6^2 \quad = 25 + 33 + 52 - 62$
$:= 2^5 + 6^3 + 23^2 - 27^2 \quad = 25 + 63 + 232 - 272$
$:= 2^6 + 3^2 + 12^2 - 13^2 \quad = 26 + 32 + 122 - 132$
$:= 2^6 + 4^2 + 7^2 - 9^2 \quad = 26 + 42 + 72 - 92$
$:= -2^8 - 3^4 - 12^2 + 23^2 \quad = -28 - 34 - 122 + 232$
$:= -2^9 - 4^3 - 20^2 + 32^2 \quad = -29 - 43 - 202 + 322$
$:= 3^5 + 5^3 + 38^2 - 42^2 \quad = 35 + 53 + 382 - 422$
$:= 3^6 + 12^2 + 32^2 - 43^2 \quad = 36 + 122 + 322 - 432$

49 $:= 2^2 - 3^2 - 3^3 + 9^2 \quad = 22 - 32 - 33 + 92$
$:= 2^2 - 6^3 - 10^2 + 19^2 \quad = 22 - 63 - 102 + 192$
$:= -2^3 + 3^2 - 4^2 + 8^2 \quad = -23 + 32 - 42 + 82$
$:= -2^3 + 5^2 - 7^2 + 9^2 \quad = -23 + 52 - 72 + 92$
$:= -2^4 - 2^4 + 2^5 + 7^2 \quad = -24 - 24 + 25 + 72$
$:= 2^4 - 2^5 - 4^2 + 9^2 \quad = 24 - 25 - 42 + 92$
$:= 2^4 - 3^5 - 20^2 + 26^2 \quad = 24 - 35 - 202 + 262$
$:= 2^8 - 2^9 - 28^2 + 33^2 \quad = 28 - 29 - 282 + 332$
$:= 3^2 - 6^3 - 12^2 + 20^2 \quad = 32 - 63 - 122 + 202$
$:= -3^3 + 5^2 - 7^2 + 10^2 \quad = -33 + 52 - 72 + 102$

49 $:= -3^3 + 7^2 - 13^2 + 14^2 \quad = -33 + 72 - 132 + 142$
$:= -4^3 + 5^2 - 9^2 + 13^2 \quad = -43 + 52 - 92 + 132$
$:= -4^3 + 7^2 - 15^2 + 17^2 \quad = -43 + 72 - 152 + 172$
$:= -4^3 + 8^2 - 24^2 + 25^2 \quad = -43 + 82 - 242 + 252$
$:= -4^3 - 4^5 + 5^4 + 8^3 \quad = -43 - 45 + 54 + 83$
$:= 5^2 - 6^3 - 17^2 + 23^2 \quad = 52 - 63 - 172 + 232$
$:= -6^3 + 7^2 - 25^2 + 29^2 \quad = -63 + 72 - 252 + 292$
$:= -6^3 + 8^2 - 32^2 + 35^2 \quad = -63 + 82 - 322 + 352$
$:= -7^3 + 8^2 - 39^2 + 43^2 \quad = -73 + 82 - 392 + 432$

50 $:= 2^8 + 5^2 + 37^2 - 40^2 \quad = 28 + 52 + 372 - 402$
$:= 2^8 + 7^2 + 23^2 - 28^2 \quad = 28 + 72 + 232 - 282$
$:= 2^8 + 9^2 + 17^2 - 24^2 \quad = 28 + 92 + 172 - 242$

$$:= 2^9 + 5^2 + 5^2 - 8^3 \quad = 29 + 52 + 52 - 83$$

51 $:= 2^4 - 5^3 - 6^2 + 14^2 \quad = 24 - 53 - 62 + 142$
$:= 8^4 - 17^3 - 24^2 + 38^2 \quad = 84 - 173 - 242 + 382$

52 $:= -3^5 - 5^3 - 8^2 + 22^2 \quad = -35 - 53 - 82 + 222$
$:= 3^9 + 4^5 + 9^2 - 12^4 \quad = 39 + 45 + 92 - 124$

53 $:= -3^2 + 3^7 - 5^5 + 10^3 \quad = -32 + 37 - 55 + 103$

54 $:= -2^5 - 2^6 + 5^2 + 5^3 \quad = -25 - 26 + 52 + 53$
$:= -5^2 - 5^4 - 14^2 + 30^2 \quad = -52 - 54 - 142 + 302$
$:= -5^4 - 9^2 - 9^2 + 29^2 \quad = -54 - 92 - 92 + 292$

55 $:= 2^2 + 2^6 - 2^8 + 3^5 \quad = 22 + 26 - 28 + 35$
$:= 2^2 + 4^3 + 6^2 - 7^2 \quad = 22 + 43 + 62 - 72$
$:= 2^2 + 6^3 + 26^2 - 29^2 \quad = 22 + 63 + 262 - 292$
$:= 2^8 - 9^3 - 16^2 + 28^2 \quad = 28 - 93 - 162 + 282$
$:= 5^2 + 5^3 + 7^2 - 12^2 \quad = 52 + 53 + 72 - 122$
$:= 6^3 + 8^2 + 8^2 - 17^2 \quad = 63 + 82 + 82 - 172$

56 $:= -2^6 + 6^2 - 20^2 + 22^2 \quad = -26 + 62 - 202 + 222$
$:= -2^6 + 7^2 - 35^2 + 36^2 \quad = -26 + 72 - 352 + 362$
$:= -2^7 + 4^3 - 13^2 + 17^2 \quad = -27 + 43 - 132 + 172$
$:= -2^8 + 4^4 - 5^2 + 9^2 \quad = -28 + 44 - 52 + 92$
$:= -2^9 + 3^5 - 30^2 + 35^2 \quad = -29 + 35 - 302 + 352$
$:= -3^6 + 8^2 - 15^3 + 16^3 \quad = -36 + 82 - 153 + 163$

57 $:= 2^2 + 2^6 - 3^3 + 4^2 \quad = 22 + 26 - 33 + 42$
$:= 2^3 + 2^4 - 16^2 + 17^2 \quad = 23 + 24 - 162 + 172$
$:= 2^3 + 4^6 + 7^2 - 8^4 \quad = 23 + 46 + 72 - 84$
$:= 2^4 + 5^3 + 20^2 - 22^2 \quad = 24 + 53 + 202 - 222$
$:= 2^4 - 2^5 + 2^6 + 3^2 \quad = 24 - 25 + 26 + 32$

57 $:= -2^4 - 2^5 - 2^6 + 13^2 \quad = -24 - 25 - 26 + 132$
$:= 3^3 + 3^4 + 25^2 - 26^2 \quad = 33 + 34 + 252 - 262$
$:= 3^4 + 6^3 + 28^2 - 32^2 \quad = 34 + 63 + 282 - 322$
$:= 4^4 + 6^3 + 39^2 - 44^2 \quad = 44 + 63 + 392 - 442$
$:= 4^5 + 23^2 + 23^2 - 45^2 \quad = 45 + 232 + 232 - 452$

58 $:= -2^4 + 3^2 - 4^2 + 9^2$ $= -24 + 32 - 42 + 92$

$:= -2^4 + 7^2 - 12^2 + 13^2$ $= -24 + 72 - 122 + 132$

$:= -2^8 + 3^7 - 13^3 + 18^2$ $= -28 + 37 - 133 + 182$

$:= -3^4 + 8^2 - 37^2 + 38^2$ $= -34 + 82 - 372 + 382$

$:= -3^5 + 5^3 - 20^2 + 24^2$ $= -35 + 53 - 202 + 242$

$:= -5^5 + 15^3 + 22^2 - 26^2$ $= -55 + 153 + 222 - 262$

59 $:= 2^4 + 2^5 - 5^2 + 6^2$ $= 24 + 25 - 52 + 62$

$:= 2^6 + 4^3 + 34^2 - 35^2$ $= 26 + 43 + 342 - 352$

$:= 2^7 + 4^2 + 42^2 - 43^2$ $= 27 + 42 + 422 - 432$

$:= 2^7 + 6^2 + 16^2 - 19^2$ $= 27 + 62 + 162 - 192$

$:= -2^7 - 5^4 - 22^2 + 36^2$ $= -27 - 54 - 222 + 362$

$:= -2^8 - 9^3 - 20^2 + 38^2$ $= -28 - 93 - 202 + 382$

60 $:= -10^2 + 18^2 + 40^2 - 42^2$ $= -102 + 182 + 402 - 422$

$:= -10^2 + 19^2 + 32^2 - 35^2$ $= -102 + 192 + 322 - 352$

$:= -10^2 + 20^2 + 28^2 - 32^2$ $= -102 + 202 + 282 - 322$

$:= -10^2 + 22^2 + 24^2 - 30^2$ $= -102 + 222 + 242 - 302$

$:= -12^2 + 22^2 + 33^2 - 37^2$ $= -122 + 222 + 332 - 372$

60 $:= -12^2 + 23^2 + 30^2 - 35^2$ $= -122 + 232 + 302 - 352$

$:= -12^2 + 24^2 + 28^2 - 34^2$ $= -122 + 242 + 282 - 342$

$:= -13^2 + 25^2 + 30^2 - 36^2$ $= -132 + 252 + 302 - 362$

$:= 13^3 - 13^4 - 24^2 + 30^3$ $= 133 - 134 - 242 + 303$

$:= -14^2 + 24^2 + 38^2 - 42^2$ $= -142 + 242 + 382 - 422$

$:= -14^2 + 26^2 + 32^2 - 38^2$ $= -142 + 262 + 322 - 382$

$:= -14^2 + 28^2 + 29^2 - 37^2$ $= -142 + 282 + 292 - 372$

$:= -15^2 + 27^2 + 34^2 - 40^2$ $= -152 + 272 + 342 - 402$

$:= -16^2 + 28^2 + 36^2 - 42^2$ $= -162 + 282 + 362 - 422$

$:= -17^2 + 29^2 + 38^2 - 44^2$ $= -172 + 292 + 382 - 442$

60 $:= -17^2 + 32^2 + 33^2 - 42^2$ $= -172 + 322 + 332 - 422$

$:= -18^2 + 32^2 + 36^2 - 44^2$ $= -182 + 322 + 362 - 442$

$:= -2^3 + 3^5 - 4^4 + 9^2$ $= -23 + 35 - 44 + 92$

$:= -3^2 + 10^2 + 15^2 - 16^2$ $= -32 + 102 + 152 - 162$

$:= -3^2 - 4^2 + 6^2 + 7^2$ $= -32 - 42 + 62 + 72$

$:= -3^3 + 3^5 - 4^4 + 10^2$ $= -33 + 35 - 44 + 102$

$:= -4^2 + 12^2 + 16^2 - 18^2$ $= -42 + 122 + 162 - 182$

$:= -4^2 + 13^2 + 14^2 - 17^2$ $= -42 + 132 + 142 - 172$

$:= -5^2 + 12^2 + 29^2 - 30^2$ $= -52 + 122 + 292 - 302$

$:= -5^2 + 13^2 + 20^2 - 22^2$ $= -52 + 132 + 202 - 222$

$:= -5^2 + 14^2 + 17^2 - 20^2$ $= -52 + 142 + 172 - 202$

60 $:= -6^2 + 13^2 + 36^2 - 37^2$ $= -62 + 132 + 362 - 372$

$:= -6^2 + 14^2 + 24^2 - 26^2$ $= -62 + 142 + 242 - 262$

$:= -6^2 + 15^2 + 20^2 - 23^2$ $= -62 + 152 + 202 - 232$

$:= -6^2 + 16^2 + 18^2 - 22^2$ $= -62 + 162 + 182 - 222$

$:= -7^2 + 14^2 + 43^2 - 44^2$ $= -72 + 142 + 432 - 442$

$:= -7^2 + 15^2 + 28^2 - 30^2$ $= -72 + 152 + 282 - 302$

$:= -7^2 + 16^2 + 23^2 - 26^2$ $= -72 + 162 + 232 - 262$

60 $:= -7^2 + 18^2 + 19^2 - 24^2$ $= -72 + 182 + 192 - 242$

$:= -8^2 + 16^2 + 32^2 - 34^2$ $= -82 + 162 + 322 - 342$

$:= -8^2 + 17^2 + 26^2 - 29^2$ $= -82 + 172 + 262 - 292$

$:= -8^2 + 18^2 + 23^2 - 27^2$ $= -82 + 182 + 232 - 272$

$:= -8^2 + 20^2 + 20^2 - 26^2$ $= -82 + 202 + 202 - 262$

$:= -9^2 + 17^2 + 36^2 - 38^2$ $= -92 + 172 + 362 - 382$

$:= -9^2 + 18^2 + 29^2 - 32^2$ $= -92 + 182 + 292 - 322$

61 $:= 2^6 + 4^5 + 18^3 - 19^3$ $= 26 + 45 + 183 - 193$

$:= 2^9 + 13^2 + 26^2 - 36^2$ $= 29 + 132 + 262 - 362$

$:= -3^5 - 4^4 - 13^2 + 27^2$ $= -35 - 44 - 132 + 272$

$:= -3^6 - 5^3 - 23^2 + 38^2$ $= -36 - 53 - 232 + 382$

62 $:= 3^5 - 10^3 - 25^2 + 38^2$ $= 35 - 103 - 252 + 382$

63 $:= -5^3 - 5^3 - 6^3 + 23^2$ $= -53 - 53 - 63 + 232$

$:= -5^4 - 8^3 - 20^2 + 40^2$ $= -54 - 83 - 202 + 402$

64 $:= 2^2 + 2^2 - 13^2 + 15^2$ $= 22 + 22 - 132 + 152$

$:= 2^2 + 2^2 - 2^3 + 4^3$ $= 22 + 22 - 23 + 43$

$:= 2^2 + 3^2 - 25^2 + 26^2$ $= 22 + 32 - 252 + 262$

$:= -2^8 - 2^8 - 18^2 + 30^2$ $= -28 - 28 - 182 + 302$

$:= 2^9 - 4^5 - 32^2 + 40^2$ $= 29 - 45 - 322 + 402$

65 $:= -2^2 - 2^2 - 6^3 + 17^2$ $= -22 - 22 - 63 + 172$

$:= 2^2 - 2^7 - 10^2 + 17^2$ $= 22 - 27 - 102 + 172$

$:= -2^6 + 5^2 - 5^4 + 9^3$ $= -26 + 52 - 54 + 93$

$:= -2^7 + 5^2 - 19^2 + 23^2$ $= -27 + 52 - 192 + 232$

$$:= -2^7 + 7^2 - 35^2 + 37^2 \qquad = -27 + 72 - 352 + 372$$
$$:= -2^8 + 6^3 - 16^2 + 19^2 \qquad = -28 + 63 - 162 + 192$$
$$:= -5^2 - 9^2 - 9^3 + 30^2 \qquad = -52 - 92 - 93 + 302$$

$$66 := 2^3 + 3^3 - 15^2 + 16^2 \qquad = 23 + 33 - 152 + 162$$
$$:= 2^3 + 5^3 + 33^2 - 34^2 \qquad = 23 + 53 + 332 - 342$$
$$:= -2^4 + 2^6 + 3^2 + 3^2 \qquad = -24 + 26 + 32 + 32$$
$$:= 2^5 - 2^7 + 3^4 + 3^4 \qquad = 25 - 27 + 34 + 34$$
$$:= 3^3 + 4^3 + 12^2 - 13^2 \qquad = 33 + 43 + 122 - 132$$
$$:= 3^3 + 7^3 + 36^2 - 40^2 \qquad = 33 + 73 + 362 - 402$$
$$:= 3^4 + 4^2 + 15^2 - 16^2 \qquad = 34 + 42 + 152 - 162$$
$$:= 3^4 + 6^2 + 7^2 - 10^2 \qquad = 34 + 62 + 72 - 102$$
$$:= 4^3 + 5^3 + 19^2 - 22^2 \qquad = 43 + 53 + 192 - 222$$
$$:= 5^3 + 6^3 + 25^2 - 30^2 \qquad = 53 + 63 + 252 - 302$$
$$:= 5^4 + 9^2 + 36^2 - 44^2 \qquad = 54 + 92 + 362 - 442$$
$$:= 6^2 + 10^4 + 13^3 - 23^3 \qquad = 62 + 104 + 133 - 233$$

$$67 := -2^5 + 6^2 - 9^2 + 12^2 \qquad = -25 + 62 - 92 + 122$$
$$:= -2^5 + 8^2 - 17^2 + 18^2 \qquad = -25 + 82 - 172 + 182$$
$$:= 3^2 - 3^5 - 18^2 + 25^2 \qquad = 32 - 35 - 182 + 252$$
$$:= -3^5 + 7^2 - 42^2 + 45^2 \qquad = -35 + 72 - 422 + 452$$
$$:= -3^6 + 9^3 - 33^2 + 34^2 \qquad = -36 + 93 - 332 + 342$$

$$68 := 2^3 + 2^5 - 6^2 + 8^2 \qquad = 23 + 25 - 62 + 82$$
$$:= 2^4 + 2^4 - 8^2 + 10^2 \qquad = 24 + 24 - 82 + 102$$
$$:= 2^5 + 3^3 - 4^2 + 5^2 \qquad = 25 + 33 - 42 + 52$$
$$:= 2^5 + 5^3 + 44^2 - 45^2 \qquad = 25 + 53 + 442 - 452$$
$$:= -2^5 - 2^6 - 5^3 + 17^2 \qquad = -25 - 26 - 53 + 172$$
$$:= 2^6 + 6^2 + 7^2 - 9^2 \qquad = 26 + 62 + 72 - 92$$
$$:= 2^8 - 2^9 + 3^4 + 3^5 \qquad = 28 - 29 + 34 + 35$$
$$:= -2^9 - 4^3 - 16^2 + 30^2 \qquad = -29 - 43 - 162 + 302$$

$$69 := -14^4 + 25^2 + 34^3 - 38^2 \qquad = -144 + 252 + 343 - 382$$
$$:= -2^2 + 2^3 - 2^4 + 9^2 \qquad = -22 + 23 - 24 + 92$$
$$:= 2^2 - 10^3 - 28^2 + 43^2 \qquad = 22 - 103 - 282 + 432$$
$$:= -2^3 - 6^2 + 7^2 + 8^2 \qquad = -23 - 62 + 72 + 82$$
$$:= 2^6 - 2^7 - 6^2 + 13^2 \qquad = 26 - 27 - 62 + 132$$

$$69 := 2^6 - 4^7 - 20^3 + 29^3 \qquad = 26 - 47 - 203 + 293$$
$$:= -3^3 - 7^2 + 8^2 + 9^2 \qquad = -33 - 72 + 82 + 92$$

$$:= 3^4 - 3^5 - 13^2 + 20^2 \qquad = 34 - 35 - 132 + 202$$
$$:= -4^3 + 10^2 - 16^2 + 17^2 \qquad = -43 + 102 - 162 + 172$$
$$:= -4^3 + 5^2 - 6^2 + 12^2 \qquad = -43 + 52 - 62 + 122$$
$$:= -4^3 + 8^2 - 10^2 + 13^2 \qquad = -43 + 82 - 102 + 132$$
$$:= -4^3 + 9^2 - 12^2 + 14^2 \qquad = -43 + 92 - 122 + 142$$
$$:= -4^5 + 5^4 - 36^2 + 42^2 \qquad = -45 + 54 - 362 + 422$$
$$:= 5^2 - 7^3 - 17^2 + 26^2 \qquad = 52 - 73 - 172 + 262$$
$$:= -5^3 + 7^2 - 12^2 + 17^2 \qquad = -53 + 72 - 122 + 172$$
$$:= -7^3 + 8^2 - 26^2 + 32^2 \qquad = -73 + 82 - 262 + 322$$

$$70 := 2^5 + 2^8 - 3^5 + 5^2 \qquad = 25 + 28 - 35 + 52$$

$$71 := 2^4 - 4^2 - 5^3 + 14^2 \qquad = 24 - 42 - 53 + 142$$
$$:= 4^5 - 5^2 - 5^5 + 13^3 \qquad = 45 - 52 - 55 + 133$$
$$:= -5^2 + 14^3 + 20^3 - 22^3 \qquad = -52 + 143 + 203 - 223$$

$$72 := -2^2 - 2^5 - 6^3 + 18^2 \qquad = -22 - 25 - 63 + 182$$

$$73 := -2^3 + 2^7 - 6^3 + 13^2 \qquad = -23 + 27 - 63 + 132$$
$$:= 2^7 - 4^3 - 6^3 + 15^2 \qquad = 27 - 43 - 63 + 152$$

$$74 := -2^8 + 5^2 - 28^2 + 33^2 \qquad = -28 + 52 - 282 + 332$$
$$:= -2^8 - 4^5 + 5^4 + 9^3 \qquad = -28 - 45 + 54 + 93$$
$$:= -2^9 + 7^3 - 39^2 + 42^2 \qquad = -29 + 73 - 392 + 422$$
$$:= -2^9 - 3^5 + 3^6 + 10^2 \qquad = -29 - 35 + 36 + 102$$
$$:= -6^4 - 13^2 - 15^2 + 42^2 \qquad = -64 - 132 - 152 + 422$$

$$75 := 2^2 + 2^3 - 9^2 + 12^2 \qquad = 22 + 23 - 92 + 122$$
$$:= 2^2 + 3^3 - 10^2 + 12^2 \qquad = 22 + 33 - 102 + 122$$
$$:= 2^2 - 3^2 + 4^2 + 4^3 \qquad = 22 - 32 + 42 + 43$$
$$:= 2^3 + 4^2 - 25^2 + 26^2 \qquad = 23 + 42 - 252 + 262$$
$$:= 2^4 - 2^5 + 3^3 + 4^3 \qquad = 24 - 25 + 33 + 43$$
$$:= 3^2 + 3^3 - 19^2 + 20^2 \qquad = 32 + 33 - 192 + 202$$
$$:= 3^2 + 5^3 + 29^2 - 30^2 \qquad = 32 + 53 + 292 - 302$$

$$76 := -2^5 - 3^4 + 5^3 + 8^2 \qquad = -25 - 34 + 53 + 82$$
$$:= -2^6 + 5^2 - 9^2 + 14^2 \qquad = -26 + 52 - 92 + 142$$
$$:= -2^6 + 8^2 - 18^2 + 20^2 \qquad = -26 + 82 - 182 + 202$$
$$:= -2^6 + 9^2 - 29^2 + 30^2 \qquad = -26 + 92 - 292 + 302$$
$$:= -3^8 + 9^4 - 18^2 + 20^2 \qquad = -38 + 94 - 182 + 202$$

$$:= -4^2 + 16^2 + 18^2 - 22^2 \quad = -42 + 162 + 182 - 222$$

$77 := 2^2 + 2^6 - 3^3 + 6^2 \qquad = 22 + 26 - 33 + 62$

$\quad := -2^2 + 3^3 + 3^3 + 3^3 \qquad = -22 + 33 + 33 + 33$

$\quad := 2^5 + 3^2 - 8^2 + 10^2 \qquad = 25 + 32 - 82 + 102$

$\quad := 2^5 + 4^2 - 14^2 + 15^2 \qquad = 25 + 42 - 142 + 152$

$78 := -2^4 - 6^2 + 7^2 + 9^2 \qquad = -24 - 62 + 72 + 92$

$\quad := -3^4 + 10^2 - 29^2 + 30^2 \quad = -34 + 102 - 292 + 302$

$\quad := -3^5 + 6^3 - 8^2 + 13^2 \qquad = -35 + 63 - 82 + 132$

$\quad := -5^5 + 15^3 + 42^2 - 44^2 \quad = -55 + 153 + 422 - 442$

$79 := -2^5 - 3^6 - 23^2 + 37^2 \qquad = -25 - 36 - 232 + 372$

$\quad := 2^7 + 3^3 - 5^3 + 7^2 \qquad = 27 + 33 - 53 + 72$

$\quad := 2^7 + 6^2 + 42^2 - 43^2 \qquad = 27 + 62 + 422 - 432$

$\quad := -2^7 - 5^4 - 18^2 + 34^2 \qquad = -27 - 54 - 182 + 342$

$\quad := 3^4 + 6^5 + 35^3 - 37^3 \qquad = 34 + 65 + 353 - 373$

$\quad := 3^8 + 4^2 + 19^2 - 19^3 \qquad = 38 + 42 + 192 - 193$

$\quad := -5^6 - 6^4 - 10^4 + 30^3 \qquad = -56 - 64 - 104 + 303$

$80 := -10^2 + 22^2 + 36^2 - 40^2 = -102 + 222 + 362 - 402$

$\quad := -10^2 + 24^2 + 30^2 - 36^2 = -102 + 242 + 302 - 362$

$\quad := -10^2 + 26^2 + 27^2 - 35^2 = -102 + 262 + 272 - 352$

$\quad := 12^3 - 13^3 - 26^2 + 35^2 \quad = 123 - 133 - 262 + 352$

$\quad := -13^2 + 27^2 + 37^2 - 43^2 = -132 + 272 + 372 - 432$

$\quad := -14^2 + 30^2 + 35^2 - 43^2 = -142 + 302 + 352 - 432$

$\quad := 14^3 - 15^3 - 35^2 + 44^2 \quad = 143 - 153 - 352 + 442$

$\quad := -16^3 + 27^3 + 40^3 - 43^3 = -163 + 273 + 403 - 433$

$\quad := -2^2 + 12^2 + 14^2 - 16^2 \quad = -22 + 122 + 142 - 162$

$\quad := -2^2 - 4^2 + 6^2 + 8^2 \qquad = -22 - 42 + 62 + 82$

$80 := 2^3 - 6^2 - 6^3 + 18^2 \qquad = 23 - 62 - 63 + 182$

$\quad := -2^4 + 3^5 - 7^3 + 14^2 \qquad = -24 + 35 - 73 + 142$

$\quad := -2^6 + 2^8 - 4^4 + 12^2 \qquad = -26 + 28 - 44 + 122$

$\quad := -3^2 + 12^2 + 27^2 - 28^2 \quad = -32 + 122 + 272 - 282$

$\quad := -3^2 + 15^2 + 15^2 - 19^2 \quad = -32 + 152 + 152 - 192$

$\quad := -3^2 - 3^2 + 7^2 + 7^2 \qquad = -32 - 32 + 72 + 72$

$\quad := -4^2 + 13^2 + 36^2 - 37^2 \quad = -42 + 132 + 362 - 372$

$\quad := -4^2 + 14^2 + 24^2 - 26^2 \quad = -42 + 142 + 242 - 262$

$\quad := -4^2 + 15^2 + 20^2 - 23^2 \quad = -42 + 152 + 202 - 232$

$80 := 4^3 - 8^3 - 16^2 + 28^2 \qquad = 43 - 83 - 162 + 282$

$\quad := 4^4 - 6^3 - 6^3 + 16^2 \qquad = 44 - 63 - 63 + 162$

$\quad := -5^2 + 5^3 - 6^3 + 14^2 \qquad = -52 + 53 - 63 + 142$

$\quad := -6^2 + 16^2 + 34^2 - 36^2 \quad = -62 + 162 + 342 - 362$

$\quad := -6^2 + 18^2 + 24^2 - 28^2 \quad = -62 + 182 + 242 - 282$

$\quad := -6^2 + 19^2 + 22^2 - 27^2 \quad = -62 + 192 + 222 - 272$

$\quad := 6^3 - 10^3 - 30^2 + 42^2 \qquad = 63 - 103 - 302 + 422$

$\quad := 6^3 - 7^2 - 7^3 + 16^2 \qquad = 63 - 72 - 73 + 162$

$\quad := -7^3 + 18^3 + 23^3 - 26^3 \qquad = -73 + 183 + 233 - 263$

$80 := 7^3 - 10^3 - 28^2 + 39^2 \qquad = 73 - 103 - 282 + 392$

$\quad := -8^2 + 20^2 + 30^2 - 34^2 \qquad = -82 + 202 + 302 - 342$

$\quad := -9^2 + 25^2 + 25^2 - 33^2 \qquad = -92 + 252 + 252 - 332$

$\quad := 9^3 - 10^3 - 15^2 + 24^2 \qquad = 93 - 103 - 152 + 242$

$81 := 2^5 + 2^8 - 4^4 + 7^2 \qquad = 25 + 28 - 44 + 72$

$\quad := 2^8 + 4^4 - 8^3 + 9^2 \qquad = 28 + 44 - 83 + 92$

$\quad := 2^9 + 17^2 + 24^2 - 36^2 \qquad = 29 + 172 + 242 - 362$

$\quad := -3^6 - 5^3 - 19^2 + 36^2 \qquad = -36 - 53 - 192 + 362$

$\quad := -8^9 - 8^9 + 9^2 + 16^7 \qquad = -89 - 89 + 92 + 167$

$82 := 2^2 - 2^7 + 3^4 + 5^3 \qquad = 22 - 27 + 34 + 53$

$\quad := 3^5 - 7^2 - 8^3 + 20^2 \qquad = 35 - 72 - 83 + 202$

$\quad := 3^6 - 6^4 - 24^2 + 35^2 \qquad = 36 - 64 - 242 + 352$

$83 := -4^5 - 9^2 - 16^2 + 38^2 \qquad = -45 - 92 - 162 + 382$

$\quad := -5^3 - 5^3 - 7^3 + 26^2 \qquad = -53 - 53 - 73 + 262$

$84 := 2^2 + 4^2 - 15^2 + 17^2 \qquad = 22 + 42 - 152 + 172$

$\quad := 2^2 + 5^2 - 27^2 + 28^2 \qquad = 22 + 52 - 272 + 282$

$\quad := -2^4 + 3^2 + 3^3 + 4^3 \qquad = -24 + 32 + 33 + 43$

$\quad := 2^7 - 5^2 - 7^3 + 18^2 \qquad = 27 - 52 - 73 + 182$

$\quad := 3^2 + 4^2 - 29^2 + 30^2 \qquad = 32 + 42 - 292 + 302$

$85 := 2^3 - 2^8 - 14^2 + 23^2 \qquad = 23 - 28 - 142 + 232$

$\quad := -2^5 - 2^6 + 3^4 + 10^2 \qquad = -25 - 26 + 34 + 102$

$\quad := -2^7 + 9^2 - 32^2 + 34^2 \qquad = -27 + 92 - 322 + 342$

$\quad := -2^8 + 6^3 - 10^2 + 15^2 \qquad = -28 + 63 - 102 + 152$

$$86 := 2^3 + 3^3 - 7^2 + 10^2 \qquad = 23 + 33 - 72 + 102$$
$$:= 2^4 + 5^2 - 22^2 + 23^2 \qquad = 24 + 52 - 222 + 232$$
$$:= 3^3 + 3^3 - 7^2 + 9^2 \qquad = 33 + 33 - 72 + 92$$
$$:= 3^4 + 6^2 + 15^2 - 16^2 \qquad = 34 + 62 + 152 - 162$$
$$:= 3^4 + 7^2 + 10^2 - 12^2 \qquad = 34 + 72 + 102 - 122$$
$$:= 4^4 + 7^2 + 35^2 - 38^2 \qquad = 44 + 72 + 352 - 382$$
$$:= 5^3 + 5^3 + 40^2 - 42^2 \qquad = 53 + 53 + 402 - 422$$

$$87 := -2^3 - 2^5 + 3^3 + 10^2 \qquad = -23 - 25 + 33 + 102$$
$$:= -2^5 + 12^2 + 12^2 - 13^2 \qquad = -25 + 122 + 122 - 132$$
$$:= -2^5 - 9^2 + 10^2 + 10^2 \qquad = -25 - 92 + 102 + 102$$
$$:= -3^4 - 4^4 + 7^3 + 9^2 \qquad = -34 - 44 + 73 + 92$$
$$:= -3^4 - 5^4 + 8^2 + 9^3 \qquad = -34 - 54 + 82 + 93$$
$$:= -3^5 + 9^2 - 40^2 + 43^2 \qquad = -35 + 92 - 402 + 432$$
$$:= -3^6 + 8^3 - 36^2 + 40^2 \qquad = -36 + 83 - 362 + 402$$
$$:= -3^6 + 9^3 - 13^2 + 16^2 \qquad = -36 + 93 - 132 + 162$$
$$:= -5^6 + 15^4 + 32^2 - 33^3 \qquad = -56 + 154 + 322 - 333$$

$$88 := 2^2 + 2^7 - 5^3 + 9^2 \qquad = 22 + 27 - 53 + 92$$
$$:= 2^3 + 2^5 - 4^2 + 8^2 \qquad = 23 + 25 - 42 + 82$$
$$:= -2^3 - 2^7 - 6^5 + 20^3 \qquad = -23 - 27 - 65 + 203$$
$$:= 2^4 + 2^4 - 5^2 + 9^2 \qquad = 24 + 24 - 52 + 92$$
$$:= -2^5 - 2^6 - 6^3 + 20^2 \qquad = -25 - 26 - 63 + 202$$

$$88 := 2^6 + 4^3 - 4^4 + 6^3 \qquad = 26 + 43 - 44 + 63$$
$$:= 2^6 + 7^2 + 12^2 - 13^2 \qquad = 26 + 72 + 122 - 132$$
$$:= -2^7 - 3^3 - 3^4 + 18^2 \qquad = -27 - 33 - 34 + 182$$
$$:= -2^7 - 3^4 - 4^3 + 19^2 \qquad = -27 - 34 - 43 + 192$$
$$:= 2^7 - 3^6 + 4^3 + 5^4 \qquad = 27 - 36 + 43 + 54$$
$$:= -2^8 - 5^4 - 20^2 + 37^2 \qquad = -28 - 54 - 202 + 372$$

$$89 := -2^3 + 12^2 + 23^2 - 24^2 \qquad = -23 + 122 + 232 - 242$$
$$:= -2^3 + 13^2 + 17^2 - 19^2 \qquad = -23 + 132 + 172 - 192$$
$$:= -2^3 + 14^2 + 15^2 - 18^2 \qquad = -23 + 142 + 152 - 182$$
$$:= -2^3 - 3^2 + 5^2 + 9^2 \qquad = -23 - 32 + 52 + 92$$
$$:= -2^3 - 4^2 + 7^2 + 8^2 \qquad = -23 - 42 + 72 + 82$$
$$:= 2^6 - 2^7 - 4^2 + 13^2 \qquad = 26 - 27 - 42 + 132$$
$$:= -3^2 - 3^3 + 5^2 + 10^2 \qquad = -32 - 33 + 52 + 102$$

$$:= -3^3 + 13^2 + 26^2 - 27^2 \qquad = -33 + 132 + 262 - 272$$
$$:= -4^2 - 4^3 + 5^2 + 12^2 \qquad = -42 - 43 + 52 + 122$$
$$:= 4^2 - 8^3 - 16^2 + 29^2 \qquad = 42 - 83 - 162 + 292$$

$$89 := -4^3 + 15^2 + 17^2 - 19^2 \qquad = -43 + 152 + 172 - 192$$
$$:= 5^2 - 5^3 - 6^2 + 15^2 \qquad = 52 - 53 - 62 + 152$$
$$:= 5^2 - 6^3 - 9^2 + 19^2 \qquad = 52 - 63 - 92 + 192$$
$$:= 5^2 - 7^3 - 13^2 + 24^2 \qquad = 52 - 73 - 132 + 242$$
$$:= 5^2 - 8^3 - 18^2 + 30^2 \qquad = 52 - 83 - 182 + 302$$
$$:= 5^2 - 9^3 - 24^2 + 37^2 \qquad = 52 - 93 - 242 + 372$$
$$:= -5^3 + 13^2 - 22^2 + 23^2 \qquad = -53 + 132 - 222 + 232$$
$$:= -5^4 + 7^3 - 23^2 + 30^2 \qquad = -54 + 73 - 232 + 302$$
$$:= -6^3 + 10^2 - 18^2 + 23^2 \qquad = -63 + 102 - 182 + 232$$
$$:= -6^3 + 13^2 - 33^2 + 35^2 \qquad = -63 + 132 - 332 + 352$$

$$89 := -6^3 + 7^2 - 12^2 + 20^2 \qquad = -63 + 72 - 122 + 202$$
$$:= -7^3 + 12^2 - 34^2 + 38^2 \qquad = -73 + 122 - 342 + 382$$
$$:= -7^3 + 8^2 - 19^2 + 27^2 \qquad = -73 + 82 - 192 + 272$$
$$:= -8^4 + 16^3 - 44^2 + 45^2 \qquad = -84 + 163 - 442 + 452$$

$$90 := -3^5 - 3^5 - 10^2 + 26^2 \qquad = -35 - 35 - 102 + 262$$

$$91 := -2^2 + 2^5 - 3^4 + 12^2 \qquad = -22 + 25 - 34 + 122$$
$$:= 3^5 - 5^4 - 16^2 + 27^2 \qquad = 35 - 54 - 162 + 272$$
$$:= 6^4 - 13^3 - 23^2 + 39^2 \qquad = 64 - 133 - 232 + 392$$
$$:= -8^2 + 18^3 + 43^3 - 44^3 \qquad = -82 + 183 + 433 - 443$$

$$92 := -2^2 - 3^6 - 20^2 + 35^2 \qquad = -22 - 36 - 202 + 352$$
$$:= -2^4 - 5^3 - 7^3 + 24^2 \qquad = -24 - 53 - 73 + 242$$
$$:= -3^5 - 5^2 - 6^3 + 24^2 \qquad = -35 - 52 - 63 + 242$$

$$93 := 2^4 - 2^6 + 4^2 + 5^3 \qquad = 24 - 26 + 42 + 53$$
$$:= -2^8 + 3^4 + 3^5 + 5^2 \qquad = -28 + 34 + 35 + 52$$
$$:= 3^9 - 5^7 - 28^2 + 39^3 \qquad = 39 - 57 - 282 + 393$$

$$95 := 2^2 + 3^3 - 6^2 + 10^2 \qquad = 22 + 33 - 62 + 102$$
$$:= 2^2 - 3^2 + 4^3 + 6^2 \qquad = 22 - 32 + 43 + 62$$
$$:= 2^3 + 2^8 - 2^9 + 7^3 \qquad = 23 + 28 - 29 + 73$$
$$:= 2^3 + 6^2 - 25^2 + 26^2 \qquad = 23 + 62 - 252 + 262$$
$$:= -3^3 + 3^4 + 4^2 + 5^2 \qquad = -33 + 34 + 42 + 52$$

$$95 := 3^3 + 4^2 - 12^2 + 14^2 \quad = 33 + 42 - 122 + 142$$
$$:= 4^2 + 4^3 - 7^2 + 8^2 \quad = 42 + 43 - 72 + 82$$
$$:= 5^2 + 5^3 + 27^2 - 28^2 \quad = 52 + 53 + 272 - 282$$
$$:= 7^3 + 8^2 + 23^2 - 29^2 \quad = 73 + 82 + 232 - 292$$
$$:= 7^3 + 9^2 + 20^2 - 27^2 \quad = 73 + 92 + 202 - 272$$

$$96 := -2^2 - 2^8 + 4^4 + 10^2 \quad = -22 - 28 + 44 + 102$$
$$:= 2^4 - 2^5 - 2^5 + 12^2 \quad = 24 - 25 - 25 + 122$$
$$:= -2^6 + 10^2 - 14^2 + 16^2 \quad = -26 + 102 - 142 + 162$$
$$:= -2^6 + 4^2 - 5^2 + 13^2 \quad = -26 + 42 - 52 + 132$$
$$:= -2^6 + 8^2 - 10^2 + 14^2 \quad = -26 + 82 - 102 + 142$$
$$:= -2^7 + 4^3 - 6^2 + 14^2 \quad = -27 + 43 - 62 + 142$$
$$:= -3^8 + 9^4 - 10^2 + 14^2 \quad = -38 + 94 - 102 + 142$$

$$97 := -2^3 + 2^6 + 4^2 + 5^2 \quad = -23 + 26 + 42 + 52$$
$$:= 2^4 + 3^4 - 4^3 + 8^2 \quad = 24 + 34 - 43 + 82$$
$$:= 2^4 - 2^5 + 2^6 + 7^2 \quad = 24 - 25 + 26 + 72$$
$$:= 2^5 + 3^2 - 5^2 + 9^2 \quad = 25 + 32 - 52 + 92$$
$$:= 2^5 + 6^2 - 14^2 + 15^2 \quad = 25 + 62 - 142 + 152$$
$$:= 2^7 - 3^4 + 5^2 + 5^2 \quad = 27 - 34 + 52 + 52$$
$$:= 3^5 + 13^2 + 19^2 - 26^2 \quad = 35 + 132 + 192 - 262$$
$$:= 4^2 + 4^9 - 8^6 + 9^2 \quad = 42 + 49 - 86 + 92$$

$$98 := -2^4 + 13^2 + 27^2 - 28^2 \quad = -24 + 132 + 272 - 282$$
$$:= -2^4 + 15^2 + 17^2 - 20^2 \quad = -24 + 152 + 172 - 202$$
$$:= -2^4 - 4^2 + 7^2 + 9^2 \quad = -24 - 42 + 72 + 92$$
$$:= -3^3 + 5^3 - 8^8 + 16^6 \quad = -33 + 53 - 88 + 166$$
$$:= -3^4 + 12^2 - 17^2 + 18^2 \quad = -34 + 122 - 172 + 182$$
$$:= -3^4 + 8^2 - 9^2 + 14^2 \quad = -34 + 82 - 92 + 142$$

$$99 := -2^2 - 2^9 - 13^2 + 28^2 \quad = -22 - 29 - 132 + 282$$
$$:= 2^7 + 10^2 + 20^2 - 23^2 \quad = 27 + 102 + 202 - 232$$
$$:= 3^5 + 7^5 + 25^2 - 26^3 \quad = 35 + 75 + 252 - 263$$
$$:= -3^5 - 3^6 - 23^2 + 40^2 \quad = -35 - 36 - 232 + 402$$
$$:= 3^7 + 8^3 + 12^2 - 14^3 \quad = 37 + 83 + 122 - 143$$
$$:= 3^7 + 9^2 + 14^3 - 17^3 \quad = 37 + 92 + 143 - 173$$
$$:= 3^8 + 6^2 + 19^2 - 19^3 \quad = 38 + 62 + 192 - 193$$

$$100 := -10^2 + 25^2 + 40^2 - 45^2 = -102 + 252 + 402 - 452$$

$$:= -10^2 + 30^2 + 30^2 - 40^2 = -102 + 302 + 302 - 402$$
$$:= -12^2 + 30^2 + 37^2 - 45^2 = -122 + 302 + 372 - 452$$
$$:= -12^2 + 32^2 + 34^2 - 44^2 = -122 + 322 + 342 - 442$$
$$:= -2^2 + 13^2 + 32^2 - 33^2 \quad = -22 + 132 + 322 - 332$$
$$:= -2^2 + 14^2 + 22^2 - 24^2 \quad = -22 + 142 + 222 - 242$$
$$:= -2^2 + 2^4 - 3^4 + 13^2 \quad = -22 + 24 - 34 + 132$$
$$:= -2^2 - 3^2 + 7^2 + 8^2 \quad = -22 - 32 + 72 + 82$$
$$:= 2^3 - 4^2 - 6^3 + 18^2 \quad = 23 - 42 - 63 + 182$$
$$:= 2^3 - 7^2 - 7^3 + 22^2 \quad = 23 - 72 - 73 + 222$$
$$:= -3^2 + 14^2 + 43^2 - 44^2 \quad = -32 + 142 + 432 - 442$$
$$:= -3^2 + 15^2 + 28^2 - 30^2 \quad = -32 + 152 + 282 - 302$$
$$:= -3^2 + 16^2 + 23^2 - 26^2 \quad = -32 + 162 + 232 - 262$$
$$:= -3^2 + 18^2 + 19^2 - 24^2 \quad = -32 + 182 + 192 - 242$$
$$:= 3^3 - 8^3 - 12^2 + 27^2 \quad = 33 - 83 - 122 + 272$$
$$:= 3^4 - 4^4 - 7^2 + 18^2 \quad = 34 - 44 - 72 + 182$$
$$:= -4^2 + 16^2 + 34^2 - 36^2 \quad = -42 + 162 + 342 - 362$$
$$:= -4^2 + 18^2 + 24^2 - 28^2 \quad = -42 + 182 + 242 - 282$$
$$:= -4^2 + 19^2 + 22^2 - 27^2 \quad = -42 + 192 + 222 - 272$$
$$:= 4^3 - 9^3 - 18^2 + 33^2 \quad = 43 - 93 - 182 + 332$$
$$:= -5^2 + 17^2 + 40^2 - 42^2 \quad = -52 + 172 + 402 - 422$$
$$:= -5^2 + 20^2 + 25^2 - 30^2 \quad = -52 + 202 + 252 - 302$$
$$:= 5^3 - 10^3 - 25^2 + 40^2 \quad = 53 - 103 - 252 + 402$$
$$:= -6^2 + 19^2 + 36^2 - 39^2 \quad = -62 + 192 + 362 - 392$$
$$:= -6^2 + 22^2 + 26^2 - 32^2 \quad = -62 + 222 + 262 - 322$$
$$:= -7^2 + 24^2 + 27^2 - 34^2 \quad = -72 + 242 + 272 - 342$$
$$:= 7^4 - 9^3 - 13^3 + 25^2 \quad = 74 - 93 - 133 + 252$$
$$:= -8^2 + 22^2 + 38^2 - 42^2 \quad = -82 + 222 + 382 - 422$$
$$:= -8^2 + 23^2 + 34^2 - 39^2 \quad = -82 + 232 + 342 - 392$$
$$:= -8^2 + 26^2 + 28^2 - 36^2 \quad = -82 + 262 + 282 - 362$$
$$:= -9^2 + 24^2 + 37^2 - 42^2 \quad = -92 + 242 + 372 - 422$$
$$:= -9^2 + 25^2 + 34^2 - 40^2 \quad = -92 + 252 + 342 - 402$$
$$:= -9^2 + 28^2 + 29^2 - 38^2 \quad = -92 + 282 + 292 - 382$$

$$101 := -2^3 - 2^5 - 7^3 + 22^2 \quad = -23 - 25 - 73 + 222$$
$$:= -2^4 - 3^3 - 4^4 + 20^2 \quad = -24 - 33 - 44 + 202$$
$$:= 2^9 + 17^2 + 30^2 - 40^2 \quad = 29 + 172 + 302 - 402$$
$$:= -3^5 - 5^4 - 16^2 + 35^2 \quad = -35 - 54 - 162 + 352$$

$$102 := 2^5 - 9^3 - 15^2 + 32^2 \quad = 25 - 93 - 152 + 322$$

$:= 2^6 - 5^4 - 19^2 + 32^2 \qquad = 26 - 54 - 192 + 322$

$:= -3^3 + 3^6 - 10^3 + 20^2 \qquad = -33 + 36 - 103 + 202$

$103 := 2^8 + 2^9 - 3^6 + 8^2 \qquad = 28 + 29 - 36 + 82$

$104 := 2^2 + 6^2 - 15^2 + 17^2 \qquad = 22 + 62 - 152 + 172$

$:= 2^2 + 7^2 - 25^2 + 26^2 \qquad = 22 + 72 - 252 + 262$

$:= -2^3 + 2^9 - 5^4 + 15^2 \qquad = -23 + 29 - 54 + 152$

$:= 2^7 - 2^8 + 4^2 + 6^3 \qquad = 27 - 28 + 42 + 63$

$:= 3^2 + 6^2 - 29^2 + 30^2 \qquad = 32 + 62 - 292 + 302$

$:= 4^2 + 4^2 - 17^2 + 19^2 \qquad = 42 + 42 - 172 + 192$

$105 := -2^4 - 2^5 + 3^2 + 12^2 \qquad = -24 - 25 + 32 + 122$

$:= -2^7 + 12^2 - 44^2 + 45^2 \qquad = -27 + 122 - 442 + 452$

$:= -2^7 + 5^2 - 9^2 + 17^2 \qquad = -27 + 52 - 92 + 172$

$:= -2^8 - 4^3 + 4^4 + 13^2 \qquad = -28 - 43 + 44 + 132$

$106 := 2^3 + 3^4 - 4^3 + 9^2 \qquad = 23 + 34 - 43 + 92$

$:= 2^3 + 9^3 + 14^3 - 15^3 \qquad = 23 + 93 + 143 - 153$

$:= -2^4 + 2^6 + 3^2 + 7^2 \qquad = -24 + 26 + 32 + 72$

$:= 3^4 + 8^2 + 19^2 - 20^2 \qquad = 34 + 82 + 192 - 202$

$:= 3^4 + 9^2 + 13^2 - 15^2 \qquad = 34 + 92 + 132 - 152$

$:= 4^4 + 9^2 + 37^2 - 40^2 \qquad = 44 + 92 + 372 - 402$

$:= 4^6 + 5^2 - 8^4 + 9^2 \qquad = 46 + 52 - 84 + 92$

$107 := 2^3 - 2^4 - 3^4 + 14^2 \qquad = 23 - 24 - 34 + 142$

$:= 2^3 - 2^5 - 5^3 + 16^2 \qquad = 23 - 25 - 53 + 162$

$:= -2^5 + 14^2 + 28^2 - 29^2 \qquad = -25 + 142 + 282 - 292$

$:= -2^5 + 7^3 - 7^4 + 13^3 \qquad = -25 + 73 - 74 + 133$

$:= -2^5 - 5^2 + 8^2 + 10^2 \qquad = -25 - 52 + 82 + 102$

$:= -3^4 - 3^4 + 5^3 + 12^2 \qquad = -34 - 34 + 53 + 122$

$:= -3^5 + 7^2 - 18^2 + 25^2 \qquad = -35 + 72 - 182 + 252$

$:= -3^6 + 5^3 - 35^2 + 44^2 \qquad = -36 + 53 - 352 + 442$

$:= -3^6 + 8^3 - 24^2 + 30^2 \qquad = -36 + 83 - 242 + 302$

$:= -5^5 + 12^2 - 14^3 + 18^3 \qquad = -55 + 122 - 143 + 183$

$108 := 2^3 + 2^6 - 4^3 + 10^2 \qquad = 23 + 26 - 43 + 102$

$:= 2^6 + 10^2 + 13^2 - 15^2 \qquad = 26 + 102 + 132 - 152$

$:= 2^6 + 3^3 - 4^3 + 9^2 \qquad = 26 + 33 - 43 + 92$

$:= 2^6 + 9^2 + 18^2 - 19^2 \qquad = 26 + 92 + 182 - 192$

$:= -2^6 - 3^6 - 18^2 + 35^2 \qquad = -26 - 36 - 182 + 352$

$:= -2^7 - 4^5 - 26^2 + 44^2 \qquad = -27 - 45 - 262 + 442$

$:= -2^9 - 4^3 - 10^2 + 28^2 \qquad = -29 - 43 - 102 + 282$

$:= 4^6 + 9^3 + 14^2 - 17^3 \qquad = 46 + 93 + 142 - 173$

$109 := 2^2 - 6^2 - 7^3 + 22^2 \qquad = 22 - 62 - 73 + 222$

$:= -2^3 + 14^2 + 39^2 - 40^2 \qquad = -23 + 142 + 392 - 402$

$:= -2^3 + 15^2 + 26^2 - 28^2 \qquad = -23 + 152 + 262 - 282$

$:= 2^4 - 3^5 - 8^2 + 20^2 \qquad = 24 - 35 - 82 + 202$

$:= -3^2 - 3^3 + 8^2 + 9^2 \qquad = -32 - 33 + 82 + 92$

$:= -3^3 + 15^2 + 44^2 - 45^2 \qquad = -33 + 152 + 442 - 452$

$:= -3^3 + 17^2 + 24^2 - 27^2 \qquad = -33 + 172 + 242 - 272$

$:= -3^3 + 19^2 + 20^2 - 25^2 \qquad = -33 + 192 + 202 - 252$

$:= -4^2 + 5^2 - 5^3 + 15^2 \qquad = -42 + 52 - 53 + 152$

$:= -4^3 + 17^2 + 28^2 - 30^2 \qquad = -43 + 172 + 282 - 302$

$:= -4^4 + 5^3 - 7^2 + 17^2 \qquad = -44 + 53 - 72 + 172$

$:= -5^3 + 17^2 + 27^2 - 28^2 \qquad = -53 + 172 + 272 - 282$

$:= 6^2 - 8^3 - 16^2 + 29^2 \qquad = 62 - 83 - 162 + 292$

$:= -6^3 + 14^2 - 20^2 + 23^2 \qquad = -63 + 142 - 202 + 232$

$:= -6^3 + 15^2 - 24^2 + 26^2 \qquad = -63 + 152 - 242 + 262$

$:= -6^3 + 16^2 - 34^2 + 35^2 \qquad = -63 + 162 - 342 + 352$

$:= -6^3 + 8^2 - 10^2 + 19^2 \qquad = -63 + 82 - 102 + 192$

$:= -6^4 + 9^4 - 18^3 + 26^2 \qquad = -64 + 94 - 183 + 262$

$:= -7^3 + 10^2 - 18^2 + 26^2 \qquad = -73 + 102 - 182 + 262$

$:= -7^3 + 14^2 - 30^2 + 34^2 \qquad = -73 + 142 - 302 + 342$

$:= -8^3 + 14^2 - 40^2 + 45^2 \qquad = -83 + 142 - 402 + 452$

$:= -8^3 + 9^2 - 22^2 + 32^2 \qquad = -83 + 92 - 222 + 322$

$110 := 2^8 + 13^2 + 29^2 - 34^2 \qquad = 28 + 132 + 292 - 342$

$:= 2^8 + 15^2 + 23^2 - 30^2 \qquad = 28 + 152 + 232 - 302$

$111 := -5^2 + 10^4 - 22^3 + 28^2 \qquad = -52 + 104 - 223 + 282$

$:= -8^2 + 12^4 - 13^4 + 20^3 \qquad = -82 + 124 - 134 + 203$

$112 := -2^2 - 3^5 - 5^3 + 22^2 \qquad = -22 - 35 - 53 + 222$

$:= -4^3 - 4^5 - 20^2 + 40^2 \qquad = -43 - 45 - 202 + 402$

$113 := 2^4 - 2^6 + 5^3 + 6^2 \qquad = 24 - 26 + 53 + 62$

$:= 2^5 - 2^9 + 3^4 + 8^3 \qquad = 25 - 29 + 34 + 83$

$:= 2^6 - 8^2 - 8^3 + 25^2 \qquad = 26 - 82 - 83 + 252$

$$:= 3^8 - 8^3 - 9^4 + 25^2 \qquad = 38 - 83 - 94 + 252$$
$$:= -4^3 + 4^7 - 26^3 + 37^2 \qquad = -43 + 47 - 263 + 372$$
$$:= 4^7 - 6^3 - 26^3 + 39^2 \qquad = 47 - 63 - 263 + 392$$

$$114 := -2^3 - 7^2 - 9^3 + 30^2 \qquad = -23 - 72 - 93 + 302$$
$$:= -2^5 - 2^5 + 3^2 + 13^2 \qquad = -25 - 25 + 32 + 132$$

$$115 := 2^2 + 3^3 - 4^2 + 10^2 \qquad = 22 + 33 - 42 + 102$$
$$:= 2^6 - 2^8 + 3^5 + 8^2 \qquad = 26 - 28 + 35 + 82$$
$$:= 2^8 - 13^2 - 15^4 + 37^3 \qquad = 28 - 132 - 154 + 373$$
$$:= -3^3 + 3^4 + 5^2 + 6^2 \qquad = -33 + 34 + 52 + 62$$
$$:= 3^3 + 5^2 - 9^2 + 12^2 \qquad = 33 + 52 - 92 + 122$$
$$:= 3^3 + 6^2 - 12^2 + 14^2 \qquad = 33 + 62 - 122 + 142$$
$$:= 3^3 + 7^2 - 19^2 + 20^2 \qquad = 33 + 72 - 192 + 202$$
$$:= 4^3 + 6^2 - 7^2 + 8^2 \qquad = 43 + 62 - 72 + 82$$
$$:= 5^3 + 7^2 + 29^2 - 30^2 \qquad = 53 + 72 + 292 - 302$$
$$:= 6^3 + 8^2 + 26^2 - 29^2 \qquad = 63 + 82 + 262 - 292$$
$$:= 8^3 + 10^2 + 32^2 - 39^2 \qquad = 83 + 102 + 322 - 392$$

$$116 := -2^5 + 4^2 - 4^3 + 14^2 \qquad = -25 + 42 - 43 + 142$$
$$:= -2^6 + 15^2 + 22^2 - 23^2 \qquad = -26 + 152 + 222 - 232$$
$$:= -2^6 + 16^2 + 18^2 - 20^2 \qquad = -26 + 162 + 182 - 202$$
$$:= -2^6 - 5^2 + 6^2 + 13^2 \qquad = -26 - 52 + 62 + 132$$
$$:= -2^6 - 8^2 + 10^2 + 12^2 \qquad = -26 - 82 + 102 + 122$$
$$:= -2^7 - 4^2 + 4^3 + 14^2 \qquad = -27 - 42 + 43 + 142$$
$$:= -2^9 + 3^5 - 12^2 + 23^2 \qquad = -29 + 35 - 122 + 232$$
$$:= -4^5 - 5^5 + 8^4 + 13^2 \qquad = -45 - 55 + 84 + 132$$

$$117 := 2^2 + 2^8 - 3^5 + 10^2 \qquad = 22 + 28 - 35 + 102$$
$$:= -2^3 + 2^6 + 5^2 + 6^2 \qquad = -23 + 26 + 52 + 62$$
$$:= 2^5 + 7^2 - 8^2 + 10^2 \qquad = 25 + 72 - 82 + 102$$
$$:= 2^6 - 3^3 + 4^2 + 8^2 \qquad = 26 - 33 + 42 + 82$$
$$:= 3^5 + 13^2 + 27^2 - 32^2 \qquad = 35 + 132 + 272 - 322$$
$$:= 4^9 + 6^2 - 8^6 + 9^2 \qquad = 49 + 62 - 86 + 92$$

$$118 := -2^4 + 5^3 - 6^3 + 15^2 \qquad = -24 + 53 - 63 + 152$$
$$:= -3^4 + 16^2 + 28^2 - 29^2 \qquad = -34 + 162 + 282 - 292$$
$$:= -3^5 + 4^3 - 8^2 + 19^2 \qquad = -35 + 43 - 82 + 192$$
$$:= -4^5 + 9^3 - 26^2 + 33^2 \qquad = -45 + 93 - 262 + 332$$
$$:= -5^6 + 7^3 - 15^2 + 25^3 \qquad = -56 + 73 - 152 + 253$$

$$119 := 2^7 + 12^2 + 24^2 - 27^2 \qquad = 27 + 122 + 242 - 272$$
$$:= 2^7 + 14^2 + 18^2 - 23^2 \qquad = 27 + 142 + 182 - 232$$
$$:= -2^8 - 10^3 - 15^2 + 40^2 \qquad = -28 - 103 - 152 + 402$$
$$:= 3^7 + 10^2 + 18^3 - 20^3 \qquad = 37 + 102 + 183 - 203$$
$$:= 4^6 + 10^3 + 22^3 - 25^3 \qquad = 46 + 103 + 223 - 253$$
$$:= 4^6 + 9^3 + 27^3 - 29^3 \qquad = 46 + 93 + 273 - 293$$

$$120 := -10^2 + 33^2 + 34^2 - 45^2 = -102 + 332 + 342 - 452$$
$$:= -2^2 + 16^2 + 32^2 - 34^2 \qquad = -22 + 162 + 322 - 342$$
$$:= -2^2 + 17^2 + 26^2 - 29^2 \qquad = -22 + 172 + 262 - 292$$
$$:= -2^2 + 18^2 + 23^2 - 27^2 \qquad = -22 + 182 + 232 - 272$$
$$:= -2^2 + 20^2 + 20^2 - 26^2 \qquad = -22 + 202 + 202 - 262$$
$$:= -2^2 - 2^2 + 8^2 + 8^2 \qquad = -22 - 22 + 82 + 82$$
$$:= -2^3 + 2^7 - 4^8 + 16^4 \qquad = -23 + 27 - 48 + 164$$
$$:= 2^3 - 2^8 + 5^2 + 7^3 \qquad = 23 - 28 + 52 + 73$$
$$:= -2^7 + 4^2 + 4^2 + 6^3 \qquad = -27 + 42 + 42 + 63$$
$$:= -3^2 + 6^3 - 7^3 + 16^2 \qquad = -32 + 63 - 73 + 162$$
$$:= -4^2 + 19^2 + 36^2 - 39^2 \qquad = -42 + 192 + 362 - 392$$
$$:= -4^2 + 22^2 + 26^2 - 32^2 \qquad = -42 + 222 + 262 - 322$$
$$:= -5^2 + 23^2 + 29^2 - 35^2 \qquad = -52 + 232 + 292 - 352$$
$$:= -5^2 + 25^2 + 26^2 - 34^2 \qquad = -52 + 252 + 262 - 342$$
$$:= -6^2 + 22^2 + 39^2 - 43^2 \qquad = -62 + 222 + 392 - 432$$
$$:= -6^2 + 24^2 + 32^2 - 38^2 \qquad = -62 + 242 + 322 - 382$$
$$:= -6^2 + 25^2 + 30^2 - 37^2 \qquad = -62 + 252 + 302 - 372$$
$$:= -8^2 + 26^2 + 38^2 - 44^2 \qquad = -82 + 262 + 382 - 442$$
$$:= -9^2 + 29^2 + 36^2 - 44^2 \qquad = -92 + 292 + 362 - 442$$

$$121 := -2^5 - 4^3 - 8^3 + 27^2 \qquad = -25 - 43 - 83 + 272$$
$$:= -2^5 - 6^4 - 24^2 + 45^2 \qquad = -25 - 64 - 242 + 452$$

$$122 := -3^2 + 3^5 - 8^3 + 20^2 \qquad = -32 + 35 - 83 + 202$$
$$:= 3^7 - 4^3 - 7^4 + 20^2 \qquad = 37 - 43 - 74 + 202$$

$$124 := 2^2 + 5^2 - 7^2 + 12^2 \qquad = 22 + 52 - 72 + 122$$
$$:= 2^2 + 8^2 - 13^2 + 15^2 \qquad = 22 + 82 - 132 + 152$$
$$:= 2^2 + 9^2 - 19^2 + 20^2 \qquad = 22 + 92 - 192 + 202$$
$$:= 2^2 - 2^3 + 4^3 + 8^2 \qquad = 22 - 23 + 43 + 82$$
$$:= -2^4 + 3^3 + 4^3 + 7^2 \qquad = -24 + 33 + 43 + 72$$
$$:= 2^7 - 2^8 + 6^2 + 6^3 \qquad = 27 - 28 + 62 + 63$$

$$:= 3^2 + 8^2 - 25^2 + 26^2 \quad = 32 + 82 - 252 + 262$$
$$:= 4^2 + 6^2 - 17^2 + 19^2 \quad = 42 + 62 - 172 + 192$$
$$:= 4^2 + 7^2 - 29^2 + 30^2 \quad = 42 + 72 - 292 + 302$$
$$:= -5^2 + 5^7 - 18^4 + 30^3 \quad = -52 + 57 - 184 + 303$$

$$125 := -2^7 + 13^2 - 20^2 + 22^2 \quad = -27 + 132 - 202 + 222$$
$$:= -2^7 + 14^2 - 28^2 + 29^2 \quad = -27 + 142 - 282 + 292$$
$$:= -2^7 + 8^2 - 10^2 + 17^2 \quad = -27 + 82 - 102 + 172$$

$$126 := 2^3 - 3^2 + 3^3 + 10^2 \quad = 23 - 32 + 33 + 102$$
$$:= 2^4 + 9^2 - 14^2 + 15^2 \quad = 24 + 92 - 142 + 152$$
$$:= 2^5 - 3^5 + 4^4 + 9^2 \quad = 25 - 35 + 44 + 92$$
$$:= -3^2 + 3^3 + 3^3 + 9^2 \quad = -32 + 33 + 33 + 92$$
$$:= 3^4 + 10^2 + 27^2 - 28^2 \quad = 34 + 102 + 272 - 282$$
$$:= 3^4 + 12^2 + 15^2 - 18^2 \quad = 34 + 122 + 152 - 182$$
$$:= 5^3 + 9^3 + 10^3 - 12^3 \quad = 53 + 93 + 103 - 123$$
$$:= 7^4 + 10^2 + 10^3 - 15^3 \quad = 74 + 102 + 103 - 153$$

$$127 := -2^5 + 18^2 + 26^2 - 29^2 \quad = -25 + 182 + 262 - 292$$
$$:= 2^5 - 2^8 - 7^2 + 20^2 \quad = 25 - 28 - 72 + 202$$
$$:= 3^2 - 3^4 - 5^3 + 18^2 \quad = 32 - 34 - 53 + 182$$
$$:= -3^4 + 4^2 - 4^3 + 16^2 \quad = -34 + 42 - 43 + 162$$
$$:= -3^4 - 3^4 + 4^3 + 15^2 \quad = -34 - 34 + 43 + 152$$
$$:= -3^5 + 13^2 - 32^2 + 35^2 \quad = -35 + 132 - 322 + 352$$
$$:= -3^6 + 4^3 - 27^2 + 39^2 \quad = -36 + 43 - 272 + 392$$
$$:= -3^6 + 6^3 - 27^2 + 37^2 \quad = -36 + 63 - 272 + 372$$
$$:= -3^6 + 7^3 - 24^2 + 33^2 \quad = -36 + 73 - 242 + 332$$
$$:= -4^6 - 6^3 + 7^3 + 16^3 \quad = -46 - 63 + 73 + 163$$
$$:= -6^6 - 9^5 + 10^5 + 18^3 \quad = -66 - 95 + 105 + 183$$

$$128 := -2^2 + 2^4 + 2^4 + 10^2 \quad = -22 + 24 + 24 + 102$$
$$:= -2^3 - 2^3 - 2^8 + 20^2 \quad = -23 - 23 - 28 + 202$$
$$:= -2^3 - 2^9 - 9^2 + 27^2 \quad = -23 - 29 - 92 + 272$$
$$:= 2^4 + 2^5 - 4^3 + 12^2 \quad = 24 + 25 - 43 + 122$$
$$:= -2^5 - 3^4 - 3^5 + 22^2 \quad = -25 - 34 - 35 + 222$$
$$:= 2^6 + 13^2 + 16^2 - 19^2 \quad = 26 + 132 + 162 - 192$$
$$:= -2^6 - 3^4 - 4^4 + 23^2 \quad = -26 - 34 - 44 + 232$$
$$:= 2^7 + 5^2 - 5^3 + 10^2 \quad = 27 + 52 - 53 + 102$$
$$:= -2^7 - 4^3 - 4^4 + 24^2 \quad = -27 - 43 - 44 + 242$$

$$:= -2^7 - 4^5 - 22^2 + 42^2 \quad = -27 - 45 - 222 + 422$$
$$:= -2^8 - 4^4 - 6^2 + 26^2 \quad = -28 - 44 - 62 + 262$$
$$:= -2^9 - 8^3 - 12^2 + 36^2 \quad = -29 - 83 - 122 + 362$$
$$:= 8^4 + 12^4 + 28^3 - 36^3 \quad = 84 + 124 + 283 - 363$$

$$129 := 2^2 - 2^9 + 5^3 + 8^3 \quad = 22 - 29 + 53 + 83$$
$$:= 2^2 - 4^2 - 7^3 + 22^2 \quad = 22 - 42 - 73 + 222$$
$$:= -2^3 + 17^2 + 37^2 - 39^2 \quad = -23 + 172 + 372 - 392$$
$$:= -2^3 + 19^2 + 26^2 - 30^2 \quad = -23 + 192 + 262 - 302$$
$$:= -2^3 + 4^3 - 6^3 + 17^2 \quad = -23 + 43 - 63 + 172$$
$$:= 3^2 - 10^3 - 18^2 + 38^2 \quad = 32 - 103 - 182 + 382$$
$$:= -4^3 + 20^2 + 33^2 - 36^2 \quad = -43 + 202 + 332 - 362$$
$$:= -4^5 + 5^4 - 16^2 + 28^2 \quad = -45 + 54 - 162 + 282$$
$$:= 5^2 - 9^3 - 16^2 + 33^2 \quad = 52 - 93 - 162 + 332$$
$$:= -5^3 + 23^2 + 25^2 - 30^2 \quad = -53 + 232 + 252 - 302$$
$$:= -6^3 + 20^2 + 27^2 - 28^2 \quad = -63 + 202 + 272 - 282$$
$$:= -6^3 - 13^2 + 15^2 + 17^2 \quad = -63 - 132 + 152 + 172$$
$$:= -7^3 + 14^2 - 20^2 + 26^2 \quad = -73 + 142 - 202 + 262$$
$$:= -7^3 + 16^2 - 25^2 + 29^2 \quad = -73 + 162 - 252 + 292$$
$$:= -7^3 + 17^2 - 29^2 + 32^2 \quad = -73 + 172 - 292 + 322$$
$$:= -7^3 + 18^2 - 36^2 + 38^2 \quad = -73 + 182 - 362 + 382$$
$$:= 8^2 - 10^3 - 28^2 + 43^2 \quad = 82 - 103 - 282 + 432$$

$$130 := -2^6 - 5^4 - 9^2 + 30^2 \quad = -26 - 54 - 92 + 302$$

$$131 := -2^4 + 3^7 - 7^4 + 19^2 \quad = -24 + 37 - 74 + 192$$
$$:= 2^4 - 7^2 - 8^3 + 26^2 \quad = 24 - 72 - 83 + 262$$
$$:= 3^5 - 10^3 - 14^4 + 34^3 \quad = 35 - 103 - 144 + 343$$
$$:= 3^5 - 6^4 - 29^2 + 45^2 \quad = 35 - 64 - 292 + 452$$

$$132 := 2^2 - 2^6 - 2^6 + 16^2 \quad = 22 - 26 - 26 + 162$$
$$:= -2^6 - 2^8 + 4^4 + 14^2 \quad = -26 - 28 + 44 + 142$$

$$133 := 2^2 - 2^4 + 4^3 + 9^2 \quad = 22 - 24 + 43 + 92$$
$$:= 2^3 - 3^6 + 5^3 + 9^3 \quad = 23 - 36 + 53 + 93$$

$$134 := -3^3 - 8^2 - 10^3 + 35^2 \quad = -33 - 82 - 103 + 352$$
$$:= -6^2 - 9^5 - 10^2 + 39^3 \quad = -62 - 95 - 102 + 393$$

$$135 := 10^3 + 22^2 + 26^2 - 45^2 \quad = 103 + 222 + 262 - 452$$

$$:= 2^2 + 3^5 - 4^4 + 12^2 \qquad = 22 + 35 - 44 + 122$$
$$:= 2^3 + 10^2 - 13^2 + 14^2 \qquad = 23 + 102 - 132 + 142$$
$$:= 2^3 + 8^2 - 9^2 + 12^2 \qquad = 23 + 82 - 92 + 122$$
$$:= -3^2 + 4^2 + 4^3 + 8^2 \qquad = -32 + 42 + 43 + 82$$
$$:= 3^3 + 8^2 - 10^2 + 12^2 \qquad = 33 + 82 - 102 + 122$$
$$:= 3^3 + 9^2 - 13^2 + 14^2 \qquad = 33 + 92 - 132 + 142$$
$$:= 3^9 - 12^4 - 16^2 + 38^2 \qquad = 39 - 124 - 162 + 382$$
$$:= 4^3 + 10^2 + 14^2 - 15^2 \qquad = 43 + 102 + 142 - 152$$
$$:= 5^3 + 9^2 + 35^2 - 36^2 \qquad = 53 + 92 + 352 - 362$$
$$:= 6^3 + 12^2 + 20^2 - 25^2 \qquad = 63 + 122 + 202 - 252$$

136 $:= -2^3 + 2^4 - 2^7 + 16^2 \qquad = -23 + 24 - 27 + 162$
$$:= -2^3 - 4^9 + 8^6 + 12^2 \qquad = -23 - 49 + 86 + 122$$
$$:= 2^5 - 2^9 - 15^2 + 29^2 \qquad = 25 - 29 - 152 + 292$$
$$:= -2^5 - 4^3 + 6^2 + 14^2 \qquad = -25 - 43 + 62 + 142$$
$$:= -2^6 + 17^2 + 44^2 - 45^2 \qquad = -26 + 172 + 442 - 452$$
$$:= -2^6 + 18^2 + 30^2 - 32^2 \qquad = -26 + 182 + 302 - 322$$
$$:= -2^6 + 20^2 + 23^2 - 27^2 \qquad = -26 + 202 + 232 - 272$$
$$:= -2^6 - 5^2 + 9^2 + 12^2 \qquad = -26 - 52 + 92 + 122$$
$$:= 3^2 - 3^4 - 3^4 + 17^2 \qquad = 32 - 34 - 34 + 172$$
$$:= -4^8 + 16^4 - 33^2 + 35^2 \qquad = -48 + 164 - 332 + 352$$

137 $:= -2^2 + 2^5 + 3^2 + 10^2 \qquad = -22 + 25 + 32 + 102$
$$:= 2^4 + 2^4 - 4^3 + 13^2 \qquad = 24 + 24 - 43 + 132$$
$$:= 2^4 + 5^4 - 9^3 + 15^2 \qquad = 24 + 54 - 93 + 152$$
$$:= -2^4 - 2^8 - 6^3 + 25^2 \qquad = -24 - 28 - 63 + 252$$
$$:= -2^4 - 2^9 - 8^2 + 27^2 \qquad = -24 - 29 - 82 + 272$$
$$:= 2^5 + 12^2 + 19^2 - 20^2 \qquad = 25 + 122 + 192 - 202$$
$$:= 2^5 + 13^2 + 15^2 - 17^2 \qquad = 25 + 132 + 152 - 172$$
$$:= 2^5 - 5^2 + 7^2 + 9^2 \qquad = 25 - 52 + 72 + 92$$
$$:= 2^6 - 3^3 + 6^2 + 8^2 \qquad = 26 - 33 + 62 + 82$$
$$:= 2^7 + 3^2 - 8^8 + 16^6 \qquad = 27 + 32 - 88 + 166$$

138 $:= -2^2 - 3^5 + 6^3 + 13^2 \qquad = -22 - 35 + 63 + 132$
$$:= -2^4 + 19^2 + 33^2 - 36^2 \qquad = -24 + 192 + 332 - 362$$
$$:= 3^3 - 8^4 - 13^4 + 32^3 \qquad = 33 - 84 - 134 + 323$$
$$:= -3^4 + 22^2 + 24^2 - 29^2 \qquad = -34 + 222 + 242 - 292$$
$$:= -3^4 - 5^2 + 10^2 + 12^2 \qquad = -34 - 52 + 102 + 122$$
$$:= -3^6 + 4^4 - 17^2 + 30^2 \qquad = -36 + 44 - 172 + 302$$

$$:= -4^4 + 13^2 - 20^2 + 25^2 \qquad = -44 + 132 - 202 + 252$$

139 $:= 2^7 + 16^2 + 22^2 - 27^2 \qquad = 27 + 162 + 222 - 272$
$$:= 2^9 - 3^6 + 4^4 + 10^2 \qquad = 29 - 36 + 44 + 102$$

140 $:= -2^2 + 20^2 + 30^2 - 34^2 \qquad = -22 + 202 + 302 - 342$
$$:= 2^3 - 3^2 - 7^3 + 22^2 \qquad = 23 - 32 - 73 + 222$$
$$:= -2^7 + 4^2 + 6^2 + 6^3 \qquad = -27 + 42 + 62 + 63$$
$$:= -3^2 + 24^2 + 27^2 - 34^2 \qquad = -32 + 242 + 272 - 342$$
$$:= -3^2 + 3^4 - 4^4 + 18^2 \qquad = -32 + 34 - 44 + 182$$
$$:= 3^3 - 10^3 - 16^2 + 37^2 \qquad = 33 - 103 - 162 + 372$$
$$:= -4^2 + 22^2 + 39^2 - 43^2 \qquad = -42 + 222 + 392 - 432$$
$$:= -4^2 + 24^2 + 32^2 - 38^2 \qquad = -42 + 242 + 322 - 382$$
$$:= -4^2 + 25^2 + 30^2 - 37^2 \qquad = -42 + 252 + 302 - 372$$
$$:= -5^2 + 26^2 + 33^2 - 40^2 \qquad = -52 + 262 + 332 - 402$$
$$:= 5^3 - 7^2 - 8^3 + 24^2 \qquad = 53 - 72 - 83 + 242$$
$$:= -6^2 + 27^2 + 36^2 - 43^2 \qquad = -62 + 272 + 362 - 432$$
$$:= -6^2 + 28^2 + 34^2 - 42^2 \qquad = -62 + 282 + 342 - 422$$
$$:= -7^2 + 30^2 + 35^2 - 44^2 \qquad = -72 + 302 + 352 - 442$$
$$:= -7^2 - 9^4 + 15^3 + 15^3 \qquad = -72 - 94 + 153 + 153$$
$$:= 9^3 - 12^3 - 25^2 + 42^2 \qquad = 93 - 123 - 252 + 422$$

142 $:= -2^7 + 3^4 + 5^3 + 8^2 \qquad = -27 + 34 + 53 + 82$
$$:= 2^8 - 3^6 - 13^2 + 28^2 \qquad = 28 - 36 - 132 + 282$$

143 $:= -3^3 - 5^3 - 9^3 + 32^2 \qquad = -33 - 53 - 93 + 322$

144 $:= 2^2 + 13^2 + 14^2 - 15^2 \qquad = 22 + 132 + 142 - 152$
$$:= 2^2 + 2^3 - 4^3 + 14^2 \qquad = 22 + 23 - 43 + 142$$
$$:= 2^3 + 2^3 - 2^4 + 12^2 \qquad = 23 + 23 - 24 + 122$$
$$:= 3^2 + 10^2 - 17^2 + 18^2 \qquad = 32 + 102 - 172 + 182$$
$$:= 3^2 + 4^2 - 5^2 + 12^2 \qquad = 32 + 42 - 52 + 122$$
$$:= 4^2 + 8^2 - 15^2 + 17^2 \qquad = 42 + 82 - 152 + 172$$
$$:= 4^2 + 9^2 - 23^2 + 24^2 \qquad = 42 + 92 - 232 + 242$$
$$:= 5^2 + 8^2 - 27^2 + 28^2 \qquad = 52 + 82 - 272 + 282$$
$$:= 6^2 + 6^2 - 17^2 + 19^2 \qquad = 62 + 62 - 172 + 192$$
$$:= 6^2 + 7^2 - 29^2 + 30^2 \qquad = 62 + 72 - 292 + 302$$

145 $:= -2^4 - 2^5 + 7^2 + 12^2 \qquad = -24 - 25 + 72 + 122$
$$:= -2^7 + 18^2 + 25^2 - 26^2 \qquad = -27 + 182 + 252 - 262$$

$$:= -2^7 - 8^2 + 9^2 + 16^2 \quad = -27 - 82 + 92 + 162$$
$$:= -2^8 + 4^4 - 6^3 + 19^2 \quad = -28 + 44 - 63 + 192$$
$$:= -2^8 + 7^4 - 10^4 + 20^3 \quad = -28 + 74 - 104 + 203$$

$146 := 2^3 + 2^7 - 3^7 + 13^3 \quad = 23 + 27 - 37 + 133$
$\quad := 2^3 + 4^4 - 7^3 + 15^2 \quad = 23 + 44 - 73 + 152$
$\quad := 2^4 + 13^2 + 19^2 - 20^2 \quad = 24 + 132 + 192 - 202$
$\quad := -2^4 + 2^6 + 7^2 + 7^2 \quad = -24 + 26 + 72 + 72$
$\quad := 2^5 + 3^2 - 4^3 + 13^2 \quad = 25 + 32 - 43 + 132$
$\quad := 3^4 + 12^2 + 39^2 - 40^2 \quad = 34 + 122 + 392 - 402$
$\quad := 3^4 + 13^2 + 25^2 - 27^2 \quad = 34 + 132 + 252 - 272$
$\quad := 3^4 + 15^2 + 18^2 - 22^2 \quad = 34 + 152 + 182 - 222$
$\quad := 4^3 + 4^4 - 7^3 + 13^2 \quad = 43 + 44 - 73 + 132$
$\quad := 4^4 + 17^2 + 25^2 - 32^2 \quad = 44 + 172 + 252 - 322$
$\quad := 5^4 + 23^2 + 29^2 - 43^2 \quad = 54 + 232 + 292 - 432$
$\quad := 7^3 + 10^3 + 10^3 - 13^3 \quad = 73 + 103 + 103 - 133$

$147 := -2^5 + 22^2 + 28^2 - 33^2 \quad = -25 + 222 + 282 - 332$
$\quad := -3^4 - 4^3 + 6^2 + 16^2 \quad = -34 - 43 + 62 + 162$
$\quad := -3^5 + 15^2 - 26^2 + 29^2 \quad = -35 + 152 - 262 + 292$
$\quad := -3^6 + 4^3 - 22^2 + 36^2 \quad = -36 + 43 - 222 + 362$
$\quad := -4^6 + 16^3 - 23^2 + 26^2 \quad = -46 + 163 - 232 + 262$
$\quad := -4^7 + 9^4 - 13^3 + 23^3 \quad = -47 + 94 - 133 + 233$
$\quad := -5^7 + 6^9 - 10^7 + 24^2 \quad = -57 + 69 - 107 + 242$
$\quad := -6^5 - 7^4 + 10^4 + 18^2 \quad = -65 - 74 + 104 + 182$

$148 := 2^4 + 2^5 - 5^3 + 15^2 \quad = 24 + 25 - 53 + 152$
$\quad := 2^6 + 13^2 + 42^2 - 43^2 \quad = 26 + 132 + 422 - 432$
$\quad := 2^6 + 14^2 + 27^2 - 29^2 \quad = 26 + 142 + 272 - 292$
$\quad := 2^6 + 15^2 + 22^2 - 25^2 \quad = 26 + 152 + 222 - 252$
$\quad := 2^6 + 17^2 + 18^2 - 23^2 \quad = 26 + 172 + 182 - 232$
$\quad := 2^7 - 5^3 + 8^2 + 9^2 \quad = 27 - 53 + 82 + 92$
$\quad := -2^8 - 4^2 - 4^4 + 26^2 \quad = -28 - 42 - 44 + 262$
$\quad := 5^5 + 12^4 + 26^2 - 29^3 \quad = 55 + 124 + 262 - 293$

$149 := -2^3 + 20^2 + 39^2 - 42^2 \quad = -23 + 202 + 392 - 422$
$\quad := -2^3 + 23^2 + 28^2 - 34^2 \quad = -23 + 232 + 282 - 342$
$\quad := -3^2 - 4^4 + 5^3 + 17^2 \quad = -32 - 44 + 53 + 172$
$\quad := 3^3 - 4^3 - 7^3 + 23^2 \quad = 33 - 43 - 73 + 232$

$$:= -5^3 + 27^2 + 29^2 - 36^2 \quad = -53 + 272 + 292 - 362$$
$$:= -6^3 + 23^2 + 40^2 - 42^2 \quad = -63 + 232 + 402 - 422$$
$$:= -7^3 + 18^2 - 19^2 + 23^2 \quad = -73 + 182 - 192 + 232$$
$$:= -7^3 + 20^2 - 22^2 + 24^2 \quad = -73 + 202 - 222 + 242$$
$$:= -8^3 + 12^2 - 18^2 + 29^2 \quad = -83 + 122 - 182 + 292$$
$$:= -8^3 + 17^2 - 28^2 + 34^2 \quad = -83 + 172 - 282 + 342$$
$$:= -8^3 + 20^2 - 42^2 + 45^2 \quad = -83 + 202 - 422 + 452$$

$150 := 2^8 + 17^2 + 37^2 - 42^2 \quad = 28 + 172 + 372 - 422$
$\quad := -3^3 - 3^5 - 4^4 + 26^2 \quad = -33 - 35 - 44 + 262$

$151 := -2^2 + 18^3 + 43^3 - 44^3 \quad = -22 + 183 + 433 - 443$
$\quad := -2^6 + 3^2 + 5^3 + 9^2 \quad = -26 + 32 + 53 + 92$

$153 := 2^3 + 2^3 - 2^5 + 13^2 \quad = 23 + 23 - 25 + 132$
$\quad := 3^2 - 3^4 + 5^3 + 10^2 \quad = 32 - 34 + 53 + 102$
$\quad := 3^3 - 3^6 + 7^3 + 8^3 \quad = 33 - 36 + 73 + 83$
$\quad := 3^6 - 12^2 - 12^3 + 36^2 \quad = 36 - 122 - 123 + 362$

$154 := -2^3 - 3^2 - 9^3 + 30^2 \quad = -23 - 32 - 93 + 302$
$\quad := -2^5 - 2^5 + 7^2 + 13^2 \quad = -25 - 25 + 72 + 132$
$\quad := -4^2 - 9^5 - 10^2 + 39^3 \quad = -42 - 95 - 102 + 393$

$155 := 2^3 + 14^2 + 24^2 - 25^2 \quad = 23 + 142 + 242 - 252$
$\quad := -3^2 + 4^3 + 6^2 + 8^2 \quad = -32 + 43 + 62 + 82$
$\quad := 3^3 + 14^2 + 16^2 - 18^2 \quad = 33 + 142 + 162 - 182$
$\quad := 3^3 - 6^2 + 8^2 + 10^2 \quad = 33 - 62 + 82 + 102$
$\quad := 4^3 + 12^2 + 26^2 - 27^2 \quad = 43 + 122 + 262 - 272$
$\quad := 4^3 + 14^2 + 16^2 - 19^2 \quad = 43 + 142 + 162 - 192$
$\quad := 5^3 + 15^2 + 17^2 - 22^2 \quad = 53 + 152 + 172 - 222$
$\quad := 7^3 + 14^2 + 29^2 - 35^2 \quad = 73 + 142 + 292 - 352$
$\quad := 7^3 + 15^2 + 26^2 - 33^2 \quad = 73 + 152 + 262 - 332$
$\quad := 8^3 + 14^2 + 36^2 - 43^2 \quad = 83 + 142 + 362 - 432$

$156 := 2^4 - 2^7 - 6^3 + 22^2 \quad = 24 - 27 - 63 + 222$

$157 := 2^5 + 14^2 + 35^2 - 36^2 \quad = 25 + 142 + 352 - 362$
$\quad := 2^5 + 15^2 + 24^2 - 26^2 \quad = 25 + 152 + 242 - 262$
$\quad := 2^5 + 5^3 - 8^4 + 16^3 \quad = 25 + 53 - 84 + 163$
$\quad := 3^5 + 17^2 + 35^2 - 40^2 \quad = 35 + 172 + 352 - 402$

$$:= 7^2 + 8^2 - 25^2 + 26^2 \quad = 72 + 82 - 252 + 262$$

$$\mathbf{158} := -2^4 + 23^2 + 33^2 - 38^2 \quad = -24 + 232 + 332 - 382$$
$$:= -4^4 + 19^2 - 26^2 + 27^2 \quad = -44 + 192 - 262 + 272$$
$$:= -5^5 + 14^3 - 35^2 + 42^2 \quad = -55 + 143 - 352 + 422$$

$$\mathbf{159} := 2^7 + 16^2 + 36^2 - 39^2 \quad = 27 + 162 + 362 - 392$$

$$\mathbf{160} := -10^2 + 12^3 - 13^3 + 27^2 = -102 + 123 - 133 + 272$$
$$:= -2^2 + 22^2 + 38^2 - 42^2 \quad = -22 + 222 + 382 - 422$$
$$:= -2^2 + 23^2 + 34^2 - 39^2 \quad = -22 + 232 + 342 - 392$$
$$:= -2^2 + 26^2 + 28^2 - 36^2 \quad = -22 + 262 + 282 - 362$$
$$:= 2^3 - 10^3 - 12^2 + 36^2 \quad = 23 - 103 - 122 + 362$$
$$:= -2^7 + 6^2 + 6^2 + 6^3 \quad = -27 + 62 + 62 + 63$$
$$:= -4^2 + 27^2 + 36^2 - 43^2 \quad = -42 + 272 + 362 - 432$$
$$:= -4^2 + 28^2 + 34^2 - 42^2 \quad = -42 + 282 + 342 - 422$$
$$:= -4^3 + 26^3 + 28^3 - 34^3 \quad = -43 + 263 + 283 - 343$$
$$:= -5^2 + 29^2 + 37^2 - 45^2 \quad = -52 + 292 + 372 - 452$$
$$:= 8^3 - 9^2 - 10^3 + 27^2 \quad = 83 - 92 - 103 + 272$$

$$\mathbf{161} := 2^6 + 2^7 - 4^4 + 15^2 \quad = 26 + 27 - 44 + 152$$
$$:= -2^7 - 2^8 + 4^4 + 17^2 \quad = -27 - 28 + 44 + 172$$
$$:= 2^9 + 13^3 + 14^2 - 14^3 \quad = 29 + 133 + 142 - 143$$

$$\mathbf{162} := 2^6 - 7^3 - 7^3 + 28^2 \quad = 26 - 73 - 73 + 282$$

$$\mathbf{163} := -2^9 - 7^3 + 9^3 + 17^2 \quad = -29 - 73 + 93 + 172$$
$$:= -5^2 - 5^4 - 7^3 + 34^2 \quad = -52 - 54 - 73 + 342$$

$$\mathbf{164} := 2^2 + 15^2 + 32^2 - 33^2 \quad = 22 + 152 + 322 - 332$$
$$:= 2^2 + 16^2 + 23^2 - 25^2 \quad = 22 + 162 + 232 - 252$$
$$:= 2^2 + 17^2 + 20^2 - 23^2 \quad = 22 + 172 + 202 - 232$$
$$:= 2^2 + 2^4 - 3^4 + 15^2 \quad = 22 + 24 - 34 + 152$$
$$:= 2^2 - 3^2 + 5^2 + 12^2 \quad = 22 - 32 + 52 + 122$$
$$:= 2^4 + 2^4 - 2^6 + 14^2 \quad = 24 + 24 - 26 + 142$$
$$:= 2^5 - 2^6 + 3^3 + 13^2 \quad = 25 - 26 + 33 + 132$$
$$:= -2^7 - 2^7 - 4^4 + 26^2 \quad = -27 - 27 - 44 + 262$$
$$:= 3^2 - 5^2 + 6^2 + 12^2 \quad = 32 - 52 + 62 + 122$$
$$:= 5^2 + 10^2 - 19^2 + 20^2 \quad = 52 + 102 - 192 + 202$$
$$:= 6^2 + 8^2 - 15^2 + 17^2 \quad = 62 + 82 - 152 + 172$$
$$:= 6^2 + 9^2 - 23^2 + 24^2 \quad = 62 + 92 - 232 + 242$$

$$\mathbf{166} := 2^4 + 15^2 + 37^2 - 38^2 \quad = 24 + 152 + 372 - 382$$
$$:= -2^8 - 3^5 - 4^3 + 27^2 \quad = -28 - 35 - 43 + 272$$
$$:= 3^4 + 15^2 + 34^2 - 36^2 \quad = 34 + 152 + 342 - 362$$
$$:= 3^4 + 16^2 + 27^2 - 30^2 \quad = 34 + 162 + 272 - 302$$
$$:= 3^4 + 19^2 + 20^2 - 26^2 \quad = 34 + 192 + 202 - 262$$

$$\mathbf{167} := -2^5 + 28^2 + 28^2 - 37^2 \quad = -25 + 282 + 282 - 372$$
$$:= 2^5 - 2^8 - 3^2 + 20^2 \quad = 25 - 28 - 32 + 202$$
$$:= 2^6 - 2^8 - 5^3 + 22^2 \quad = 26 - 28 - 53 + 222$$
$$:= -3^4 - 5^3 + 7^2 + 18^2 \quad = -34 - 53 + 72 + 182$$
$$:= -3^5 + 19^2 - 24^2 + 25^2 \quad = -35 + 192 - 242 + 252$$
$$:= -3^6 + 4^3 - 18^2 + 34^2 \quad = -36 + 43 - 182 + 342$$
$$:= -3^6 + 8^3 - 10^2 + 22^2 \quad = -36 + 83 - 102 + 222$$

$$\mathbf{168} := -2^5 - 5^7 - 19^3 + 44^3 \quad = -25 - 57 - 193 + 443$$
$$:= 2^6 + 16^2 + 37^2 - 39^2 \quad = 26 + 162 + 372 - 392$$
$$:= 2^6 + 4^3 - 6^3 + 16^2 \quad = 26 + 43 - 63 + 162$$
$$:= -2^9 - 10^3 - 13^2 + 43^2 \quad = -29 - 103 - 132 + 432$$

$$\mathbf{169} := -17^3 - 25^3 + 27^3 + 32^2 = -173 - 253 + 273 + 322$$
$$:= -18^3 - 22^3 + 25^3 + 32^2 = -183 - 223 + 253 + 322$$
$$:= -2^2 + 2^4 - 3^5 + 20^2 \quad = -22 + 24 - 35 + 202$$
$$:= 2^4 - 4^4 - 6^3 + 25^2 \quad = 24 - 44 - 63 + 252$$
$$:= -3^3 + 26^2 + 37^2 - 43^2 \quad = -33 + 262 + 372 - 432$$
$$:= -3^4 + 5^4 - 10^3 + 25^2 \quad = -34 + 54 - 103 + 252$$
$$:= -4^3 + 29^2 + 34^2 - 42^2 \quad = -43 + 292 + 342 - 422$$
$$:= -4^3 + 6^3 - 8^3 + 23^2 \quad = -43 + 63 - 83 + 232$$
$$:= 5^2 - 10^3 - 15^2 + 37^2 \quad = 52 - 103 - 152 + 372$$
$$:= -6^2 - 6^3 + 14^2 + 15^2 \quad = -62 - 63 + 142 + 152$$
$$:= -6^2 - 7^3 + 8^2 + 22^2 \quad = -62 - 73 + 82 + 222$$
$$:= 7^2 - 10^3 - 18^2 + 38^2 \quad = 72 - 103 - 182 + 382$$
$$:= -7^3 + 26^2 + 40^2 - 42^2 \quad = -73 + 262 + 402 - 422$$
$$:= -7^3 + 28^2 + 32^2 - 36^2 \quad = -73 + 282 + 322 - 362$$
$$:= -7^3 + 8^3 - 16^5 + 32^4 \quad = -73 + 83 - 165 + 324$$
$$:= -7^3 - 12^2 + 16^2 + 20^2 \quad = -73 - 122 + 162 + 202$$
$$:= -8^3 + 18^2 - 22^2 + 29^2 \quad = -83 + 182 - 222 + 292$$
$$:= -8^3 + 23^2 - 37^2 + 39^2 \quad = -83 + 232 - 372 + 392$$

$170 := 2^9 + 3^3 - 5^4 + 16^2 \qquad = 29 + 33 - 54 + 162$

$\quad\; := 4^5 + 5^6 - 10^5 + 17^4 \qquad = 45 + 56 - 105 + 174$

$171 := -2^2 + 12^4 - 13^4 + 20^3 \quad = -22 + 124 - 134 + 203$

$\quad\; := 2^4 - 3^2 - 8^3 + 26^2 \qquad = 24 - 32 - 83 + 262$

$\quad\; := -2^8 + 3^3 + 4^4 + 12^2 \qquad = -28 + 33 + 44 + 122$

$\quad\; := 4^6 - 8^4 - 9^3 + 30^2 \qquad = 46 - 84 - 93 + 302$

$\quad\; := -6^2 + 8^4 - 17^3 + 32^2 \qquad = -62 + 84 - 173 + 322$

$172 := -4^4 - 5^4 - 6^2 + 33^2 \qquad = -44 - 54 - 62 + 332$

$173 := -2^2 + 2^6 - 8^3 + 25^2 \qquad = -22 + 26 - 83 + 252$

$\quad\; := -2^4 + 4^3 + 5^2 + 10^2 \qquad = -24 + 43 + 52 + 102$

$\quad\; := 2^5 - 2^6 + 3^2 + 14^2 \qquad = 25 - 26 + 32 + 142$

$\quad\; := 2^5 - 2^7 + 5^3 + 12^2 \qquad = 25 - 27 + 53 + 122$

$173 := 2^7 - 7^3 - 8^3 + 30^2 \qquad = 27 - 73 - 83 + 302$

$\quad\; := 2^7 - 9^5 - 15^2 + 39^3 \qquad = 27 - 95 - 152 + 393$

$\quad\; := -3^5 + 4^2 + 4^4 + 12^2 \qquad = -35 + 42 + 44 + 122$

$\quad\; := -3^6 + 6^3 + 7^3 + 7^3 \qquad = -36 + 63 + 73 + 73$

$\quad\; := -3^7 + 4^3 + 6^4 + 10^3 \qquad = -37 + 43 + 64 + 103$

$174 := -2^8 + 15^2 - 18^2 + 23^2 \quad = -28 + 152 - 182 + 232$

$\quad\; := -2^8 + 17^2 - 22^2 + 25^2 \quad = -28 + 172 - 222 + 252$

$\quad\; := -2^8 + 19^2 - 34^2 + 35^2 \quad = -28 + 192 - 342 + 352$

$\quad\; := -6^4 - 7^2 - 9^2 + 40^2 \qquad = -64 - 72 - 92 + 402$

$175 := 2^3 + 16^2 + 44^2 - 45^2 \qquad = 23 + 162 + 442 - 452$

$\quad\; := 2^8 - 12^3 - 17^2 + 44^2 \qquad = 28 - 123 - 172 + 442$

$\quad\; := 3^3 + 15^2 + 38^2 - 39^2 \qquad = 33 + 152 + 382 - 392$

$\quad\; := 3^3 + 16^2 + 26^2 - 28^2 \qquad = 33 + 162 + 262 - 282$

$\quad\; := 3^3 + 17^2 + 22^2 - 25^2 \qquad = 33 + 172 + 222 - 252$

$\quad\; := 3^3 + 18^2 + 20^2 - 24^2 \qquad = 33 + 182 + 202 - 242$

$\quad\; := 3^3 - 4^2 + 8^2 + 10^2 \qquad = 33 - 42 + 82 + 102$

$\quad\; := 4^3 + 14^2 + 42^2 - 43^2 \qquad = 43 + 142 + 422 - 432$

$\quad\; := 6^3 + 20^2 + 20^2 - 29^2 \qquad = 63 + 202 + 202 - 292$

$\quad\; := 8^3 + 20^2 + 28^2 - 39^2 \qquad = 83 + 202 + 282 - 392$

$176 := -2^2 - 2^6 + 10^2 + 12^2 \qquad = -22 - 26 + 102 + 122$

$\quad\; := -2^5 + 4^3 - 4^4 + 20^2 \qquad = -25 + 43 - 44 + 202$

$\quad\; := -2^6 + 24^2 + 40^2 - 44^2 \quad = -26 + 242 + 402 - 442$

$\quad\; := -2^6 + 28^2 + 30^2 - 38^2 \quad = -26 + 282 + 302 - 382$

$\quad\; := -3^4 - 3^4 + 7^2 + 17^2 \qquad = -34 - 34 + 72 + 172$

$\quad\; := -3^4 - 3^6 + 5^4 + 19^2 \qquad = -34 - 36 + 54 + 192$

$177 := -2^2 + 2^5 + 7^2 + 10^2 \qquad = -22 + 25 + 72 + 102$

$\quad\; := 2^4 + 2^4 - 6^3 + 19^2 \qquad = 24 + 24 - 63 + 192$

$\quad\; := 2^5 + 17^2 + 35^2 - 37^2 \qquad = 25 + 172 + 352 - 372$

$\quad\; := 2^5 + 19^2 + 25^2 - 29^2 \qquad = 25 + 192 + 252 - 292$

$177 := 2^5 + 20^2 + 23^2 - 28^2 \qquad = 25 + 202 + 232 - 282$

$\quad\; := 2^7 + 7^2 - 8^8 + 16^6 \qquad = 27 + 72 - 88 + 166$

$\quad\; := 2^8 - 3^5 + 8^2 + 10^2 \qquad = 28 - 35 + 82 + 102$

$\quad\; := -2^9 - 3^3 - 5^3 + 29^2 \qquad = -29 - 33 - 53 + 292$

$178 := -2^2 - 3^5 + 4^3 + 19^2 \qquad = -22 - 35 + 43 + 192$

$\quad\; := 3^3 - 8^4 - 15^4 + 38^3 \qquad = 33 - 84 - 154 + 383$

$\quad\; := -4^4 + 27^2 + 27^2 - 32^2 \quad = -44 + 272 + 272 - 322$

$\quad\; := -4^4 - 12^2 + 17^2 + 17^2 \quad = -44 - 122 + 172 + 172$

$\quad\; := -8^4 - 10^3 + 17^3 + 19^2 \quad = -84 - 103 + 173 + 192$

$180 := -2^2 + 26^2 + 38^2 - 44^2 \quad = -22 + 262 + 382 - 442$

$\quad\; := -2^4 + 2^5 - 8^3 + 26^2 \qquad = -24 + 25 - 83 + 262$

$\quad\; := -3^2 + 30^2 + 35^2 - 44^2 \quad = -32 + 302 + 352 - 442$

$\quad\; := -3^2 + 5^3 - 8^3 + 24^2 \qquad = -32 + 53 - 83 + 242$

$\quad\; := -3^2 - 9^4 + 15^3 + 15^3 \qquad = -32 - 94 + 153 + 153$

$\quad\; := 4^7 - 5^7 - 23^3 + 42^3 \qquad = 47 - 57 - 233 + 423$

$\quad\; := -5^3 + 12^4 - 28^3 + 39^2 \quad = -53 + 124 - 283 + 392$

$\quad\; := -6^2 + 6^3 - 9^3 + 27^2 \qquad = -62 + 63 - 93 + 272$

$181 := -3^5 - 6^3 - 9^3 + 37^2 \qquad = -35 - 63 - 93 + 372$

$182 := 2^2 - 2^4 + 5^2 + 13^2 \qquad = 22 - 24 + 52 + 132$

$\quad\; := 2^4 - 2^7 + 5^3 + 13^2 \qquad = 24 - 27 + 53 + 132$

$\quad\; := -3^7 + 4^2 + 5^4 + 12^3 \qquad = -37 + 42 + 54 + 123$

$\quad\; := 3^7 - 5^5 - 18^2 + 38^2 \qquad = 37 - 55 - 182 + 382$

$183 := -4^5 - 5^2 - 8^2 + 36^2 \qquad = -45 - 52 - 82 + 362$

$\quad\; := -8^3 - 8^3 - 9^3 + 44^2 \qquad = -83 - 83 - 93 + 442$

$$184 := 2^2 + 18^2 + 35^2 - 37^2 \quad = 22 + 182 + 352 - 372$$
$$:= -2^3 + 4^3 + 8^2 + 8^2 \quad = -23 + 43 + 82 + 82$$
$$:= 3^2 + 20^2 + 20^2 - 25^2 \quad = 32 + 202 + 202 - 252$$
$$:= 3^2 - 5^2 + 10^2 + 10^2 \quad = 32 - 52 + 102 + 102$$
$$:= 3^3 - 4^3 + 5^2 + 14^2 \quad = 33 - 43 + 52 + 142$$
$$:= 4^2 + 15^2 + 28^2 - 29^2 \quad = 42 + 152 + 282 - 292$$
$$:= 4^2 - 5^2 + 7^2 + 12^2 \quad = 42 - 52 + 72 + 122$$
$$:= 5^2 + 14^2 + 18^2 - 19^2 \quad = 52 + 142 + 182 - 192$$
$$:= 5^2 - 7^2 + 8^2 + 12^2 \quad = 52 - 72 + 82 + 122$$
$$:= -5^4 + 6^3 + 8^3 + 9^2 \quad = -54 + 63 + 83 + 92$$
$$:= 7^2 + 10^2 - 17^2 + 18^2 \quad = 72 + 102 - 172 + 182$$
$$:= 8^2 + 8^2 - 13^2 + 15^2 \quad = 82 + 82 - 132 + 152$$
$$:= 8^2 + 9^2 - 19^2 + 20^2 \quad = 82 + 92 - 192 + 202$$

$$185 := -2^6 + 4^2 - 7^3 + 24^2 \quad = -26 + 42 - 73 + 242$$
$$:= -2^6 - 4^3 + 12^2 + 13^2 \quad = -26 - 43 + 122 + 132$$
$$:= -2^7 + 29^2 + 29^2 - 37^2 \quad = -27 + 292 + 292 - 372$$
$$:= -2^7 - 5^2 + 13^2 + 13^2 \quad = -27 - 52 + 132 + 132$$
$$:= -2^8 + 10^4 - 22^3 + 33^2 \quad = -28 + 104 - 223 + 332$$
$$:= -2^8 + 3^4 - 6^3 + 24^2 \quad = -28 + 34 - 63 + 242$$
$$:= -2^8 + 7^4 - 14^3 + 28^2 \quad = -28 + 74 - 143 + 282$$

$$186 := -2^3 + 2^5 + 9^2 + 9^2 \quad = -23 + 25 + 92 + 92$$
$$:= 2^5 + 3^2 - 6^3 + 19^2 \quad = 25 + 32 - 63 + 192$$
$$:= 2^5 - 3^3 + 9^2 + 10^2 \quad = 25 - 33 + 92 + 102$$
$$:= 2^5 - 4^3 + 7^2 + 13^2 \quad = 25 - 43 + 72 + 132$$
$$:= 3^4 + 18^2 + 35^2 - 38^2 \quad = 34 + 182 + 352 - 382$$
$$:= 3^4 + 19^2 + 30^2 - 34^2 \quad = 34 + 192 + 302 - 342$$
$$:= 3^4 + 20^2 + 27^2 - 32^2 \quad = 34 + 202 + 272 - 322$$

$$187 := -3^5 - 10^2 + 13^2 + 19^2 \quad = -35 - 102 + 132 + 192$$
$$:= -8^4 - 9^4 + 14^2 + 22^3 \quad = -84 - 94 + 142 + 223$$

$$188 := 2^6 + 22^2 + 27^2 - 33^2 \quad = 26 + 222 + 272 - 332$$
$$:= 2^7 + 3^3 - 4^4 + 17^2 \quad = 27 + 33 - 44 + 172$$
$$:= 5^7 + 27^2 + 29^2 - 43^3 \quad = 57 + 272 + 292 - 433$$

$$189 := -16^5 - 30^2 + 32^4 + 33^2 \quad = -165 - 302 + 324 + 332$$
$$:= 2^4 - 4^5 - 18^2 + 39^2 \quad = 24 - 45 - 182 + 392$$
$$:= -2^9 + 5^3 + 8^2 + 8^3 \quad = -29 + 53 + 82 + 83$$

$$:= -3^3 + 6^3 - 16^5 + 32^4 \quad = -33 + 63 - 165 + 324$$
$$:= -4^2 - 6^3 + 14^2 + 15^2 \quad = -42 - 63 + 142 + 152$$
$$:= -4^2 - 7^3 + 8^2 + 22^2 \quad = -42 - 73 + 82 + 222$$
$$:= 5^3 - 6^4 - 24^2 + 44^2 \quad = 53 - 64 - 242 + 442$$
$$:= -6^3 + 9^3 - 10^3 + 26^2 \quad = -63 + 93 - 103 + 262$$
$$:= -7^3 + 32^2 + 38^2 - 44^2 \quad = -73 + 322 + 382 - 442$$
$$:= -7^3 + 34^2 + 35^2 - 43^2 \quad = -73 + 342 + 352 - 432$$
$$:= -7^3 - 8^2 + 14^2 + 20^2 \quad = -73 - 82 + 142 + 202$$
$$:= -7^3 - 9^2 + 17^2 + 18^2 \quad = -73 - 92 + 172 + 182$$
$$:= -8^3 + 29^2 + 34^2 - 36^2 \quad = -83 + 292 + 342 - 362$$
$$:= -8^3 - 12^2 + 13^2 + 26^2 \quad = -83 - 122 + 132 + 262$$
$$:= -8^3 - 18^2 + 20^2 + 25^2 \quad = -83 - 182 + 202 + 252$$

$$191 := -2^6 + 5^3 + 7^2 + 9^2 \quad = -26 + 53 + 72 + 92$$
$$:= -4^2 + 8^4 - 17^3 + 32^2 \quad = -42 + 84 - 173 + 322$$
$$:= 6^4 - 8^2 - 13^3 + 34^2 \quad = 64 - 82 - 133 + 342$$

$$192 := -2^6 - 2^6 + 8^2 + 16^2 \quad = -26 - 26 + 82 + 162$$
$$:= -2^6 - 3^8 + 9^4 + 16^2 \quad = -26 - 38 + 94 + 162$$
$$:= -4^2 - 4^4 - 5^4 + 33^2 \quad = -42 - 44 - 54 + 332$$

$$193 := 2^2 + 5^2 - 5^3 + 17^2 \quad = 22 + 52 - 53 + 172$$
$$:= -2^3 + 4^2 + 4^2 + 13^2 \quad = -23 + 42 + 42 + 132$$
$$:= 2^4 + 2^4 - 2^7 + 17^2 \quad = 24 + 24 - 27 + 172$$
$$:= -2^4 + 4^3 + 8^2 + 9^2 \quad = -24 + 43 + 82 + 92$$
$$:= 2^5 - 2^7 + 4^3 + 15^2 \quad = 25 - 27 + 43 + 152$$
$$:= 2^6 - 2^8 + 6^3 + 13^2 \quad = 26 - 28 + 63 + 132$$
$$:= 2^7 - 8^3 - 8^3 + 33^2 \quad = 27 - 83 - 83 + 332$$
$$:= -3^4 + 5^3 + 7^2 + 10^2 \quad = -34 + 53 + 72 + 102$$
$$:= -3^5 + 4^4 + 6^2 + 12^2 \quad = -35 + 44 + 62 + 122$$
$$:= 4^2 + 4^2 - 4^3 + 15^2 \quad = 42 + 42 - 43 + 152$$
$$:= 4^2 - 4^7 + 9^4 + 10^4 \quad = 42 - 47 + 94 + 104$$
$$:= -5^2 + 5^6 - 18^5 + 37^4 \quad = -52 + 56 - 185 + 374$$

$$194 := -2^2 - 3^3 - 10^3 + 35^2 \quad = -22 - 33 - 103 + 352$$
$$:= -2^7 + 3^4 - 3^5 + 22^2 \quad = -27 + 34 - 35 + 222$$
$$:= -2^8 + 23^2 + 39^2 - 40^2 \quad = -28 + 232 + 392 - 402$$

$$195 := 2^3 + 20^2 + 34^2 - 37^2 \quad = 23 + 202 + 342 - 372$$
$$:= 3^2 + 17^4 + 43^2 - 44^3 \quad = 32 + 174 + 432 - 443$$

$$:= 3^2 + 7^4 - 14^3 + 23^2 \qquad = 32 + 74 - 143 + 232$$
$$:= 3^3 + 18^2 + 38^2 - 40^2 \qquad = 33 + 182 + 382 - 402$$
$$:= 3^5 - 4^4 + 8^2 + 12^2 \qquad = 35 - 44 + 82 + 122$$
$$:= 5^3 + 17^2 + 35^2 - 38^2 \qquad = 53 + 172 + 352 - 382$$
$$:= 6^3 + 18^2 + 32^2 - 37^2 \qquad = 63 + 182 + 322 - 372$$
$$:= 6^3 + 8^3 - 9^3 + 14^2 \qquad = 63 + 83 - 93 + 142$$

$$196 := -2^5 + 2^8 - 2^9 + 22^2 \qquad = -25 + 28 - 29 + 222$$
$$:= -2^6 + 29^2 + 38^2 - 45^2 \qquad = -26 + 292 + 382 - 452$$
$$:= -2^6 + 30^2 + 36^2 - 44^2 \qquad = -26 + 302 + 362 - 442$$
$$:= -3^6 + 14^2 - 36^2 + 45^2 \qquad = -36 + 142 - 362 + 452$$
$$:= -3^6 + 5^2 - 16^2 + 34^2 \qquad = -36 + 52 - 162 + 342$$

$$197 := -2^2 - 2^4 - 2^9 + 27^2 \qquad = -22 - 24 - 29 + 272$$
$$:= 2^6 + 5^2 - 6^3 + 18^2 \qquad = 26 + 52 - 63 + 182$$

$$198 := -3^3 - 8^4 + 15^2 + 16^3 \qquad = -33 - 84 + 152 + 163$$
$$:= -5^4 + 14^2 - 23^2 + 34^2 \qquad = -54 + 142 - 232 + 342$$
$$:= -5^4 + 16^2 - 27^2 + 36^2 \qquad = -54 + 162 - 272 + 362$$

$$199 := 2^8 - 5^4 + 7^3 + 15^2 \qquad = 28 - 54 + 73 + 152$$
$$:= 3^3 + 3^7 - 14^3 + 27^2 \qquad = 33 + 37 - 143 + 272$$
$$:= 5^5 + 9^5 - 40^3 + 45^2 \qquad = 55 + 95 - 403 + 452$$
$$:= 7^5 + 14^4 + 18^4 - 20^4 \qquad = 75 + 144 + 184 - 204$$

$$200 := -4^2 + 6^3 - 9^3 + 27^2 \qquad = -42 + 63 - 93 + 272$$
$$:= 5^3 - 9^2 - 10^3 + 34^2 \qquad = 53 - 92 - 103 + 342$$

$$201 := 2^8 + 23^3 + 23^3 - 29^3 \qquad = 28 + 233 + 233 - 293$$
$$:= -3^5 - 6^4 - 14^2 + 44^2 \qquad = -35 - 64 - 142 + 442$$

$$202 := 2^2 - 3^5 + 6^3 + 15^2 \qquad = 22 - 35 + 63 + 152$$
$$:= 2^4 - 2^6 + 5^2 + 15^2 \qquad = 24 - 26 + 52 + 152$$
$$:= 2^5 - 2^7 + 3^2 + 17^2 \qquad = 25 - 27 + 32 + 172$$
$$:= -3^7 + 5^4 + 6^2 + 12^3 \qquad = -37 + 54 + 62 + 123$$

$$204 := 2^3 + 2^7 - 2^8 + 18^2 \qquad = 23 + 27 - 28 + 182$$
$$:= 2^3 - 4^3 + 8^2 + 14^2 \qquad = 23 - 43 + 82 + 142$$
$$:= 4^2 + 18^2 + 33^2 - 35^2 \qquad = 42 + 182 + 332 - 352$$
$$:= 5^2 + 16^2 + 38^2 - 39^2 \qquad = 52 + 162 + 382 - 392$$

$$:= -5^2 + 6^2 + 7^2 + 12^2 \qquad = -52 + 62 + 72 + 122$$
$$:= 6^2 + 15^2 + 28^2 - 29^2 \qquad = 62 + 152 + 282 - 292$$
$$:= 8^2 + 13^2 + 14^2 - 15^2 \qquad = 82 + 132 + 142 - 152$$

$$205 := -2^2 - 2^7 + 9^2 + 16^2 \qquad = -22 - 27 + 92 + 162$$
$$:= -2^6 + 6^2 - 7^3 + 24^2 \qquad = -26 + 62 - 73 + 242$$
$$:= -2^6 - 5^3 + 13^2 + 15^2 \qquad = -26 - 53 + 132 + 152$$
$$:= -2^7 + 30^2 + 37^2 - 44^2 \qquad = -27 + 302 + 372 - 442$$

$$206 := 12^4 + 15^3 + 22^2 - 29^3 \qquad = 124 + 153 + 222 - 293$$
$$:= 3^5 - 7^3 + 9^2 + 15^2 \qquad = 35 - 73 + 92 + 152$$
$$:= 4^4 + 25^2 + 33^2 - 42^2 \qquad = 44 + 252 + 332 - 422$$
$$:= 5^3 + 10^4 - 22^3 + 27^2 \qquad = 53 + 104 - 223 + 272$$

$$207 := -2^5 + 7^3 - 9^3 + 25^2 \qquad = -25 + 73 - 93 + 252$$
$$:= -3^4 + 4^2 - 8^3 + 28^2 \qquad = -34 + 42 - 83 + 282$$
$$:= 3^4 - 3^5 - 4^4 + 25^2 \qquad = 34 - 35 - 44 + 252$$
$$:= -3^5 + 4^3 - 7^3 + 27^2 \qquad = -35 + 43 - 73 + 272$$
$$:= 3^5 - 3^9 - 6^2 + 27^3 \qquad = 35 - 39 - 62 + 273$$
$$:= -3^5 - 8^2 + 15^2 + 17^2 \qquad = -35 - 82 + 152 + 172$$
$$:= -4^6 - 7^2 + 16^2 + 16^3 \qquad = -46 - 72 + 162 + 163$$
$$:= -4^7 + 7^5 - 10^3 + 28^2 \qquad = -47 + 75 - 103 + 282$$
$$:= -5^4 - 6^4 + 12^3 + 20^2 \qquad = -54 - 64 + 123 + 202$$
$$:= -9^9 + 27^6 - 33^2 + 36^2 \qquad = -99 + 276 - 332 + 362$$

$$208 := 2^5 + 2^5 - 4^4 + 20^2 \qquad = 25 + 25 - 44 + 202$$
$$:= 2^6 + 24^2 + 33^2 - 39^2 \qquad = 26 + 242 + 332 - 392$$
$$:= 2^6 + 27^2 + 28^2 - 37^2 \qquad = 26 + 272 + 282 - 372$$
$$:= 2^6 + 8^3 - 9^3 + 19^2 \qquad = 26 + 83 - 93 + 192$$
$$:= 2^7 - 6^3 + 10^2 + 14^2 \qquad = 27 - 63 + 102 + 142$$

$$209 := -18^3 - 18^3 + 22^3 + 35^2 \qquad = -183 - 183 + 223 + 352$$
$$:= 2^2 - 2^7 + 3^2 + 18^2 \qquad = 22 - 27 + 32 + 182$$
$$:= 2^3 - 8^3 - 8^3 + 35^2 \qquad = 23 - 83 - 83 + 352$$
$$:= -6^2 - 8^3 + 9^2 + 26^2 \qquad = -62 - 83 + 92 + 262$$
$$:= -8^3 + 35^2 + 39^2 - 45^2 \qquad = -83 + 352 + 392 - 452$$
$$:= -8^3 - 10^2 + 14^2 + 25^2 \qquad = -83 - 102 + 142 + 252$$
$$:= -8^3 - 12^2 + 17^2 + 24^2 \qquad = -83 - 122 + 172 + 242$$
$$:= -8^3 - 13^2 + 19^2 + 23^2 \qquad = -83 - 132 + 192 + 232$$

$211 := 2^5 - 6^4 - 17^2 + 42^2 \quad = 25 - 64 - 172 + 422$

$212 := -2^6 - 2^6 + 12^2 + 14^2 \quad = -26 - 26 + 122 + 142$

$213 := 2^2 + 5^2 - 6^3 + 20^2 \quad = 22 + 52 - 63 + 202$
$\quad := -2^3 + 4^2 + 6^2 + 13^2 \quad = -23 + 42 + 62 + 132$
$\quad := 2^5 - 2^6 + 7^2 + 14^2 \quad = 25 - 26 + 72 + 142$
$\quad := -3^5 + 4^4 + 10^2 + 10^2 \quad = -35 + 44 + 102 + 102$
$\quad := 4^2 - 4^3 + 6^2 + 15^2 \quad = 42 - 43 + 62 + 152$
$\quad := -4^7 + 6^2 + 9^4 + 10^4 \quad = -47 + 62 + 94 + 104$

$214 := -2^7 - 3^3 + 12^2 + 15^2 \quad = -27 - 33 + 122 + 152$
$\quad := -3^2 - 6^4 - 9^2 + 40^2 \quad = -32 - 64 - 92 + 402$
$\quad := -3^7 + 7^4 - 9^9 + 27^6 \quad = -37 + 74 - 99 + 276$

$215 := 2^3 + 26^2 + 30^2 - 37^2 \quad = 23 + 262 + 302 - 372$
$\quad := 2^4 + 3^4 - 3^5 + 19^2 \quad = 24 + 34 - 35 + 192$
$\quad := -2^9 - 3^6 - 12^2 + 40^2 \quad = -29 - 36 - 122 + 402$
$\quad := 3^3 + 22^2 + 35^2 - 39^2 \quad = 33 + 222 + 352 - 392$
$\quad := 4^3 + 20^2 + 40^2 - 43^2 \quad = 43 + 202 + 402 - 432$

$216 := -3^6 + 17^2 - 37^2 + 45^2 \quad = -36 + 172 - 372 + 452$
$\quad := -3^6 + 5^2 - 13^2 + 33^2 \quad = -36 + 52 - 132 + 332$
$\quad := -3^6 + 9^2 - 19^2 + 35^2 \quad = -36 + 92 - 192 + 352$
$\quad := -3^6 - 4^4 + 5^4 + 24^2 \quad = -36 - 44 + 54 + 242$

$217 := 2^4 + 5^4 - 10^3 + 24^2 \quad = 24 + 54 - 103 + 242$
$\quad := 2^5 + 27^2 + 30^2 - 38^2 \quad = 25 + 272 + 302 - 382$

$218 := -2^4 - 10^4 + 15^3 + 19^3 \quad = -24 - 104 + 153 + 193$
$\quad := -5^3 - 5^4 + 7^3 + 25^2 \quad = -53 - 54 + 73 + 252$

$219 := -2^4 - 3^6 - 5^3 + 33^2 \quad = -24 - 36 - 53 + 332$
$\quad := 2^7 + 28^2 + 34^2 - 43^2 \quad = 27 + 282 + 342 - 432$
$\quad := 2^7 + 3^3 - 8^3 + 24^2 \quad = 27 + 33 - 83 + 242$
$\quad := 4^6 + 10^4 - 12^4 + 19^3 \quad = 46 + 104 - 124 + 193$

$220 := 2^3 - 2^7 + 4^2 + 18^2 \quad = 23 - 27 + 42 + 182$
$\quad := -2^8 + 4^3 + 6^3 + 14^2 \quad = -28 + 43 + 63 + 142$
$\quad := -4^3 + 4^4 - 15^4 + 37^3 \quad = -43 + 44 - 154 + 373$
$\quad := 4^4 - 5^3 - 10^3 + 33^2 \quad = 44 - 53 - 103 + 332$

$\quad := 4^4 - 6^2 - 8^5 + 32^3 \quad = 44 - 62 - 85 + 323$
$\quad := -7^2 + 14^3 - 15^3 + 30^2 \quad = -72 + 143 - 153 + 302$

$221 := -2^5 - 2^8 + 5^2 + 22^2 \quad = -25 - 28 + 52 + 222$
$222 := 4^5 - 7^2 - 13^3 + 38^2 \quad = 45 - 72 - 133 + 382$

$223 := -2^3 - 2^9 + 7^3 + 20^2 \quad = -23 - 29 + 73 + 202$
$\quad := -2^9 + 14^2 - 19^2 + 30^2 \quad = -29 + 142 - 192 + 302$

$224 := 10^2 + 13^2 + 22^2 - 23^2 \quad = 102 + 132 + 222 - 232$
$\quad := 10^2 + 14^2 + 17^2 - 19^2 \quad = 102 + 142 + 172 - 192$
$\quad := 12^2 + 12^2 + 15^2 - 17^2 \quad = 122 + 122 + 152 - 172$
$\quad := 2^2 + 25^2 + 38^2 - 43^2 \quad = 22 + 252 + 382 - 432$
$\quad := 2^2 + 29^2 + 30^2 - 39^2 \quad = 22 + 292 + 302 - 392$

$224 := 2^4 + 2^6 - 2^8 + 20^2 \quad = 24 + 26 - 28 + 202$
$\quad := 2^4 - 3^4 + 8^2 + 15^2 \quad = 24 - 34 + 82 + 152$
$\quad := -2^5 - 2^9 - 4^4 + 32^2 \quad = -25 - 29 - 44 + 322$
$\quad := -3^2 + 5^2 + 8^2 + 12^2 \quad = -32 + 52 + 82 + 122$
$\quad := 5^2 + 20^2 + 32^2 - 35^2 \quad = 52 + 202 + 322 - 352$
$\quad := -5^2 + 7^2 + 10^2 + 10^2 \quad = -52 + 72 + 102 + 102$

$224 := 6^2 + 18^2 + 33^2 - 35^2 \quad = 62 + 182 + 332 - 352$
$\quad := 7^2 + 20^2 + 20^2 - 25^2 \quad = 72 + 202 + 202 - 252$
$\quad := 8^2 + 15^2 + 32^2 - 33^2 \quad = 82 + 152 + 322 - 332$
$\quad := 8^2 + 16^2 + 23^2 - 25^2 \quad = 82 + 162 + 232 - 252$
$\quad := 8^2 + 17^2 + 20^2 - 23^2 \quad = 82 + 172 + 202 - 232$
$\quad := 9^2 + 14^2 + 26^2 - 27^2 \quad = 92 + 142 + 262 - 272$

$225 := -2^6 - 6^3 + 12^2 + 19^2 \quad = -26 - 63 + 122 + 192$
$\quad := -2^6 - 8^4 + 16^3 + 17^2 \quad = -26 - 84 + 163 + 172$

$226 := 2^4 + 25^2 + 39^2 - 44^2 \quad = 24 + 252 + 392 - 442$
$\quad := 2^5 - 6^3 + 7^2 + 19^2 \quad = 25 - 63 + 72 + 192$
$\quad := 3^4 + 25^2 + 37^2 - 43^2 \quad = 34 + 252 + 372 - 432$
$\quad := 9^3 + 18^3 + 18^3 - 23^3 \quad = 93 + 183 + 183 - 233$

$227 := -2^9 + 3^7 - 14^3 + 36^2 \quad = -29 + 37 - 143 + 362$
$\quad := -3^4 + 6^2 - 8^3 + 28^2 \quad = -34 + 62 - 83 + 282$
$\quad := 3^5 - 3^9 - 4^2 + 27^3 \quad = 35 - 39 - 42 + 273$

$$228 := -2^7 - 4^5 - 8^2 + 38^2 \quad = -27 - 45 - 82 + 382$$
$$:= 4^4 + 4^5 - 12^3 + 26^2 \quad = 44 + 45 - 123 + 262$$

$$229 := -10^3 + 19^2 - 24^2 + 38^2 = -103 + 192 - 242 + 382$$
$$:= -10^3 + 23^2 - 30^2 + 40^2 = -103 + 232 - 302 + 402$$
$$:= -10^3 + 26^2 - 36^2 + 43^2 = -103 + 262 - 362 + 432$$
$$:= -2^3 + 5^3 - 9^3 + 29^2 \quad = -23 + 53 - 93 + 292$$
$$:= 2^8 - 3^3 - 3^9 + 27^3 \quad = 28 - 33 - 39 + 273$$
$$:= -4^2 - 8^3 + 9^2 + 26^2 \quad = -42 - 83 + 92 + 262$$

$$230 := 2^7 + 3^5 - 5^4 + 22^2 \quad = 27 + 35 - 54 + 222$$
$$:= 2^8 + 3^3 - 9^3 + 26^2 \quad = 28 + 33 - 93 + 262$$

$$231 := -2^8 + 3^5 + 10^2 + 12^2 \quad = -28 + 35 + 102 + 122$$

$$232 := -2^5 - 2^7 + 14^2 + 14^2 \quad = -25 - 27 + 142 + 142$$

$$233 := -2^3 + 4^2 + 9^2 + 12^2 \quad = -23 + 42 + 92 + 122$$
$$:= -2^3 + 6^2 + 6^2 + 13^2 \quad = -23 + 62 + 62 + 132$$
$$:= 2^3 - 3^4 + 9^2 + 15^2 \quad = 23 - 34 + 92 + 152$$
$$:= 2^6 - 2^8 + 4^3 + 19^2 \quad = 26 - 28 + 43 + 192$$
$$:= 3^2 - 4^3 + 12^2 + 12^2 \quad = 32 - 43 + 122 + 122$$
$$:= -3^3 + 4^2 + 10^2 + 12^2 \quad = -33 + 42 + 102 + 122$$
$$:= 3^3 - 3^5 + 5^3 + 18^2 \quad = 33 - 35 + 53 + 182$$
$$:= -3^4 + 4^3 + 9^2 + 13^2 \quad = -34 + 43 + 92 + 132$$
$$:= 3^7 - 7^3 - 15^3 + 42^2 \quad = 37 - 73 - 153 + 422$$
$$:= -4^3 + 6^2 + 6^2 + 15^2 \quad = -43 + 62 + 62 + 152$$

$$234 := -2^9 + 3^4 - 4^3 + 27^2 \quad = -29 + 34 - 43 + 272$$
$$:= -2^9 + 7^4 - 14^3 + 33^2 \quad = -29 + 74 - 143 + 332$$
$$:= -3^3 - 6^2 - 12^3 + 45^2 \quad = -33 - 62 - 123 + 452$$
$$:= -3^7 - 6^5 + 13^3 + 20^3 \quad = -37 - 65 + 133 + 203$$
$$:= -4^6 - 6^6 + 15^4 + 19^2 \quad = -46 - 66 + 154 + 192$$

$$235 := 3^3 + 26^2 + 36^2 - 42^2 \quad = 33 + 262 + 362 - 422$$
$$:= 3^3 + 28^2 + 32^2 - 40^2 \quad = 33 + 282 + 322 - 402$$
$$:= 3^4 - 6^3 + 9^2 + 17^2 \quad = 34 - 63 + 92 + 172$$
$$:= 4^3 + 24^2 + 38^2 - 43^2 \quad = 43 + 242 + 382 - 432$$
$$:= 7^2 + 17^4 + 43^2 - 44^3 \quad = 72 + 174 + 432 - 443$$

$$:= 7^2 + 7^4 - 14^3 + 23^2 \quad = 72 + 74 - 143 + 232$$
$$:= 7^3 + 29^2 + 30^2 - 43^2 \quad = 73 + 292 + 302 - 432$$

$$236 := 2^6 - 2^9 - 6^3 + 30^2 \quad = 26 - 29 - 63 + 302$$

$$237 := 2^6 + 3^2 - 8^3 + 26^2 \quad = 26 + 32 - 83 + 262$$
$$:= 2^6 - 6^3 + 10^2 + 17^2 \quad = 26 - 63 + 102 + 172$$

$$238 := 3^3 - 4^3 - 5^4 + 30^2 \quad = 33 - 43 - 54 + 302$$
$$:= -5^4 + 18^2 - 19^2 + 30^2 \quad = -54 + 182 - 192 + 302$$
$$:= -5^4 + 28^2 - 39^2 + 40^2 \quad = -54 + 282 - 392 + 402$$

$$240 := -2^3 + 2^5 - 5^4 + 29^2 \quad = -23 + 25 - 54 + 292$$
$$:= 2^3 - 2^7 + 6^2 + 18^2 \quad = 23 - 27 + 62 + 182$$
$$:= -2^4 + 2^8 - 3^6 + 27^2 \quad = -24 + 28 - 36 + 272$$
$$:= -4^2 + 4^4 - 8^5 + 32^3 \quad = -42 + 44 - 85 + 323$$
$$:= 7^4 - 12^3 - 13^3 + 42^2 \quad = 74 - 123 - 133 + 422$$
$$:= 8^3 - 12^2 - 12^3 + 40^2 \quad = 83 - 122 - 123 + 402$$

$$241 := -2^6 - 2^7 + 12^2 + 17^2 \quad = -26 - 27 + 122 + 172$$
$$:= 2^8 + 4^4 - 10^3 + 27^2 \quad = 28 + 44 - 103 + 272$$
$$:= -2^9 - 3^5 + 8^3 + 22^2 \quad = -29 - 35 + 83 + 222$$

$$242 := -2^4 + 5^2 + 8^2 + 13^2 \quad = -24 + 52 + 82 + 132$$
$$:= 2^5 - 2^7 + 7^2 + 17^2 \quad = 25 - 27 + 72 + 172$$
$$:= 2^6 - 7^3 - 10^3 + 39^2 \quad = 26 - 73 - 103 + 392$$

$$243 := -2^2 - 4^5 - 5^2 + 36^2 \quad = -22 - 45 - 52 + 362$$
$$:= -2^7 - 3^4 + 14^2 + 16^2 \quad = -27 - 34 + 142 + 162$$
$$:= -2^9 + 14^2 - 15^2 + 28^2 \quad = -29 + 142 - 152 + 282$$
$$:= -2^9 + 26^2 - 39^2 + 40^2 \quad = -29 + 262 - 392 + 402$$

$$244 := 10^2 + 16^2 + 27^2 - 29^2 \quad = 102 + 162 + 272 - 292$$
$$:= 12^2 + 13^2 + 34^2 - 35^2 \quad = 122 + 132 + 342 - 352$$
$$:= 12^2 + 14^2 + 23^2 - 25^2 \quad = 122 + 142 + 232 - 252$$
$$:= 8^2 + 18^2 + 35^2 - 37^2 \quad = 82 + 182 + 352 - 372$$

$$247 := -3^2 - 4^6 + 16^2 + 16^3 \quad = -32 - 46 + 162 + 163$$
$$:= -3^3 - 4^4 + 13^2 + 19^2 \quad = -33 - 44 + 132 + 192$$
$$:= -3^6 + 5^3 - 7^2 + 30^2 \quad = -36 + 53 - 72 + 302$$

$$:= -3^6 - 4^3 + 4^4 + 28^2 \quad = -36 - 43 + 44 + 282$$
$$:= -4^4 - 5^3 + 12^2 + 22^2 \quad = -44 - 53 + 122 + 222$$
$$:= -5^4 - 7^4 + 14^3 + 23^2 \quad = -54 - 74 + 143 + 232$$

$$248 := -2^5 - 3^6 - 8^3 + 39^2 \quad = -25 - 36 - 83 + 392$$

$$249 := -10^3 + 23^2 - 24^2 + 36^2 = -103 + 232 - 242 + 362$$
$$:= -10^3 + 32^2 - 36^2 + 39^2 = -103 + 322 - 362 + 392$$
$$:= 2^2 - 2^7 + 7^2 + 18^2 \quad = 22 - 27 + 72 + 182$$
$$:= -2^2 - 7^3 + 14^2 + 20^2 \quad = -22 - 73 + 142 + 202$$
$$:= -4^7 + 5^6 - 9^2 + 33^2 \quad = -47 + 56 - 92 + 332$$

$$251 := -2^2 + 6^4 - 13^3 + 34^2 \quad = -22 + 64 - 133 + 342$$
$$:= -2^6 + 3^3 + 12^2 + 12^2 \quad = -26 + 33 + 122 + 122$$
$$:= 4^6 - 6^6 - 8^2 + 35^3 \quad = 46 - 66 - 82 + 353$$

$$252 := -2^4 - 6^2 - 6^4 + 40^2 \quad = -24 - 62 - 64 + 402$$

$$253 := -2^3 + 6^2 + 9^2 + 12^2 \quad = -23 + 62 + 92 + 122$$
$$:= 2^7 - 6^4 - 10^2 + 39^2 \quad = 27 - 64 - 102 + 392$$
$$:= 3^2 - 5^3 + 12^2 + 15^2 \quad = 32 - 53 + 122 + 152$$
$$:= -3^3 + 6^2 + 10^2 + 12^2 \quad = -33 + 62 + 102 + 122$$
$$:= 4^6 - 6^2 - 18^3 + 45^2 \quad = 46 - 62 - 183 + 452$$
$$:= 5^2 - 5^3 + 8^2 + 17^2 \quad = 52 - 53 + 82 + 172$$

$$254 := -2^7 - 7^3 + 10^2 + 25^2 \quad = -27 - 73 + 102 + 252$$
$$:= -3^3 - 4^2 - 12^3 + 45^2 \quad = -33 - 42 - 123 + 452$$

$$255 := 3^3 + 4^3 - 8^3 + 26^2 \quad = 33 + 43 - 83 + 262$$
$$:= 5^3 + 29^2 + 35^2 - 44^2 \quad = 53 + 292 + 352 - 442$$
$$:= 7^3 + 8^3 - 10^3 + 20^2 \quad = 73 + 83 - 103 + 202$$

$$256 := -3^6 + 17^2 - 23^2 + 35^2 \quad = -36 + 172 - 232 + 352$$
$$:= -3^6 + 20^2 - 28^2 + 37^2 \quad = -36 + 202 - 282 + 372$$
$$:= -3^6 + 5^2 - 8^2 + 32^2 \quad = -36 + 52 - 82 + 322$$

$$258 := -5^4 - 15^2 + 18^2 + 28^2 \quad = -54 - 152 + 182 + 282$$
$$259 := 3^8 + 9^2 - 14^5 + 27^4 \quad = 38 + 92 - 145 + 274$$

$$260 := 2^4 - 2^8 + 4^2 + 22^2 \quad = 24 - 28 + 42 + 222$$

$$:= -3^2 + 14^3 - 15^3 + 30^2 \quad = -32 + 143 - 153 + 302$$

$$261 := -3^5 - 6^4 - 7^2 + 43^2 \quad = -35 - 64 - 72 + 432$$
$$:= -3^7 - 3^8 + 16^3 + 17^3 \quad = -37 - 38 + 163 + 173$$
$$:= 3^8 + 4^4 - 20^3 + 38^2 \quad = 38 + 44 - 203 + 382$$

$$262 := -3^2 + 4^5 - 13^3 + 38^2 \quad = -32 + 45 - 133 + 382$$
$$:= 3^2 - 4^4 + 5^2 + 22^2 \quad = 32 - 44 + 52 + 222$$
$$:= -3^5 + 6^3 + 8^2 + 15^2 \quad = -35 + 63 + 82 + 152$$

$$263 := -2^9 + 32^2 + 40^2 - 43^2 \quad = -29 + 322 + 402 - 432$$
$$:= -2^9 - 15^2 + 18^2 + 26^2 \quad = -29 - 152 + 182 + 262$$

$$264 := 12^2 + 16^2 + 33^2 - 35^2 \quad = 122 + 162 + 332 - 352$$
$$:= 2^3 + 4^4 - 5^6 + 25^3 \quad = 23 + 44 - 56 + 253$$
$$:= 2^3 - 8^4 + 16^2 + 16^3 \quad = 23 - 84 + 162 + 163$$
$$:= 2^4 - 6^7 + 7^3 + 23^4 \quad = 24 - 67 + 73 + 234$$

$$265 := -2^6 - 6^4 + 10^3 + 25^2 \quad = -26 - 64 + 103 + 252$$

$$266 := 2^5 - 6^3 + 15^2 + 15^2 \quad = 25 - 63 + 152 + 152$$

$$267 := -2^2 - 3^5 + 15^2 + 17^2 \quad = -22 - 35 + 152 + 172$$
$$:= -4^4 - 5^3 + 18^2 + 18^2 \quad = -44 - 53 + 182 + 182$$
$$:= -4^5 + 16^2 - 27^2 + 42^2 \quad = -45 + 162 - 272 + 422$$

$$269 := -10^2 - 10^3 + 12^2 + 35^2 = -102 - 103 + 122 + 352$$
$$:= -10^3 - 22^2 + 27^2 + 32^2 = -103 - 222 + 272 + 322$$
$$:= -2^7 + 3^2 + 8^2 + 18^2 \quad = -27 + 32 + 82 + 182$$
$$:= -3^3 + 10^3 - 12^3 + 32^2 \quad = -33 + 103 - 123 + 322$$
$$:= 3^4 - 4^4 - 10^3 + 38^2 \quad = 34 - 44 - 103 + 382$$
$$:= 5^4 - 6^3 - 6^4 + 34^2 \quad = 54 - 63 - 64 + 342$$

$$272 := -2^4 - 2^8 + 12^2 + 20^2 \quad = -24 - 28 + 122 + 202$$
$$:= -2^4 - 4^2 - 6^4 + 40^2 \quad = -24 - 42 - 64 + 402$$
$$:= -4^4 - 5^2 - 6^4 + 43^2 \quad = -44 - 52 - 64 + 432$$

$$273 := 2^2 - 6^3 + 14^2 + 17^2 \quad = 22 - 63 + 142 + 172$$
$$:= -2^3 + 9^2 + 10^2 + 10^2 \quad = -23 + 92 + 102 + 102$$
$$:= -2^5 + 2^9 - 12^3 + 39^2 \quad = -25 + 29 - 123 + 392$$

$$:= -3^3 + 10^2 + 10^2 + 10^2 \quad = -33 + 102 + 102 + 102$$
$$:= -4^2 + 4^6 - 18^3 + 45^2 \quad = -42 + 46 - 183 + 452$$
$$:= -4^3 + 7^2 + 12^2 + 12^2 \quad = -43 + 72 + 122 + 122$$
$$:= -4^4 + 6^3 + 12^2 + 13^2 \quad = -44 + 63 + 122 + 132$$
$$:= -4^5 + 7^3 + 9^3 + 15^2 \quad = -45 + 73 + 93 + 152$$
$$:= 5^2 - 5^4 + 8^3 + 19^2 \quad = 52 - 54 + 83 + 192$$
$$:= 5^2 - 6^3 + 8^2 + 20^2 \quad = 52 - 63 + 82 + 202$$

$$274 := -2^5 - 3^5 + 15^2 + 18^2 \quad = -25 - 35 + 152 + 182$$
$$:= -2^7 - 7^3 + 13^2 + 24^2 \quad = -27 - 73 + 132 + 242$$

$$276 := 2^3 - 3^3 - 3^6 + 32^2 \quad = 23 - 33 - 36 + 322$$
$$:= -2^5 - 8^3 + 12^2 + 26^2 \quad = -25 - 83 + 122 + 262$$
$$:= -3^4 - 4^4 + 17^2 + 18^2 \quad = -34 - 44 + 172 + 182$$
$$:= -3^6 + 20^2 - 22^2 + 33^2 \quad = -36 + 202 - 222 + 332$$
$$:= -3^6 + 29^2 - 40^2 + 42^2 \quad = -36 + 292 - 402 + 422$$
$$:= -3^6 + 9^2 - 10^2 + 32^2 \quad = -36 + 92 - 102 + 322$$

$$277 := 2^6 + 7^2 - 8^3 + 26^2 \quad = 26 + 72 - 83 + 262$$

$$278 := 2^6 - 3^4 - 3^6 + 32^2 \quad = 26 - 34 - 36 + 322$$
$$:= -6^4 + 15^2 - 26^2 + 45^2 \quad = -64 + 152 - 262 + 452$$

$$279 := -2^6 - 5^3 - 6^4 + 42^2 \quad = -26 - 53 - 64 + 422$$
$$:= -3^6 - 5^4 - 6^3 + 43^2 \quad = -36 - 54 - 63 + 432$$

$$280 := -10^2 + 19^3 - 20^3 + 39^2 = -102 + 193 - 203 + 392$$
$$:= 2^3 - 2^7 + 12^2 + 16^2 \quad = 23 - 27 + 122 + 162$$
$$:= 2^4 - 2^8 + 6^2 + 22^2 \quad = 24 - 28 + 62 + 222$$
$$:= 3^2 - 3^8 + 10^3 + 18^3 \quad = 32 - 38 + 103 + 183$$
$$:= -4^3 + 9^4 - 16^4 + 39^3 \quad = -43 + 94 - 164 + 393$$
$$:= 4^3 - 9^2 - 12^3 + 45^2 \quad = 43 - 92 - 123 + 452$$
$$:= 4^4 - 6^4 - 7^2 + 37^2 \quad = 44 - 64 - 72 + 372$$

$$281 := -2^4 - 2^9 + 5^2 + 28^2 \quad = -24 - 29 + 52 + 282$$
$$:= -2^4 - 6^4 - 7^3 + 44^2 \quad = -24 - 64 - 73 + 442$$
$$:= -2^5 - 2^8 + 13^2 + 20^2 \quad = -25 - 28 + 132 + 202$$

$$282 := 2^4 - 3^7 + 13^3 + 16^2 \quad = 24 - 37 + 133 + 162$$
$$:= -3^4 + 5^2 + 13^2 + 13^2 \quad = -34 + 52 + 132 + 132$$

$$283 := 2^3 - 2^8 - 5^4 + 34^2 \quad = 23 - 28 - 54 + 342$$

$$284 := 10^2 + 23^2 + 32^2 - 37^2 \quad = 102 + 232 + 322 - 372$$
$$:= 10^2 + 25^2 + 28^2 - 35^2 \quad = 102 + 252 + 282 - 352$$
$$:= 14^2 + 17^2 + 32^2 - 35^2 \quad = 142 + 172 + 322 - 352$$
$$:= 14^2 + 20^2 + 23^2 - 29^2 \quad = 142 + 202 + 232 - 292$$
$$:= 15^2 + 18^2 + 24^2 - 29^2 \quad = 152 + 182 + 242 - 292$$
$$:= 17^2 + 18^2 + 20^2 - 27^2 \quad = 172 + 182 + 202 - 272$$
$$:= 8^2 + 25^2 + 38^2 - 43^2 \quad = 82 + 252 + 382 - 432$$
$$:= 8^2 + 29^2 + 30^2 - 39^2 \quad = 82 + 292 + 302 - 392$$

$$287 := -3^2 - 3^6 + 5^3 + 30^2 \quad = -32 - 36 + 53 + 302$$
$$:= -4^6 + 15^3 - 19^2 + 37^2 \quad = -46 + 153 - 192 + 372$$
$$:= -6^6 - 9^4 + 12^4 + 32^3 \quad = -66 - 94 + 124 + 323$$

$$288 := 2^2 + 2^7 - 10^3 + 34^2 \quad = 22 + 27 - 103 + 342$$
$$:= -2^2 - 2^7 - 4^5 + 38^2 \quad = -22 - 27 - 45 + 382$$
$$:= -2^5 - 4^4 - 4^5 + 40^2 \quad = -25 - 44 - 45 + 402$$
$$:= 3^7 + 13^2 - 14^3 + 26^2 \quad = 37 + 132 - 143 + 262$$
$$:= 4^6 + 10^3 - 18^3 + 32^2 \quad = 46 + 103 - 183 + 322$$

$$289 := -2^9 + 4^2 + 4^4 + 23^2 \quad = -29 + 42 + 44 + 232$$
$$:= 3^5 - 5^4 - 5^4 + 36^2 \quad = 35 - 54 - 54 + 362$$
$$:= -6^2 + 10^2 - 10^3 + 35^2 \quad = -62 + 102 - 103 + 352$$

$$291 := -3^5 + 5^2 + 5^2 + 22^2 \quad = -35 + 52 + 52 + 222$$
$$:= 3^5 - 5^2 - 6^4 + 37^2 \quad = 35 - 52 - 64 + 372$$
$$:= -5^2 + 6^4 - 14^3 + 42^2 \quad = -52 + 64 - 143 + 422$$

$$292 := -2^8 - 6^5 + 18^2 + 20^3 \quad = -28 - 65 + 182 + 203$$

$$293 := 2^7 - 2^8 + 14^2 + 15^2 \quad = 27 - 28 + 142 + 152$$
$$:= -2^8 - 3^5 - 3^6 + 39^2 \quad = -28 - 35 - 36 + 392$$
$$:= 4^2 - 6^3 + 13^2 + 18^2 \quad = 42 - 63 + 132 + 182$$
$$:= -4^4 + 5^3 + 10^2 + 18^2 \quad = -44 + 53 + 102 + 182$$
$$:= -5^3 + 7^2 + 12^2 + 15^2 \quad = -53 + 72 + 122 + 152$$
$$:= -5^3 + 9^2 + 9^2 + 16^2 \quad = -53 + 92 + 92 + 162$$

$$294 := -3^9 - 7^3 + 14^3 + 26^3 \quad = -39 - 73 + 143 + 263$$

$$:= -2^7 + 7^2 + 8^2 + 18^2 \qquad = -27 + 72 + 82 + 182$$

$295 := 14^2 + 16^3 + 36^3 - 37^3 \qquad = 142 + 163 + 363 - 373$

$$:= -2^9 + 4^4 + 6^2 + 23^2 \qquad = -29 + 44 + 62 + 232$$

$$:= 3^4 - 7^3 + 14^2 + 19^2 \qquad = 34 - 73 + 142 + 192$$

$$:= 3^6 - 3^7 - 13^2 + 44^2 \qquad = 36 - 37 - 132 + 442$$

$$:= 6^4 - 7^4 + 10^3 + 20^2 \qquad = 64 - 74 + 103 + 202$$

$$:= -4^2 + 10^2 - 10^3 + 35^2 \qquad = -42 + 102 - 103 + 352$$

$$:= -6^3 + 17^3 - 18^3 + 38^2 \qquad = -63 + 173 - 183 + 382$$

$296 := -4^9 + 8^6 - 10^3 + 36^2 \qquad = -49 + 86 - 103 + 362$

$297 := 2^6 - 6^4 + 10^3 + 23^2 \qquad = 26 - 64 + 103 + 232$

$311 := -2^2 + 4^6 - 6^6 + 35^3 \qquad = -22 + 46 - 66 + 353$

$$:= 2^5 - 5^2 - 6^4 + 40^2 \qquad = 25 - 52 - 64 + 402$$

$298 := -2^3 - 8^3 + 17^2 + 23^2 \qquad = -23 - 83 + 172 + 232$

$$:= -4^4 + 5^4 - 6^4 + 35^2 \qquad = -44 + 54 - 64 + 352$$

$312 := -2^6 - 3^6 + 4^2 + 33^2 \qquad = -26 - 36 + 42 + 332$

$299 := 2^9 + 3^3 - 4^5 + 28^2 \qquad = 29 + 33 - 45 + 282$

$313 := 4^3 - 4^4 + 12^2 + 19^2 \qquad = 43 - 44 + 122 + 192$

$300 := -9^2 + 9^3 - 13^3 + 43^2 \qquad = -92 + 93 - 133 + 432$

$$:= -5^3 + 10^2 + 13^2 + 13^2 \qquad = -53 + 102 + 132 + 132$$

$301 := -3^2 - 3^5 - 6^4 + 43^2 \qquad = -32 - 35 - 64 + 432$

$$:= 6^2 - 6^3 + 13^2 + 18^2 \qquad = 62 - 63 + 132 + 182$$

$302 := 2^6 - 2^9 + 5^3 + 25^2 \qquad = 26 - 29 + 53 + 252$

$314 := -2^7 - 8^3 + 15^2 + 27^2 \qquad = -27 - 83 + 152 + 272$

$$:= -3^5 + 4^3 + 9^2 + 20^2 \qquad = -35 + 43 + 92 + 202$$

$$:= -4^4 + 5^2 + 7^2 + 22^2 \qquad = -44 + 52 + 72 + 222$$

$315 := 3^2 + 3^4 - 10^3 + 35^2 \qquad = 32 + 34 - 103 + 352$

$$:= 3^6 - 4^5 + 9^2 + 23^2 \qquad = 36 - 45 + 92 + 232$$

$304 := 13^2 + 24^2 + 28^2 - 35^2 \qquad = 132 + 242 + 282 - 352$

$$:= 2^4 - 4^4 + 12^2 + 20^2 \qquad = 24 - 44 + 122 + 202$$

$$:= 3^3 - 4^5 + 5^4 + 26^2 \qquad = 33 - 45 + 54 + 262$$

$316 := -2^2 - 3^6 + 5^2 + 32^2 \qquad = -22 - 36 + 52 + 322$

$$:= 2^6 - 2^9 - 10^3 + 42^2 \qquad = 26 - 29 - 103 + 422$$

$$:= -3^6 - 12^2 + 17^2 + 30^2 \qquad = -36 - 122 + 172 + 302$$

$305 := -2^6 - 8^3 + 16^2 + 25^2 \qquad = -26 - 83 + 162 + 252$

$$:= -3^6 - 14^2 + 20^2 + 29^2 \qquad = -36 - 142 + 202 + 292$$

$$:= -3^6 + 5^2 - 6^3 + 35^2 \qquad = -36 + 52 - 63 + 352$$

$$:= -3^6 - 16^2 + 25^2 + 26^2 \qquad = -36 - 162 + 252 + 262$$

$306 := 2^5 - 7^3 + 16^2 + 19^2 \qquad = 25 - 73 + 162 + 192$

$318 := -2^8 + 3^2 + 9^2 + 22^2 \qquad = -28 + 32 + 92 + 222$

$$:= -5^2 - 6^6 + 7^3 + 36^3 \qquad = -52 - 66 + 73 + 363$$

$307 := -2^5 + 16^3 - 17^3 + 34^2 \qquad = -25 + 163 - 173 + 342$

$$:= -5^4 + 7^3 - 10^3 + 40^2 \qquad = -54 + 73 - 103 + 402$$

$$:= -3^4 + 4^4 - 4^5 + 34^2 \qquad = -34 + 44 - 45 + 342$$

$$:= -6^5 + 19^3 - 23^2 + 42^2 \qquad = -65 + 193 - 232 + 422$$

$$:= -3^4 - 8^3 + 18^2 + 24^2 \qquad = -34 - 83 + 182 + 242$$

$$:= -6^2 - 6^8 + 7^3 + 36^4 \qquad = -62 - 68 + 73 + 364$$

$320 := 2^5 - 2^9 + 4^2 + 28^2 \qquad = 25 - 29 + 42 + 282$

$$:= -6^6 + 40^3 + 42^3 - 45^3 \qquad = -66 + 403 + 423 - 453$$

$$:= -3^2 + 4^4 - 6^4 + 37^2 \qquad = -32 + 44 - 64 + 372$$

$$:= -3^8 + 7^2 + 10^3 + 18^3 \qquad = -38 + 72 + 103 + 183$$

$308 := 2^6 + 6^3 - 15^4 + 37^3 \qquad = 26 + 63 - 154 + 373$

$$:= 3^7 - 14^3 + 17^2 + 24^2 \qquad = 37 - 143 + 172 + 242$$

$321 := 2^4 + 2^9 - 6^4 + 33^2 \qquad = 24 + 29 - 64 + 332$

$$:= 4^4 + 4^5 - 13^3 + 35^2 \qquad = 44 + 45 - 133 + 352$$

$$:= -2^8 - 3^5 + 12^2 + 26^2 \qquad = -28 - 35 + 122 + 262$$

$$:= 2^9 + 3^4 - 6^4 + 32^2 \qquad = 29 + 34 - 64 + 322$$

$309 := -2^4 + 5^5 - 8^4 + 36^2 \qquad = -24 + 55 - 84 + 362$

$$:= -2^7 + 4^2 + 14^2 + 15^2 \qquad = -27 + 42 + 142 + 152$$

$322 := 2^3 - 3^5 + 14^2 + 19^2 \qquad = 23 - 35 + 142 + 192$

$$:= 2^6 - 2^8 + 15^2 + 17^2 \qquad = 26 - 28 + 152 + 172$$
$$:= 3^2 - 4^4 + 13^2 + 20^2 \qquad = 32 - 44 + 132 + 202$$

$$323 := 2^4 - 2^9 - 5^4 + 38^2 \qquad = 24 - 29 - 54 + 382$$
$$:= -2^9 - 7^2 + 20^2 + 22^2 \qquad = -29 - 72 + 202 + 222$$

$$324 := 10^2 + 32^2 + 35^2 - 45^2 \qquad = 102 + 322 + 352 - 452$$
$$:= 14^2 + 25^2 + 32^2 - 39^2 \qquad = 142 + 252 + 322 - 392$$
$$:= 17^2 + 20^2 + 34^2 - 39^2 \qquad = 172 + 202 + 342 - 392$$
$$:= -2^4 + 2^9 - 13^3 + 45^2 \qquad = -24 + 29 - 133 + 452$$
$$:= 20^2 + 22^2 + 23^2 - 33^2 \qquad = 202 + 222 + 232 - 332$$
$$:= 3^5 - 5^6 + 9^2 + 25^3 \qquad = 35 - 56 + 92 + 253$$

$$326 := 2^7 + 3^3 - 3^6 + 30^2 \qquad = 27 + 33 - 36 + 302$$

$$327 := -2^6 + 3^5 - 6^4 + 38^2 \qquad = -26 + 35 - 64 + 382$$
$$:= 4^2 - 5^4 - 10^3 + 44^2 \qquad = 42 - 54 - 103 + 442$$
$$:= -4^2 - 6^8 + 7^3 + 36^4 \qquad = -42 - 68 + 73 + 364$$
$$:= -4^5 + 40^2 + 40^2 - 43^2 \qquad = -45 + 402 + 402 - 432$$
$$:= -4^5 - 27^2 + 28^2 + 36^2 \qquad = -45 - 272 + 282 + 362$$
$$:= -5^4 - 6^3 + 12^2 + 32^2 \qquad = -54 - 63 + 122 + 322$$
$$:= -5^7 + 9^4 - 13^3 + 42^3 \qquad = -57 + 94 - 133 + 423$$

$$329 := -10^2 - 10^3 + 23^2 + 30^2 = -102 - 103 + 232 + 302$$
$$:= -2^7 + 6^2 + 14^2 + 15^2 \qquad = -27 + 62 + 142 + 152$$
$$:= -7^2 - 10^3 + 17^2 + 33^2 \qquad = -72 - 103 + 172 + 332$$

$$330 := 2^9 - 10^3 + 17^2 + 23^2 \qquad = 29 - 103 + 172 + 232$$

$$332 := -2^6 - 3^6 + 6^2 + 33^2 \qquad = -26 - 36 + 62 + 332$$

$$333 := 4^2 - 8^3 + 10^2 + 27^2 \qquad = 42 - 83 + 102 + 272$$
$$:= -6^3 + 8^2 + 14^2 + 17^2 \qquad = -63 + 82 + 142 + 172$$
$$:= -6^3 + 9^2 + 12^2 + 18^2 \qquad = -63 + 92 + 122 + 182$$

$$335 := 17^2 + 19^3 + 26^3 - 29^3 \qquad = 172 + 193 + 263 - 293$$
$$:= 2^6 - 3^6 + 6^3 + 28^2 \qquad = 26 - 36 + 63 + 282$$
$$:= 5^3 + 14^3 - 15^3 + 29^2 \qquad = 53 + 143 - 153 + 292$$

$$336 := -2^5 - 9^3 + 16^2 + 29^2 \qquad = -25 - 93 + 162 + 292$$

$$:= -2^7 + 4^4 - 12^3 + 44^2 \qquad = -27 + 44 - 123 + 442$$
$$:= -3^4 - 4^5 + 6^3 + 35^2 \qquad = -34 - 45 + 63 + 352$$
$$:= -3^6 - 10^2 + 18^2 + 29^2 \qquad = -36 - 102 + 182 + 292$$
$$:= -4^3 - 9^9 + 20^2 + 27^6 \qquad = -43 - 99 + 202 + 276$$
$$:= -5^2 - 5^8 + 19^2 + 25^4 \qquad = -52 - 58 + 192 + 254$$
$$:= -6^8 + 36^4 - 40^2 + 44^2 \qquad = -68 + 364 - 402 + 442$$

$$337 := 2^6 - 8^3 + 16^2 + 23^2 \qquad = 26 - 83 + 162 + 232$$
$$339 := 4^6 + 9^4 - 23^3 + 43^2 \qquad = 46 + 94 - 233 + 432$$

$$340 := 2^4 - 2^8 + 16^2 + 18^2 \qquad = 24 - 28 + 162 + 182$$
$$:= 2^5 - 2^9 + 6^2 + 28^2 \qquad = 25 - 29 + 62 + 282$$
$$:= 4^2 - 4^8 + 16^4 + 18^2 \qquad = 42 - 48 + 164 + 182$$

$$344 := 14^2 + 27^2 + 38^2 - 45^2 \qquad = 142 + 272 + 382 - 452$$
$$:= 14^2 + 29^2 + 34^2 - 43^2 \qquad = 142 + 292 + 342 - 432$$
$$:= 17^2 + 26^2 + 30^2 - 39^2 \qquad = 172 + 262 + 302 - 392$$
$$:= 19^2 + 26^2 + 26^2 - 37^2 \qquad = 192 + 262 + 262 - 372$$
$$:= 20^2 + 23^2 + 28^2 - 37^2 \qquad = 202 + 232 + 282 - 372$$
$$:= 3^5 - 6^7 + 14^2 + 23^4 \qquad = 35 - 67 + 142 + 234$$

$$345 := -2^4 + 4^2 - 4^5 + 37^2 \qquad = -24 + 42 - 45 + 372$$
$$:= -2^4 - 9^9 + 19^2 + 27^6 \qquad = -24 - 99 + 192 + 276$$

$$346 := 14^3 + 15^4 - 38^3 + 43^2 \qquad = 143 + 154 - 383 + 432$$
$$:= 3^5 - 9^3 + 16^2 + 24^2 \qquad = 35 - 93 + 162 + 242$$
$$:= 4^4 + 9^3 - 12^3 + 33^2 \qquad = 44 + 93 - 123 + 332$$
$$:= 4^7 - 7^5 + 12^2 + 25^2 \qquad = 47 - 75 + 122 + 252$$

$$347 := -2^3 - 5^4 + 14^2 + 28^2 \qquad = -23 - 54 + 142 + 282$$
$$:= -2^5 + 7^3 - 12^3 + 42^2 \qquad = -25 + 73 - 123 + 422$$
$$:= -4^5 - 19^2 + 24^2 + 34^2 \qquad = -45 - 192 + 242 + 342$$
$$:= -5^3 - 5^4 + 16^2 + 29^2 \qquad = -53 - 54 + 162 + 292$$
$$:= -5^4 + 6^2 - 10^3 + 44^2 \qquad = -54 + 62 - 103 + 442$$
$$:= -5^5 - 25^3 + 26^3 + 39^2 \qquad = -55 - 253 + 263 + 392$$

$$348 := 2^7 + 8^2 - 10^3 + 34^2 \qquad = 27 + 82 - 103 + 342$$
$$:= 2^8 + 3^3 - 4^5 + 33^2 \qquad = 28 + 33 - 45 + 332$$
$$:= 2^8 - 4^5 + 6^3 + 30^2 \qquad = 28 - 45 + 63 + 302$$

$349 := -12^2 - 12^3 + 14^2 + 45^2 = -122 - 123 + 142 + 452$

$:= -12^3 - 22^2 + 25^2 + 44^2 = -123 - 222 + 252 + 442$

$:= -2^8 + 3^3 + 17^2 + 17^2 = -28 + 33 + 172 + 172$

$:= -6^2 - 10^3 + 19^2 + 32^2 = -62 - 103 + 192 + 322$

$350 := -2^9 - 3^5 + 9^2 + 32^2 = -29 - 35 + 92 + 322$

$351 := -3^5 + 4^2 + 17^2 + 17^2 = -35 + 42 + 172 + 172$

$:= -3^5 + 5^2 + 13^2 + 20^2 = -35 + 52 + 132 + 202$

$352 := -2^3 - 2^9 + 14^2 + 26^2 = -23 - 29 + 142 + 262$

$353 := -4^7 + 7^4 + 8^3 + 24^3 = -47 + 74 + 83 + 243$

$:= -4^8 + 9^5 + 14^3 + 16^3 = -48 + 95 + 143 + 163$

$:= 6^2 - 8^3 + 10^2 + 27^2 = 62 - 83 + 102 + 272$

$:= -6^3 + 12^2 + 13^2 + 16^2 = -63 + 122 + 132 + 162$

$:= -6^5 + 10^2 + 13^3 + 18^3 = -65 + 102 + 133 + 183$

$355 := 3^4 + 7^2 - 10^3 + 35^2 = 34 + 72 - 103 + 352$

$:= 3^4 - 6^4 + 9^3 + 29^2 = 34 - 64 + 93 + 292$

$:= 3^6 - 4^5 + 17^2 + 19^2 = 36 - 45 + 172 + 192$

$356 := -5^3 - 6^7 + 23^4 + 24^2 = -53 - 67 + 234 + 242$

$358 := -2^8 + 7^2 + 9^2 + 22^2 = -28 + 72 + 92 + 222$

$:= 3^5 - 4^5 - 5^4 + 42^2 = 35 - 45 - 54 + 422$

$360 := -3^3 + 4^5 - 7^4 + 42^2 = -33 + 45 - 74 + 422$

$:= -3^8 + 9^2 + 14^3 + 16^3 = -38 + 92 + 143 + 163$

$:= -4^8 + 6^2 + 16^4 + 18^2 = -48 + 62 + 164 + 182$

$361 := 2^5 + 2^8 - 6^4 + 37^2 = 25 + 28 - 64 + 372$

$:= -2^9 + 3^4 - 3^6 + 39^2 = -29 + 34 - 36 + 392$

$:= -2^9 - 3^4 + 15^2 + 27^2 = -29 - 34 + 152 + 272$

$362 := -3^6 + 5^3 + 5^3 + 29^2 = -36 + 53 + 53 + 292$

$:= -3^9 + 5^6 + 16^3 + 18^2 = -39 + 56 + 163 + 182$

$:= -4^4 + 7^2 + 13^2 + 20^2 = -44 + 72 + 132 + 202$

$363 := -2^5 - 3^6 + 10^2 + 32^2 = -25 - 36 + 102 + 322$

$:= -2^9 - 3^2 + 20^2 + 22^2 = -29 - 32 + 202 + 222$

$364 := 17^2 + 30^2 + 32^2 - 43^2 = 172 + 302 + 322 - 432$

$365 := -2^4 - 4^5 + 6^2 + 37^2 = -24 - 45 + 62 + 372$

$:= -2^6 + 5^3 - 6^4 + 40^2 = -26 + 53 - 64 + 402$

$:= -3^5 - 5^4 + 12^2 + 33^2 = -35 - 54 + 122 + 332$

$366 := 2^5 + 4^3 - 9^5 + 39^3 = 25 + 43 - 95 + 393$

$367 := -2^3 - 5^4 + 18^2 + 26^2 = -23 - 54 + 182 + 262$

$:= -4^4 - 7^4 + 12^3 + 36^2 = -44 - 74 + 123 + 362$

$:= -4^5 - 7^2 + 12^2 + 36^2 = -45 - 72 + 122 + 362$

$368 := 2^5 + 2^6 - 4^5 + 36^2 = 25 + 26 - 45 + 362$

$:= 2^7 - 6^4 + 8^3 + 32^2 = 27 - 64 + 83 + 322$

$:= 3^4 + 3^7 - 5^5 + 35^2 = 34 + 37 - 55 + 352$

$369 := 2^4 - 2^9 + 9^2 + 28^2 = 24 - 29 + 92 + 282$

$:= -2^9 + 4^4 + 15^2 + 20^2 = -29 + 44 + 152 + 202$

$:= -3^2 - 10^3 + 17^2 + 33^2 = -32 - 103 + 172 + 332$

$:= -4^2 - 10^3 + 19^2 + 32^2 = -42 - 103 + 192 + 322$

$:= -6^2 - 10^3 + 26^2 + 27^2 = -62 - 103 + 262 + 272$

$370 := -2^5 - 2^9 + 17^2 + 25^2 = -25 - 29 + 172 + 252$

$371 := -3^5 + 6^2 + 17^2 + 17^2 = -35 + 62 + 172 + 172$

$374 := -3^7 - 4^4 + 12^3 + 33^2 = -37 - 44 + 123 + 332$

$375 := 2^5 - 4^5 + 7^3 + 32^2 = 25 - 45 + 73 + 322$

$376 := -3^5 - 9^3 + 18^2 + 32^2 = -35 - 93 + 182 + 322$

$:= -3^6 - 5^2 + 17^2 + 29^2 = -36 - 52 + 172 + 292$

$:= -3^6 - 7^2 + 23^2 + 25^2 = -36 - 72 + 232 + 252$

$:= -4^5 - 5^3 + 9^2 + 38^2 = -45 - 53 + 92 + 382$

$379 := 3^8 - 8^5 + 13^3 + 29^3 = 38 - 85 + 133 + 293$

$382 := -4^4 + 9^2 + 14^2 + 19^2 = -44 + 92 + 142 + 192$

$383 := -3^8 - 8^5 + 14^4 + 36^2 = -38 - 85 + 144 + 362$

$:= -4^5 + 5^2 - 5^7 + 43^3 = -45 + 52 - 57 + 433$

$$384 := 19^2 + 32^2 + 32^2 - 45^2 \quad = 192 + 322 + 322 - 452$$
$$:= 20^2 + 28^2 + 35^2 - 45^2 \quad = 202 + 282 + 352 - 452$$
$$:= 3^4 - 5^4 + 12^2 + 28^2 \quad = 34 - 54 + 122 + 282$$
$$:= 8^3 - 10^3 + 14^2 + 26^2 \quad = 83 - 103 + 142 + 262$$

$$385 := 3^2 - 4^5 - 5^4 + 45^2 \quad = 32 - 45 - 54 + 452$$

$$386 := 13^4 + 14^3 - 32^3 + 43^2 \quad = 134 + 143 - 323 + 432$$
$$:= 2^3 + 3^4 - 12^3 + 45^2 \quad = 23 + 34 - 123 + 452$$
$$:= 3^4 + 8^3 - 12^3 + 39^2 \quad = 34 + 83 - 123 + 392$$
$$:= 3^6 - 6^4 + 13^2 + 28^2 \quad = 36 - 64 + 132 + 282$$
$$:= 4^5 - 12^3 + 19^2 + 27^2 \quad = 45 - 123 + 192 + 272$$

$$387 := -3^3 - 9^5 + 12^2 + 39^3 \quad = -33 - 95 + 122 + 393$$
$$:= -6^6 - 17^2 + 26^2 + 36^3 \quad = -66 - 172 + 262 + 363$$

$$388 := 2^6 + 10^3 - 13^3 + 39^2 \quad = 26 + 103 - 133 + 392$$
$$:= 2^6 + 3^3 - 12^3 + 45^2 \quad = 26 + 33 - 123 + 452$$

$$389 := -12^3 - 18^2 + 29^2 + 40^2 = -123 - 182 + 292 + 402$$
$$:= -2^9 + 3^4 + 12^2 + 26^2 \quad = -29 + 34 + 122 + 262$$
$$:= -4^2 - 10^3 + 26^2 + 27^2 \quad = -42 - 103 + 262 + 272$$

$$390 := 2^7 + 5^6 - 7^5 + 38^2 \quad = 27 + 56 - 75 + 382$$

$$393 := 2^3 - 5^4 + 13^2 + 29^2 \quad = 23 - 54 + 132 + 292$$
$$:= 4^2 + 9^2 - 10^3 + 36^2 \quad = 42 + 92 - 103 + 362$$

$$394 := -2^5 - 4^5 + 9^2 + 37^2 \quad = -25 - 45 + 92 + 372$$

$$395 := 2^4 - 9^3 + 18^2 + 28^2 \quad = 24 - 93 + 182 + 282$$
$$:= 7^4 + 12^2 - 15^3 + 35^2 \quad = 74 + 122 - 153 + 352$$
$$:= 8^3 + 19^3 - 20^3 + 32^2 \quad = 83 + 193 - 203 + 322$$

$$396 := -2^5 - 15^4 + 20^2 + 37^3 \quad = -25 - 154 + 202 + 373$$

$$400 := -3^9 + 4^4 + 12^2 + 27^3 \quad = -39 + 44 + 122 + 273$$
$$:= -4^8 + 12^2 + 16^2 + 16^4 \quad = -48 + 122 + 162 + 164$$

$$401 := -2^7 - 3^6 + 13^2 + 33^2 \quad = -27 - 36 + 132 + 332$$
$$:= -2^7 - 5^8 + 23^2 + 25^4 \quad = -27 - 58 + 232 + 254$$

$$402 := -4^4 + 12^2 + 15^2 + 17^2 \quad = -44 + 122 + 152 + 172$$

$$404 := 26^2 + 27^2 + 32^2 - 45^2 \quad = 262 + 272 + 322 - 452$$

$$407 := -3^2 - 4^5 + 12^2 + 36^2 \quad = -32 - 45 + 122 + 362$$
$$:= -4^5 - 7^2 + 18^2 + 34^2 \quad = -45 - 72 + 182 + 342$$
$$:= -6^6 - 13^2 + 24^2 + 36^3 \quad = -66 - 132 + 242 + 363$$
$$:= -7^4 - 9^4 + 20^3 + 37^2 \quad = -74 - 94 + 203 + 372$$

$$408 := 2^7 - 10^3 + 16^2 + 32^2 \quad = 27 - 103 + 162 + 322$$

$$409 := -12^3 - 15^2 + 29^2 + 39^2 = -123 - 152 + 292 + 392$$
$$:= -12^3 - 16^2 + 32^2 + 37^2 = -123 - 162 + 322 + 372$$
$$:= -2^3 + 22^3 - 23^3 + 44^2 \quad = -23 + 223 - 233 + 442$$

$$410 := -2^9 - 3^5 + 18^2 + 29^2 \quad = -29 - 35 + 182 + 292$$
$$411 := -3^5 + 13^2 + 14^2 + 17^2 \quad = -35 + 132 + 142 + 172$$

$$413 := -3^9 + 4^6 + 20^3 + 20^3 \quad = -39 + 46 + 203 + 203$$
$$:= 6^2 + 9^2 - 10^3 + 36^2 \quad = 62 + 92 - 103 + 362$$
$$:= -6^4 + 10^3 + 15^2 + 22^2 \quad = -64 + 103 + 152 + 222$$
$$:= -7^4 + 13^3 + 16^2 + 19^2 \quad = -74 + 133 + 162 + 192$$

$$414 := -3^4 - 3^6 + 18^2 + 30^2 \quad = -34 - 36 + 182 + 302$$
$$:= -3^5 - 4^5 + 9^2 + 40^2 \quad = -35 - 45 + 92 + 402$$

$$416 := -3^2 - 3^6 + 23^2 + 25^2 \quad = -32 - 36 + 232 + 252$$
$$:= -4^5 - 5^3 + 14^2 + 37^2 \quad = -45 - 53 + 142 + 372$$

$$418 := -2^8 + 12^2 + 13^2 + 19^2 \quad = -28 + 122 + 132 + 192$$
$$420 := 2^5 - 2^9 + 18^2 + 24^2 \quad = 25 - 29 + 182 + 242$$
$$422 := -4^5 + 5^2 + 5^3 + 36^2 \quad = -45 + 52 + 53 + 362$$
$$423 := -2^5 - 3^6 + 20^2 + 28^2 \quad = -25 - 36 + 202 + 282$$
$$424 := 3^4 - 5^4 + 22^2 + 22^2 \quad = 34 - 54 + 222 + 222$$

$$425 := -2^4 - 4^5 + 13^2 + 36^2 \quad = -24 - 45 + 132 + 362$$
$$:= -3^6 - 6^3 + 23^2 + 29^2 \quad = -36 - 63 + 232 + 292$$

$:= -4^5 - 5^4 + 7^2 + 45^2 \quad = -45 - 54 + 72 + 452$

$464 := 2^6 - 3^6 + 20^2 + 27^2 \quad = 26 - 36 + 202 + 272$

$466 := 23^3 + 32^3 + 36^3 - 45^3 \quad = 233 + 323 + 363 - 453$

$427 := -9^3 - 9^6 + 27^4 + 34^2 \quad = -93 - 96 + 274 + 342$

$428 := 2^7 - 10^3 + 20^2 + 30^2 \quad = 27 - 103 + 202 + 302$

$432 := -2^8 - 5^4 + 23^2 + 28^2 \quad = -28 - 54 + 232 + 282$

$467 := -2^9 + 9^2 + 13^2 + 27^2 \quad = -29 + 92 + 132 + 272$

$\quad := -6^3 - 6^5 + 19^3 + 40^2 \quad = -63 - 65 + 193 + 402$

$433 := -6^4 + 9^3 + 10^2 + 30^2 \quad = -64 + 93 + 102 + 302$

$\quad := -8^3 + 10^2 + 19^2 + 22^2 \quad = -83 + 102 + 192 + 222$

$\quad := -8^3 + 12^2 + 15^2 + 24^2 \quad = -83 + 122 + 152 + 242$

$473 := -6^4 + 9^3 + 16^2 + 28^2 \quad = -64 + 93 + 162 + 282$

$476 := -2^3 - 4^5 + 22^2 + 32^2 \quad = -23 - 45 + 222 + 322$

$\quad := -4^5 - 5^3 + 28^2 + 29^2 \quad = -45 - 53 + 282 + 292$

$435 := 15^3 + 29^2 + 35^3 - 36^3 \quad = 153 + 292 + 353 - 363$

$\quad := 5^4 - 12^3 + 13^2 + 37^2 \quad = 54 - 123 + 132 + 372$

$\quad := 7^3 + 14^3 - 16^3 + 38^2 \quad = 73 + 143 - 163 + 382$

$\quad := 9^3 + 22^3 - 23^3 + 35^2 \quad = 93 + 223 - 233 + 352$

$480 := 2^2 - 3^6 + 23^2 + 26^2 \quad = 22 - 36 + 232 + 262$

$481 := -2^9 - 5^4 + 23^2 + 33^2 \quad = -29 - 54 + 232 + 332$

$482 := 4^2 - 9^5 + 14^2 + 39^3 \quad = 42 - 95 + 142 + 393$

$\quad := -5^4 + 7^2 + 23^2 + 23^2 \quad = -54 + 72 + 232 + 232$

$436 := -3^3 - 3^7 + 5^4 + 45^2 \quad = -33 - 37 + 54 + 452$

$\quad := -4^5 - 5^3 + 17^2 + 36^2 \quad = -45 - 53 + 172 + 362$

$484 := 15^3 - 16^3 + 23^2 + 26^2 \quad = 153 - 163 + 232 + 262$

$485 := -2^4 - 4^5 + 25^2 + 30^2 \quad = -24 - 45 + 252 + 302$

$437 := -2^8 - 2^9 + 23^2 + 26^2 \quad = -28 - 29 + 232 + 262$

$438 := -14^4 - 24^3 + 37^3 + 45^2 = -144 - 243 + 373 + 452$

$439 := 2^7 + 15^3 - 17^3 + 43^2 \quad = 27 + 153 - 173 + 432$

$442 := 3^2 - 5^4 + 23^2 + 23^2 \quad = 32 - 54 + 232 + 232$

$445 := -3^6 - 7^3 + 26^2 + 29^2 \quad = -36 - 73 + 262 + 292$

$446 := 9^5 - 17^4 + 23^2 + 29^3 \quad = 95 - 174 + 232 + 293$

$487 := -8^3 - 9^5 + 27^2 + 39^3 \quad = -83 - 95 + 272 + 393$

$493 := 4^4 - 4^5 + 19^2 + 30^2 \quad = 44 - 45 + 192 + 302$

$\quad := 5^3 - 5^5 + 13^3 + 36^2 \quad = 53 - 55 + 133 + 362$

$\quad := -6^4 + 9^3 + 22^2 + 24^2 \quad = -64 + 93 + 222 + 242$

$\quad := 9^2 - 10^3 + 16^2 + 34^2 \quad = 92 - 103 + 162 + 342$

$\quad := -9^3 + 13^2 + 18^2 + 27^2 \quad = -93 + 132 + 182 + 272$

$447 := -3^2 - 4^5 + 18^2 + 34^2 \quad = -32 - 45 + 182 + 342$

$\quad := -5^4 - 9^3 + 24^2 + 35^2 \quad = -54 - 93 + 242 + 352$

$495 := -3^8 + 4^5 + 4^6 + 44^2 \quad = -38 + 45 + 46 + 442$

$\quad := 6^3 + 23^3 - 24^3 + 44^2 \quad = 63 + 233 - 243 + 442$

$452 := 2^9 + 3^7 - 4^6 + 43^2 \quad = 29 + 37 - 46 + 432$

$453 := 3^4 - 4^5 + 10^2 + 36^2 \quad = 34 - 45 + 102 + 362$

$\quad := -6^4 + 8^3 + 9^2 + 34^2 \quad = -64 + 83 + 92 + 342$

$\quad := -8^3 + 15^2 + 16^2 + 22^2 \quad = -83 + 152 + 162 + 222$

$496 := -4^5 - 9^3 + 20^2 + 43^2 \quad = -45 - 93 + 202 + 432$

$497 := 2^6 - 12^3 + 15^2 + 44^2 \quad = 26 - 123 + 152 + 442$

$500 := -3^6 + 4^2 + 22^2 + 27^2 \quad = -36 + 42 + 222 + 272$

$\quad := -5^8 + 10^2 + 20^2 + 25^4 \quad = -58 + 102 + 202 + 254$

$\quad := -7^2 - 18^4 + 37^3 + 38^3 \quad = -72 - 184 + 373 + 383$

$454 := -5^5 - 5^7 + 13^3 + 43^3 \quad = -55 - 57 + 133 + 433$

$455 := 7^4 - 15^3 + 23^2 + 30^2 \quad = 74 - 153 + 232 + 302$

$456 := -4^5 - 6^3 + 20^2 + 36^2 \quad = -45 - 63 + 202 + 362$

$457 := 5^4 + 20^4 - 22^4 + 42^3 \quad = 54 + 204 - 224 + 423$

$458 := -6^4 - 8^2 + 27^2 + 33^2 \quad = -64 - 82 + 272 + 332$

$502 := 6^2 - 9^5 + 14^2 + 39^3 \quad = 62 - 95 + 142 + 393$

$462 := -3^7 + 4^5 + 5^2 + 40^2 \quad = -37 + 45 + 52 + 402$

$507 := -2^9 + 13^2 + 15^2 + 25^2 \quad = -29 + 132 + 152 + 252$

$$:= -4^5 - 18^4 + 30^3 + 43^3 \quad = -45 - 184 + 303 + 433$$
$$:= -6^4 - 7^3 + 25^2 + 39^2 \quad = -64 - 73 + 252 + 392$$

$$512 := -2^6 - 6^8 + 24^2 + 36^4 \quad = -26 - 68 + 242 + 364$$

$$513 := 10^2 - 10^3 + 18^2 + 33^2 \quad = 102 - 103 + 182 + 332$$
$$:= -6^5 + 12^3 + 18^3 + 27^2 \quad = -65 + 123 + 183 + 272$$
$$:= -9^3 + 16^2 + 19^2 + 25^2 \quad = -93 + 162 + 192 + 252$$

$$514 := -3^5 - 4^5 + 25^2 + 34^2 \quad = -35 - 45 + 252 + 342$$
$$515 := 9^4 - 20^3 + 27^2 + 35^2 \quad = 94 - 203 + 272 + 352$$
$$516 := -2^5 - 12^3 + 26^2 + 40^2 \quad = -25 - 123 + 262 + 402$$

$$518 := -2^2 - 6^4 + 27^2 + 33^2 \quad = -22 - 64 + 272 + 332$$
$$:= -7^5 - 8^2 + 25^3 + 42^2 \quad = -75 - 82 + 253 + 422$$

$$520 := -3^6 + 6^2 + 22^2 + 27^2 \quad = -36 + 62 + 222 + 272$$
$$:= -5^8 + 14^2 + 18^2 + 25^4 \quad = -58 + 142 + 182 + 254$$

$$521 := -2^8 - 4^5 + 24^2 + 35^2 \quad = -28 - 45 + 242 + 352$$

$$524 := 3^3 - 12^3 + 17^2 + 44^2 \quad = 33 - 123 + 172 + 442$$
$$:= 3^3 - 8^4 + 14^3 + 43^2 \quad = 33 - 84 + 143 + 432$$

$$528 := 2^8 - 6^4 + 28^2 + 28^2 \quad = 28 - 64 + 282 + 282$$
$$532 := -2^8 - 6^4 + 22^2 + 40^2 \quad = -28 - 64 + 222 + 402$$

$$533 := 12^2 - 15^4 + 19^2 + 37^3 \quad = 122 - 154 + 192 + 373$$
$$:= 3^4 - 4^5 + 24^2 + 30^2 \quad = 34 - 45 + 242 + 302$$
$$:= -8^5 + 10^2 + 25^3 + 26^3 \quad = -85 + 102 + 253 + 263$$

$$539 := 2^9 - 6^6 + 27^3 + 30^3 \quad = 29 - 66 + 273 + 303$$

$$540 := -3^2 - 18^4 + 37^3 + 38^3 \quad = -32 - 184 + 373 + 383$$
$$:= -3^6 + 12^2 + 15^2 + 30^2 \quad = -36 + 122 + 152 + 302$$
$$:= -3^6 + 8^2 + 23^2 + 26^2 \quad = -36 + 82 + 232 + 262$$

$$541 := -2^9 - 6^4 + 18^2 + 45^2 \quad = -29 - 64 + 182 + 452$$
$$545 := -6^4 - 6^7 + 23^4 + 44^2 \quad = -64 - 67 + 234 + 442$$

$$553 := -10^3 + 12^2 + 25^2 + 28^2 = -103 + 122 + 252 + 282$$
$$:= -10^3 + 13^2 + 22^2 + 30^2 = -103 + 132 + 222 + 302$$

$$560 := -3^6 + 12^2 + 19^2 + 28^2 \quad = -36 + 122 + 192 + 282$$
$$567 := -6^4 - 9^3 + 36^2 + 36^2 \quad = -64 - 93 + 362 + 362$$
$$569 := -12^2 - 14^3 + 39^2 + 44^2 = -122 - 143 + 392 + 442$$

$$571 := -4^5 + 5^2 + 27^2 + 29^2 \quad = -45 + 52 + 272 + 292$$
$$:= -4^5 + 9^2 + 17^2 + 35^2 \quad = -45 + 92 + 172 + 352$$

$$573 := 3^5 - 4^7 + 25^3 + 33^2 \quad = 35 - 47 + 253 + 332$$
$$576 := -4^5 - 10^3 + 34^2 + 38^2 \quad = -45 - 103 + 342 + 382$$

$$578 := -2^2 - 7^5 + 25^3 + 42^2 \quad = -22 - 75 + 253 + 422$$
$$:= -3^9 + 17^2 + 17^2 + 27^3 \quad = -39 + 172 + 172 + 273$$

$$580 := -3^6 + 16^2 + 18^2 + 27^2 \quad = -36 + 162 + 182 + 272$$
$$581 := -2^9 - 6^4 + 25^2 + 42^2 \quad = -29 - 64 + 252 + 422$$
$$582 := 5^2 - 6^4 + 22^2 + 37^2 \quad = 52 - 64 + 222 + 372$$
$$584 := 3^3 - 12^3 + 29^2 + 38^2 \quad = 33 - 123 + 292 + 382$$

$$593 := -10^3 + 22^2 + 22^2 + 25^2 = -103 + 222 + 222 + 252$$
$$:= 3^2 - 12^3 + 34^2 + 34^2 \quad = 32 - 123 + 342 + 342$$
$$:= 4^2 - 12^3 + 28^2 + 39^2 \quad = 42 - 123 + 282 + 392$$

$$594 := -4^6 - 8^5 + 33^3 + 39^2 \quad = -46 - 85 + 333 + 392$$
$$595 := 4^5 - 7^4 + 26^2 + 36^2 \quad = 45 - 74 + 262 + 362$$
$$596 := -2^5 - 13^3 + 35^2 + 40^2 \quad = -25 - 133 + 352 + 402$$
$$597 := 3^6 - 14^3 + 26^2 + 44^2 \quad = 36 - 143 + 262 + 442$$

$$600 := -3^6 + 19^2 + 22^2 + 22^2 \quad = -36 + 192 + 222 + 222$$
$$:= -3^6 + 20^2 + 20^2 + 23^2 \quad = -36 + 202 + 202 + 232$$

$$602 := -3^7 + 4^5 + 26^2 + 33^2 \quad = -37 + 45 + 262 + 332$$
$$:= 5^2 - 6^4 + 28^2 + 33^2 \quad = 52 - 64 + 282 + 332$$

$$606 := 2^9 - 3^7 + 16^2 + 45^2 \quad = 29 - 37 + 162 + 452$$
$$607 := -4^4 - 13^3 + 36^2 + 42^2 \quad = -44 - 133 + 362 + 422$$
$$613 := 6^2 - 12^3 + 28^2 + 39^2 \quad = 62 - 123 + 282 + 392$$
$$631 := -4^6 + 15^3 + 26^2 + 26^2 \quad = -46 + 153 + 262 + 262$$

$$633 := -12^3 + 16^2 + 16^2 + 43^2 = -123 + 162 + 162 + 432$$
$$:= 7^2 - 12^3 + 34^2 + 34^2 = 72 - 123 + 342 + 342$$

$$635 := 5^4 - 14^3 + 27^2 + 45^2 = 54 - 143 + 272 + 452$$

$$642 := -5^5 + 13^3 + 27^2 + 29^2 = -55 + 133 + 272 + 292$$
$$:= -6^4 + 13^2 + 20^2 + 37^2 = -64 + 132 + 202 + 372$$

$$644 := 4^3 - 13^3 + 29^2 + 44^2 = 43 - 133 + 292 + 442$$
$$:= 5^4 - 7^4 + 22^2 + 44^2 = 54 - 74 + 222 + 442$$

$$645 := -3^7 - 8^2 + 36^2 + 40^2 = -37 - 82 + 362 + 402$$
$$647 := -5^4 - 13^3 + 38^2 + 45^2 = -54 - 133 + 382 + 452$$

$$649 := -3^8 + 17^2 + 18^3 + 33^2 = -38 + 172 + 183 + 332$$
$$:= -3^9 + 18^3 + 24^3 + 26^2 = -39 + 183 + 243 + 262$$

$$653 := -12^3 + 16^2 + 19^2 + 42^2 = -123 + 162 + 192 + 422$$
$$659 := 2^9 - 7^4 + 28^2 + 42^2 = 29 - 74 + 282 + 422$$

$$664 := 23^2 + 24^3 - 25^3 + 44^2 = 232 + 243 - 253 + 442$$
$$:= 5^4 - 7^4 + 26^2 + 42^2 = 54 - 74 + 262 + 422$$

$$665 := -3^7 - 6^2 + 38^2 + 38^2 = -37 - 62 + 382 + 382$$

$$673 := -12^3 + 15^2 + 24^2 + 40^2 = -123 + 152 + 242 + 402$$
$$:= 5^4 - 5^6 + 24^3 + 43^2 = 54 - 56 + 243 + 432$$

$$674 := -2^7 - 14^3 + 39^2 + 45^2 = -27 - 143 + 392 + 452$$
$$:= -3^7 - 4^3 + 30^2 + 45^2 = -37 - 43 + 302 + 452$$

$$682 := -6^4 + 15^2 + 27^2 + 32^2 = -64 + 152 + 272 + 322$$
$$685 := -3^7 - 4^2 + 38^2 + 38^2 = -37 - 42 + 382 + 382$$

$$693 := -12^3 + 15^2 + 30^2 + 36^2 = -123 + 152 + 302 + 362$$
$$:= -12^3 + 18^2 + 24^2 + 39^2 = -123 + 182 + 242 + 392$$

$$:= -12^4 + 15^2 + 27^3 + 39^2 = -124 + 152 + 273 + 392$$
$$:= -8^4 + 14^3 + 26^2 + 37^2 = -84 + 143 + 262 + 372$$
$$:= 9^2 - 13^3 + 28^2 + 45^2 = 92 - 133 + 282 + 452$$

$$703 := -2^7 - 7^4 + 36^2 + 44^2 = -27 - 74 + 362 + 442$$
$$704 := -8^6 + 12^5 + 23^3 + 43^2 = -86 + 125 + 233 + 432$$
$$705 := -2^2 - 3^7 + 36^2 + 40^2 = -22 - 37 + 362 + 402$$
$$708 := 2^8 - 7^4 + 33^2 + 42^2 = 28 - 74 + 332 + 422$$
$$710 := -2^7 - 3^7 + 33^2 + 44^2 = -27 - 37 + 332 + 442$$

$$713 := -12^3 + 19^2 + 28^2 + 36^2 = -123 + 192 + 282 + 362$$
$$:= -7^4 + 9^3 + 33^2 + 36^2 = -74 + 93 + 332 + 362$$

$$715 := 3^5 - 7^4 + 32^2 + 43^2 = 35 - 74 + 322 + 432$$
$$:= 3^7 - 4^6 + 32^2 + 40^2 = 37 - 46 + 322 + 402$$

$$720 := -3^7 + 9^3 + 33^2 + 33^2 = -37 + 93 + 332 + 332$$
$$733 := -12^3 + 24^2 + 27^2 + 34^2 = -123 + 242 + 272 + 342$$
$$753 := 6^3 - 7^4 + 33^2 + 43^2 = 63 - 74 + 332 + 432$$
$$760 := 3^3 - 3^7 + 34^2 + 42^2 = 33 - 37 + 342 + 422$$
$$773 := -9^4 + 17^3 + 30^2 + 39^2 = -94 + 173 + 302 + 392$$
$$793 := 3^6 - 4^8 + 40^2 + 40^3 = 36 - 48 + 402 + 403$$
$$813 := -13^3 + 25^2 + 33^2 + 36^2 = -133 + 252 + 332 + 362$$
$$833 := -14^3 + 16^2 + 36^2 + 45^2 = -143 + 162 + 362 + 452$$
$$842 := -7^4 + 13^2 + 35^2 + 43^2 = -74 + 132 + 352 + 432$$
$$853 := -10^4 + 20^3 + 33^2 + 42^2 = -104 + 203 + 332 + 422$$
$$873 := -14^3 + 22^2 + 37^2 + 42^2 = -143 + 222 + 372 + 422$$
$$882 := -7^4 + 23^2 + 27^2 + 45^2 = -74 + 232 + 272 + 452$$
$$893 := -14^3 + 28^2 + 33^2 + 42^2 = -143 + 282 + 332 + 422$$
$$900 := -4^8 + 30^2 + 32^3 + 32^3 = -48 + 302 + 323 + 323$$
$$922 := -7^4 + 27^2 + 35^2 + 37^2 = -74 + 272 + 352 + 372$$
$$1033 := -10^5 + 24^3 + 44^3 + 45^2 = -105 + 243 + 443 + 452$$
$$1069 := -4^8 + 29^2 + 40^3 + 42^2 = -48 + 292 + 403 + 422$$
$$1220 := -4^6 + 38^2 + 44^2 + 44^2 = -46 + 382 + 442 + 442$$

7 Positive Coefficients Expressions

This section deals with five to ten terms expressions, where we have considered only positive coefficients expressions with both powers and bases bigger than one.

7.1 Five Terms Expressions

$$120 := 2^3 + 2^3 + 2^3 + 2^5 + 2^6 \qquad = 23 + 23 + 23 + 25 + 26$$
$$125 := 2^2 + 2^2 + 2^2 + 2^5 + 3^4 \qquad = 22 + 22 + 22 + 25 + 34$$
$$131 := 2^3 + 2^5 + 2^5 + 2^5 + 3^3 \qquad = 23 + 25 + 25 + 25 + 33$$
$$136 := 2^2 + 2^3 + 2^4 + 3^3 + 3^4 \qquad = 22 + 23 + 24 + 33 + 34$$

$$138 := 2^2 + 2^4 + 2^6 + 3^3 + 3^3 \qquad = 22 + 24 + 26 + 33 + 33$$
$$:= 2^4 + 2^4 + 2^4 + 3^2 + 3^4 \qquad = 24 + 24 + 24 + 32 + 34$$

$$141 := 2^2 + 2^2 + 2^2 + 2^2 + 5^3 \qquad = 22 + 22 + 22 + 22 + 53$$
$$145 := 2^2 + 2^2 + 2^6 + 3^2 + 4^3 \qquad = 22 + 22 + 26 + 32 + 43$$
$$147 := 2^4 + 2^5 + 3^2 + 3^2 + 3^4 \qquad = 24 + 25 + 32 + 32 + 34$$
$$156 := 2^2 + 2^3 + 2^6 + 4^2 + 4^3 \qquad = 22 + 23 + 26 + 42 + 43$$
$$160 := 2^5 + 2^5 + 2^6 + 4^2 + 4^2 \qquad = 25 + 25 + 26 + 42 + 42$$

$$163 := 2^2 + 2^2 + 3^3 + 4^3 + 4^3 \qquad = 22 + 22 + 33 + 43 + 43$$
$$:= 2^2 + 2^4 + 3^2 + 3^2 + 5^3 \qquad = 22 + 24 + 32 + 32 + 53$$

$$169 := 2^4 + 2^5 + 2^5 + 4^3 + 5^2 \qquad = 24 + 25 + 25 + 43 + 52$$

$$174 := 2^3 + 2^3 + 2^3 + 5^2 + 5^3 \qquad = 23 + 23 + 23 + 52 + 53$$
$$:= 2^3 + 2^4 + 3^2 + 4^2 + 5^3 \qquad = 23 + 24 + 32 + 42 + 53$$

$$176 := 2^2 + 2^3 + 2^6 + 4^3 + 6^2 \qquad = 22 + 23 + 26 + 43 + 62$$
$$:= 2^4 + 2^4 + 4^2 + 4^3 + 4^3 \qquad = 24 + 24 + 42 + 43 + 43$$
$$:= 2^4 + 3^3 + 3^3 + 3^4 + 5^2 \qquad = 24 + 33 + 33 + 34 + 52$$

$$178 := 2^4 + 2^4 + 2^4 + 3^4 + 7^2 \qquad = 24 + 24 + 24 + 34 + 72$$
$$:= 2^6 + 2^6 + 3^2 + 4^2 + 5^2 \qquad = 26 + 26 + 32 + 42 + 52$$

$$180 := 2^5 + 2^5 + 2^6 + 4^2 + 6^2 \qquad = 25 + 25 + 26 + 42 + 62$$
$$183 := 2^2 + 3^2 + 3^4 + 4^3 + 5^2 \qquad = 22 + 32 + 34 + 43 + 52$$

$$185 := 2^2 + 2^2 + 2^5 + 3^4 + 8^2 \qquad = 22 + 22 + 25 + 34 + 82$$
$$:= 2^2 + 2^2 + 2^6 + 4^3 + 7^2 \qquad = 22 + 22 + 26 + 43 + 72$$
$$:= 2^5 + 3^2 + 4^2 + 4^3 + 4^3 \qquad = 25 + 32 + 42 + 43 + 43$$
$$:= 2^7 + 3^2 + 4^2 + 4^2 + 4^2 \qquad = 27 + 32 + 42 + 42 + 42$$

$$187 := 2^4 + 2^5 + 3^2 + 3^4 + 7^2 \qquad = 24 + 25 + 32 + 34 + 72$$

$$194 := 2^3 + 2^4 + 3^2 + 5^3 + 6^2 \qquad = 23 + 24 + 32 + 53 + 62$$
$$:= 2^3 + 3^4 + 4^2 + 4^3 + 5^2 \qquad = 23 + 34 + 42 + 43 + 52$$

$$196 := 2^3 + 2^4 + 3^3 + 3^4 + 8^2 \qquad = 23 + 24 + 33 + 34 + 82$$
$$:= 2^4 + 2^4 + 4^3 + 4^3 + 6^2 \qquad = 24 + 24 + 43 + 43 + 62$$
$$:= 2^6 + 3^3 + 4^2 + 4^3 + 5^2 \qquad = 26 + 33 + 42 + 43 + 52$$

$$198 := 2^4 + 2^6 + 3^3 + 3^3 + 8^2 \qquad = 24 + 26 + 33 + 33 + 82$$
$$:= 2^6 + 2^6 + 3^2 + 5^2 + 6^2 \qquad = 26 + 26 + 32 + 52 + 62$$

$$200 := 2^5 + 2^5 + 2^6 + 6^2 + 6^2 \qquad = 25 + 25 + 26 + 62 + 62$$
$$201 := 2^2 + 2^2 + 2^2 + 5^3 + 8^2 \qquad = 22 + 22 + 22 + 53 + 82$$
$$203 := 2^2 + 2^4 + 3^2 + 5^3 + 7^2 \qquad = 22 + 24 + 32 + 53 + 72$$

$$205 := 2^2 + 2^6 + 3^2 + 4^3 + 8^2 \qquad = 22 + 26 + 32 + 43 + 82$$
$$:= 2^3 + 2^3 + 2^3 + 3^4 + 10^2 \qquad = 23 + 23 + 23 + 34 + 102$$
$$:= 2^3 + 2^3 + 3^3 + 3^4 + 9^2 \qquad = 23 + 23 + 33 + 34 + 92$$
$$:= 2^5 + 3^2 + 4^3 + 4^3 + 6^2 \qquad = 25 + 32 + 43 + 43 + 62$$
$$:= 2^7 + 3^2 + 4^2 + 4^2 + 6^2 \qquad = 27 + 32 + 42 + 42 + 62$$

$$207 := 2^3 + 2^3 + 2^6 + 3^3 + 10^2 \qquad = 23 + 23 + 26 + 33 + 102$$
$$:= 2^3 + 2^6 + 3^3 + 3^3 + 9^2 \qquad = 23 + 26 + 33 + 33 + 92$$

$$209 := 2^3 + 2^4 + 2^5 + 2^5 + 11^2 \qquad = 23 + 24 + 25 + 25 + 112$$
$$:= 2^4 + 2^5 + 2^6 + 4^2 + 9^2 \qquad = 24 + 25 + 26 + 42 + 92$$

$$214 := 2^3 + 2^4 + 4^2 + 5^3 + 7^2 \qquad = 23 + 24 + 42 + 53 + 72$$
$$:= 2^3 + 3^4 + 4^3 + 5^2 + 6^2 \qquad = 23 + 34 + 43 + 52 + 62$$
$$:= 2^5 + 4^2 + 4^2 + 5^2 + 5^3 \qquad = 25 + 42 + 42 + 52 + 53$$

$$216 := 2^2 + 2^2 + 2^5 + 2^5 + 12^2 \qquad = 22 + 22 + 25 + 25 + 122$$
$$:= 2^2 + 2^4 + 2^5 + 4^3 + 10^2 \qquad = 22 + 24 + 25 + 43 + 102$$
$$:= 2^3 + 2^6 + 4^2 + 4^3 + 8^2 \qquad = 23 + 26 + 42 + 43 + 82$$
$$:= 2^6 + 3^3 + 4^3 + 5^2 + 6^2 \qquad = 26 + 33 + 43 + 52 + 62$$

$$218 := 2^5 + 2^5 + 3^3 + 3^3 + 10^2 \qquad = 25 + 25 + 33 + 33 + 102$$
$$:= 2^6 + 2^6 + 4^2 + 5^2 + 7^2 \qquad = 26 + 26 + 42 + 52 + 72$$

$$223 := 2^2 + 2^3 + 3^2 + 3^4 + 11^2 \qquad = 22 + 23 + 32 + 34 + 112$$
$$:= 2^2 + 3^3 + 4^3 + 4^3 + 8^2 \qquad = 22 + 33 + 43 + 43 + 82$$
$$:= 2^2 + 3^4 + 4^3 + 5^2 + 7^2 \qquad = 22 + 34 + 43 + 52 + 72$$
$$:= 2^4 + 3^2 + 3^2 + 5^3 + 8^2 \qquad = 24 + 32 + 32 + 53 + 82$$

$$225 := 2^2 + 2^2 + 2^4 + 2^5 + 13^2 \qquad = 22 + 22 + 24 + 25 + 132$$
$$:= 2^2 + 2^6 + 3^2 + 3^3 + 11^2 \qquad = 22 + 26 + 32 + 33 + 112$$
$$:= 2^5 + 4^2 + 4^3 + 4^3 + 7^2 \qquad = 25 + 42 + 43 + 43 + 72$$
$$:= 2^7 + 3^2 + 4^2 + 6^2 + 6^2 \qquad = 27 + 32 + 42 + 62 + 62$$
$$:= 2^7 + 4^2 + 4^2 + 4^2 + 7^2 \qquad = 27 + 42 + 42 + 42 + 72$$

$$227 := 2^3 + 2^4 + 2^5 + 3^3 + 12^2 \qquad = 23 + 24 + 25 + 33 + 122$$
$$:= 2^4 + 2^5 + 3^4 + 7^2 + 7^2 \qquad = 24 + 25 + 34 + 72 + 72$$

$$229 := 2^4 + 2^5 + 2^6 + 6^2 + 9^2 \qquad = 24 + 25 + 26 + 62 + 92$$
$$232 := 2^3 + 3^2 + 3^2 + 5^3 + 9^2 \qquad = 23 + 32 + 32 + 53 + 92$$

$$234 := 2^3 + 2^3 + 3^4 + 4^2 + 11^2 \qquad = 23 + 23 + 34 + 42 + 112$$
$$:= 2^3 + 2^4 + 5^3 + 6^2 + 7^2 \qquad = 23 + 24 + 53 + 62 + 72$$
$$:= 2^4 + 3^2 + 4^3 + 4^3 + 9^2 \qquad = 24 + 32 + 43 + 43 + 92$$
$$:= 2^5 + 4^2 + 5^2 + 5^3 + 6^2 \qquad = 25 + 42 + 52 + 53 + 62$$

$$236 := 2^3 + 2^4 + 2^4 + 3^3 + 13^2 \qquad = 23 + 24 + 24 + 33 + 132$$
$$:= 2^3 + 2^6 + 3^3 + 4^2 + 11^2 \qquad = 23 + 26 + 33 + 42 + 112$$
$$:= 2^3 + 2^6 + 4^3 + 6^2 + 8^2 \qquad = 23 + 26 + 43 + 62 + 82$$

$$238 := 2^6 + 2^6 + 5^2 + 6^2 + 7^2 \qquad = 26 + 26 + 52 + 62 + 72$$

$$243 := 2^2 + 2^3 + 2^3 + 3^3 + 14^2 \qquad = 22 + 23 + 23 + 33 + 142$$

$$:= 2^2 + 2^4 + 5^3 + 7^2 + 7^2 \qquad = 22 + 24 + 53 + 72 + 72$$
$$:= 2^2 + 3^3 + 3^3 + 4^3 + 11^2 \qquad = 22 + 33 + 33 + 43 + 112$$
$$:= 3^2 + 3^4 + 4^3 + 5^2 + 8^2 \qquad = 32 + 34 + 43 + 52 + 82$$

$$\mathbf{245} := 2^2 + 2^3 + 2^6 + 5^2 + 12^2 \qquad = 22 + 23 + 26 + 52 + 122$$
$$:= 2^2 + 2^5 + 3^4 + 8^2 + 8^2 \qquad = 22 + 25 + 34 + 82 + 82$$
$$:= 2^2 + 2^6 + 4^3 + 7^2 + 8^2 \qquad = 22 + 26 + 43 + 72 + 82$$
$$:= 2^3 + 2^4 + 2^4 + 3^2 + 14^2 \qquad = 23 + 24 + 24 + 32 + 142$$
$$:= 2^3 + 2^5 + 3^2 + 3^3 + 13^2 \qquad = 23 + 25 + 32 + 33 + 132$$
$$:= 2^5 + 3^4 + 4^2 + 4^2 + 10^2 \qquad = 25 + 34 + 42 + 42 + 102$$
$$:= 2^5 + 4^3 + 4^3 + 6^2 + 7^2 \qquad = 25 + 43 + 43 + 62 + 72$$
$$:= 2^7 + 3^2 + 6^2 + 6^2 + 6^2 \qquad = 27 + 32 + 62 + 62 + 62$$
$$:= 2^7 + 4^2 + 4^2 + 6^2 + 7^2 \qquad = 27 + 42 + 42 + 62 + 72$$

$$\mathbf{252} := 3^2 + 3^2 + 3^2 + 3^4 + 12^2 \qquad = 32 + 32 + 32 + 34 + 122$$

$$\mathbf{254} := 2^3 + 2^3 + 3^4 + 6^2 + 11^2 \qquad = 23 + 23 + 34 + 62 + 112$$
$$:= 2^3 + 2^5 + 3^2 + 3^2 + 14^2 \qquad = 23 + 25 + 32 + 32 + 142$$
$$:= 2^5 + 5^2 + 5^3 + 6^2 + 6^2 \qquad = 25 + 52 + 53 + 62 + 62$$

$$\mathbf{256} := 2^3 + 2^6 + 3^3 + 6^2 + 11^2 \qquad = 23 + 26 + 33 + 62 + 112$$
$$:= 2^4 + 2^6 + 4^2 + 4^2 + 12^2 \qquad = 24 + 26 + 42 + 42 + 122$$

$$\mathbf{258} := 2^4 + 2^4 + 2^6 + 9^2 + 9^2 \qquad = 24 + 24 + 26 + 92 + 92$$

$$\mathbf{261} := 2^2 + 2^2 + 5^3 + 8^2 + 8^2 \qquad = 22 + 22 + 53 + 82 + 82$$
$$:= 2^2 + 4^2 + 4^2 + 5^3 + 10^2 \qquad = 22 + 42 + 42 + 53 + 102$$

$$\mathbf{263} := 2^2 + 2^3 + 3^4 + 7^2 + 11^2 \qquad = 22 + 23 + 34 + 72 + 112$$
$$:= 2^4 + 3^2 + 5^3 + 7^2 + 8^2 \qquad = 24 + 32 + 53 + 72 + 82$$
$$:= 2^4 + 4^2 + 5^2 + 5^3 + 9^2 \qquad = 24 + 42 + 52 + 53 + 92$$
$$:= 3^2 + 3^3 + 3^4 + 5^2 + 11^2 \qquad = 32 + 33 + 34 + 52 + 112$$

$$\mathbf{265} := 2^2 + 2^6 + 3^3 + 7^2 + 11^2 \qquad = 22 + 26 + 33 + 72 + 112$$
$$:= 2^4 + 2^4 + 4^3 + 5^2 + 12^2 \qquad = 24 + 24 + 43 + 52 + 122$$
$$:= 2^5 + 3^4 + 4^2 + 6^2 + 10^2 \qquad = 25 + 34 + 42 + 62 + 102$$
$$:= 2^6 + 3^2 + 4^3 + 8^2 + 8^2 \qquad = 26 + 32 + 43 + 82 + 82$$

$$:= 2^7 + 4^2 + 6^2 + 6^2 + 7^2 \qquad = 27 + 42 + 62 + 62 + 72$$

$$267 := 2^5 + 2^6 + 3^2 + 9^2 + 9^2 \qquad = 25 + 26 + 32 + 92 + 92$$
$$:= 2^5 + 2^6 + 5^2 + 5^2 + 11^2 \qquad = 25 + 26 + 52 + 52 + 112$$

$$272 := 2^3 + 3^2 + 5^3 + 7^2 + 9^2 \qquad = 23 + 32 + 53 + 72 + 92$$

$$274 := 2^2 + 2^2 + 2^6 + 9^2 + 11^2 \qquad = 22 + 22 + 26 + 92 + 112$$
$$:= 2^4 + 4^3 + 4^3 + 7^2 + 9^2 \qquad = 24 + 43 + 43 + 72 + 92$$
$$:= 2^5 + 3^2 + 4^3 + 5^2 + 12^2 \qquad = 25 + 32 + 43 + 52 + 122$$
$$:= 2^6 + 3^2 + 4^2 + 4^2 + 13^2 \qquad = 26 + 32 + 42 + 42 + 132$$

$$276 := 2^2 + 2^5 + 2^5 + 8^2 + 12^2 \qquad = 22 + 25 + 25 + 82 + 122$$
$$:= 2^4 + 2^5 + 4^3 + 8^2 + 10^2 \qquad = 24 + 25 + 43 + 82 + 102$$
$$:= 2^4 + 2^6 + 4^2 + 6^2 + 12^2 \qquad = 24 + 26 + 42 + 62 + 122$$

$$281 := 2^2 + 3^2 + 3^3 + 4^2 + 15^2 \qquad = 22 + 32 + 33 + 42 + 152$$
$$:= 2^2 + 4^2 + 5^3 + 6^2 + 10^2 \qquad = 22 + 42 + 53 + 62 + 102$$

$$283 := 2^3 + 2^4 + 3^2 + 5^2 + 15^2 \qquad = 23 + 24 + 32 + 52 + 152$$
$$:= 2^3 + 3^2 + 3^4 + 8^2 + 11^2 \qquad = 23 + 32 + 34 + 82 + 112$$
$$:= 2^3 + 3^3 + 3^3 + 5^2 + 14^2 \qquad = 23 + 33 + 33 + 52 + 142$$
$$:= 2^3 + 3^4 + 5^2 + 5^2 + 12^2 \qquad = 23 + 34 + 52 + 52 + 122$$
$$:= 2^4 + 3^2 + 4^3 + 5^2 + 13^2 \qquad = 24 + 32 + 43 + 52 + 132$$
$$:= 2^4 + 5^2 + 5^3 + 6^2 + 9^2 \qquad = 24 + 52 + 53 + 62 + 92$$
$$:= 3^3 + 4^3 + 4^3 + 8^2 + 8^2 \qquad = 33 + 43 + 43 + 82 + 82$$
$$:= 3^4 + 4^3 + 5^2 + 7^2 + 8^2 \qquad = 34 + 43 + 52 + 72 + 82$$

$$285 := 2^2 + 2^4 + 2^5 + 8^2 + 13^2 \qquad = 22 + 24 + 25 + 82 + 132$$
$$:= 2^3 + 2^4 + 2^4 + 7^2 + 14^2 \qquad = 23 + 24 + 24 + 72 + 142$$
$$:= 2^3 + 2^5 + 3^3 + 7^2 + 13^2 \qquad = 23 + 25 + 33 + 72 + 132$$
$$:= 2^3 + 2^5 + 4^3 + 9^2 + 10^2 \qquad = 23 + 25 + 43 + 92 + 102$$
$$:= 2^4 + 2^5 + 4^2 + 5^2 + 14^2 \qquad = 24 + 25 + 42 + 52 + 142$$
$$:= 2^5 + 3^3 + 4^3 + 9^2 + 9^2 \qquad = 25 + 33 + 43 + 92 + 92$$
$$:= 2^5 + 3^4 + 6^2 + 6^2 + 10^2 \qquad = 25 + 34 + 62 + 62 + 102$$
$$:= 2^6 + 3^2 + 3^3 + 8^2 + 11^2 \qquad = 26 + 32 + 33 + 82 + 112$$
$$:= 2^6 + 3^3 + 5^2 + 5^2 + 12^2 \qquad = 26 + 33 + 52 + 52 + 122$$

$$:= 2^7 + 6^2 + 6^2 + 6^2 + 7^2 \qquad = 27 + 62 + 62 + 62 + 72$$

$$292 := 2^3 + 3^3 + 4^2 + 4^2 + 15^2 \qquad = 23 + 33 + 42 + 42 + 152$$
$$:= 3^2 + 3^2 + 3^4 + 7^2 + 12^2 \qquad = 32 + 32 + 34 + 72 + 122$$
$$:= 3^3 + 4^2 + 4^2 + 4^3 + 13^2 \qquad = 33 + 42 + 42 + 43 + 132$$

$$294 := 2^2 + 2^3 + 2^5 + 9^2 + 13^2 \qquad = 22 + 23 + 25 + 92 + 132$$
$$:= 2^3 + 2^5 + 3^2 + 7^2 + 14^2 \qquad = 23 + 25 + 32 + 72 + 142$$
$$:= 2^4 + 3^4 + 4^2 + 9^2 + 10^2 \qquad = 24 + 34 + 42 + 92 + 102$$
$$:= 2^6 + 3^2 + 4^2 + 6^2 + 13^2 \qquad = 26 + 32 + 42 + 62 + 132$$

$$296 := 2^4 + 2^5 + 3^3 + 10^2 + 11^2 \qquad = 24 + 25 + 33 + 102 + 112$$
$$:= 2^4 + 2^6 + 4^2 + 10^2 + 10^2 \qquad = 24 + 26 + 42 + 102 + 102$$
$$:= 2^4 + 2^6 + 6^2 + 6^2 + 12^2 \qquad = 24 + 26 + 62 + 62 + 122$$

$$301 := 2^2 + 3^2 + 3^3 + 6^2 + 15^2 \qquad = 22 + 32 + 33 + 62 + 152$$
$$:= 2^2 + 5^3 + 6^2 + 6^2 + 10^2 \qquad = 22 + 53 + 62 + 62 + 102$$
$$:= 3^2 + 4^2 + 4^2 + 4^3 + 14^2 \qquad = 32 + 42 + 42 + 43 + 142$$

$$303 := 2^3 + 2^3 + 3^3 + 8^2 + 14^2 \qquad = 23 + 23 + 33 + 82 + 142$$
$$:= 2^4 + 5^3 + 7^2 + 7^2 + 8^2 \qquad = 24 + 53 + 72 + 72 + 82$$
$$:= 3^3 + 3^3 + 4^3 + 8^2 + 11^2 \qquad = 33 + 33 + 43 + 82 + 112$$
$$:= 3^3 + 3^4 + 5^2 + 7^2 + 11^2 \qquad = 33 + 34 + 52 + 72 + 112$$

$$305 := 2^3 + 2^4 + 2^4 + 11^2 + 12^2 \qquad = 23 + 24 + 24 + 112 + 122$$
$$:= 2^3 + 2^6 + 5^2 + 8^2 + 12^2 \qquad = 23 + 26 + 52 + 82 + 122$$
$$:= 2^4 + 2^5 + 5^2 + 6^2 + 14^2 \qquad = 24 + 25 + 52 + 62 + 142$$
$$:= 2^5 + 3^4 + 8^2 + 8^2 + 8^2 \qquad = 25 + 34 + 82 + 82 + 82$$
$$:= 2^6 + 4^3 + 7^2 + 8^2 + 8^2 \qquad = 26 + 43 + 72 + 82 + 82$$

$$307 := 2^5 + 2^6 + 7^2 + 9^2 + 9^2 \qquad = 25 + 26 + 72 + 92 + 92$$
$$310 := 2^2 + 3^2 + 4^2 + 5^2 + 16^2 \qquad = 22 + 32 + 42 + 52 + 162$$

$$312 := 2^2 + 2^2 + 2^4 + 12^2 + 12^2 \qquad = 22 + 22 + 24 + 122 + 122$$
$$:= 2^2 + 3^4 + 5^2 + 9^2 + 11^2 \qquad = 22 + 34 + 52 + 92 + 112$$
$$:= 2^3 + 3^3 + 4^2 + 6^2 + 15^2 \qquad = 23 + 33 + 42 + 62 + 152$$
$$:= 2^3 + 5^3 + 7^2 + 7^2 + 9^2 \qquad = 23 + 53 + 72 + 72 + 92$$

$$:= 3^3 + 4^2 + 4^3 + 6^2 + 13^2 \qquad = 33 + 42 + 43 + 62 + 132$$

$$314 := 2^2 + 2^6 + 5^2 + 10^2 + 11^2 \qquad = 22 + 26 + 52 + 102 + 112$$
$$:= 2^3 + 2^5 + 3^2 + 11^2 + 12^2 \qquad = 23 + 25 + 32 + 112 + 122$$
$$:= 2^4 + 3^3 + 3^3 + 10^2 + 12^2 \qquad = 24 + 33 + 33 + 102 + 122$$
$$:= 2^4 + 3^4 + 6^2 + 9^2 + 10^2 \qquad = 24 + 34 + 62 + 92 + 102$$
$$:= 2^5 + 4^2 + 4^3 + 9^2 + 11^2 \qquad = 25 + 42 + 43 + 92 + 112$$
$$:= 2^5 + 4^3 + 5^2 + 7^2 + 12^2 \qquad = 25 + 43 + 52 + 72 + 122$$
$$:= 2^6 + 3^2 + 4^2 + 9^2 + 12^2 \qquad = 26 + 32 + 42 + 92 + 122$$
$$:= 2^6 + 3^2 + 6^2 + 6^2 + 13^2 \qquad = 26 + 32 + 62 + 62 + 132$$
$$:= 2^6 + 4^2 + 4^2 + 7^2 + 13^2 \qquad = 26 + 42 + 42 + 72 + 132$$

$$316 := 2^4 + 2^6 + 6^2 + 10^2 + 10^2 \qquad = 24 + 26 + 62 + 102 + 102$$

$$321 := 2^2 + 3^2 + 4^3 + 10^2 + 12^2 \qquad = 22 + 32 + 43 + 102 + 122$$
$$:= 2^2 + 3^3 + 4^2 + 7^2 + 15^2 \qquad = 22 + 33 + 42 + 72 + 152$$
$$:= 2^2 + 5^3 + 8^2 + 8^2 + 8^2 \qquad = 22 + 53 + 82 + 82 + 82$$
$$:= 2^3 + 4^2 + 4^2 + 5^2 + 16^2 \qquad = 23 + 42 + 42 + 52 + 162$$
$$:= 3^2 + 4^2 + 4^3 + 6^2 + 14^2 \qquad = 32 + 42 + 43 + 62 + 142$$
$$:= 3^2 + 5^2 + 5^3 + 9^2 + 9^2 \qquad = 32 + 52 + 53 + 92 + 92$$
$$:= 4^2 + 4^2 + 5^3 + 8^2 + 10^2 \qquad = 42 + 42 + 53 + 82 + 102$$
$$:= 5^2 + 5^2 + 5^2 + 5^3 + 11^2 \qquad = 52 + 52 + 52 + 53 + 112$$

$$323 := 2^3 + 2^4 + 3^2 + 11^2 + 13^2 \qquad = 23 + 24 + 32 + 112 + 132$$
$$:= 2^3 + 2^4 + 5^2 + 7^2 + 15^2 \qquad = 23 + 24 + 52 + 72 + 152$$
$$:= 2^3 + 3^4 + 7^2 + 8^2 + 11^2 \qquad = 23 + 34 + 72 + 82 + 112$$
$$:= 2^4 + 4^3 + 5^2 + 7^2 + 13^2 \qquad = 24 + 43 + 52 + 72 + 132$$
$$:= 2^5 + 4^2 + 5^2 + 5^2 + 15^2 \qquad = 25 + 42 + 52 + 52 + 152$$
$$:= 3^3 + 3^3 + 3^3 + 11^2 + 11^2 \qquad = 33 + 33 + 33 + 112 + 112$$

$$325 := 2^6 + 3^3 + 7^2 + 8^2 + 11^2 \qquad = 26 + 33 + 72 + 82 + 112$$

$$330 := 2^2 + 2^2 + 3^2 + 12^2 + 13^2 \qquad = 22 + 22 + 32 + 122 + 132$$
$$:= 2^2 + 2^2 + 4^2 + 9^2 + 15^2 \qquad = 22 + 22 + 42 + 92 + 152$$
$$:= 2^2 + 3^2 + 5^2 + 6^2 + 16^2 \qquad = 22 + 32 + 52 + 62 + 162$$

$$332 := 2^2 + 2^4 + 4^2 + 10^2 + 14^2 \qquad = 22 + 24 + 42 + 102 + 142$$

$$:= 2^3 + 3^2 + 3^3 + 12^2 + 12^2 \quad = 23 + 32 + 33 + 122 + 122$$
$$:= 2^3 + 3^3 + 6^2 + 6^2 + 15^2 \quad = 23 + 33 + 62 + 62 + 152$$
$$:= 2^3 + 4^2 + 4^3 + 10^2 + 12^2 \quad = 23 + 42 + 43 + 102 + 122$$
$$:= 3^2 + 3^3 + 3^3 + 10^2 + 13^2 \quad = 32 + 33 + 33 + 102 + 132$$
$$:= 3^2 + 3^4 + 7^2 + 7^2 + 12^2 \quad = 32 + 34 + 72 + 72 + 122$$
$$:= 3^3 + 4^2 + 4^3 + 9^2 + 12^2 \quad = 33 + 42 + 43 + 92 + 122$$
$$:= 3^3 + 4^3 + 6^2 + 6^2 + 13^2 \quad = 33 + 43 + 62 + 62 + 132$$

$$334 := 2^2 + 2^6 + 8^2 + 9^2 + 11^2 \quad = 22 + 26 + 82 + 92 + 112$$
$$:= 2^3 + 2^5 + 5^2 + 10^2 + 13^2 \quad = 23 + 25 + 52 + 102 + 132$$
$$:= 2^3 + 2^5 + 7^2 + 7^2 + 14^2 \quad = 23 + 25 + 72 + 72 + 142$$
$$:= 2^4 + 2^4 + 5^2 + 9^2 + 14^2 \quad = 24 + 24 + 52 + 92 + 142$$
$$:= 2^5 + 3^3 + 5^2 + 9^2 + 13^2 \quad = 25 + 33 + 52 + 92 + 132$$
$$:= 2^5 + 4^3 + 6^2 + 9^2 + 11^2 \quad = 25 + 43 + 62 + 92 + 112$$
$$:= 2^6 + 3^2 + 6^2 + 9^2 + 12^2 \quad = 26 + 32 + 62 + 92 + 122$$
$$:= 2^6 + 4^2 + 6^2 + 7^2 + 13^2 \quad = 26 + 42 + 62 + 72 + 132$$

$$336 := 2^5 + 2^5 + 8^2 + 8^2 + 12^2 \quad = 25 + 25 + 82 + 82 + 122$$

$$341 := 2^2 + 2^3 + 4^2 + 12^2 + 13^2 \quad = 22 + 23 + 42 + 122 + 132$$
$$:= 2^2 + 3^3 + 6^2 + 7^2 + 15^2 \quad = 22 + 33 + 62 + 72 + 152$$
$$:= 2^3 + 4^2 + 5^2 + 6^2 + 16^2 \quad = 23 + 42 + 52 + 62 + 162$$
$$:= 3^2 + 3^2 + 3^3 + 10^2 + 14^2 \quad = 32 + 32 + 33 + 102 + 142$$
$$:= 3^2 + 3^3 + 4^2 + 8^2 + 15^2 \quad = 32 + 33 + 42 + 82 + 152$$
$$:= 3^2 + 4^3 + 6^2 + 6^2 + 14^2 \quad = 32 + 43 + 62 + 62 + 142$$
$$:= 4^2 + 4^2 + 4^3 + 7^2 + 14^2 \quad = 42 + 42 + 43 + 72 + 142$$
$$:= 4^2 + 5^3 + 6^2 + 8^2 + 10^2 \quad = 42 + 53 + 62 + 82 + 102$$

$$343 := 2^5 + 3^2 + 5^2 + 9^2 + 14^2 \quad = 25 + 32 + 52 + 92 + 142$$
$$:= 2^5 + 5^2 + 5^2 + 6^2 + 15^2 \quad = 25 + 52 + 52 + 62 + 152$$

$$345 := 2^4 + 2^5 + 8^2 + 8^2 + 13^2 \quad = 24 + 25 + 82 + 82 + 132$$

$$350 := 2^2 + 2^2 + 5^2 + 11^2 + 14^2 \quad = 22 + 22 + 52 + 112 + 142$$
$$:= 2^2 + 2^2 + 6^2 + 9^2 + 15^2 \quad = 22 + 22 + 62 + 92 + 152$$
$$:= 2^2 + 4^2 + 5^2 + 7^2 + 16^2 \quad = 22 + 42 + 52 + 72 + 162$$

$$
\begin{aligned}
\mathbf{352} &:= 2^2 + 2^4 + 6^2 + 10^2 + 14^2 &&= 22 + 24 + 62 + 102 + 142 \\
&:= 2^3 + 4^3 + 6^2 + 10^2 + 12^2 &&= 23 + 43 + 62 + 102 + 122 \\
&:= 3^2 + 3^4 + 9^2 + 9^2 + 10^2 &&= 32 + 34 + 92 + 92 + 102 \\
&:= 3^3 + 4^3 + 6^2 + 9^2 + 12^2 &&= 33 + 43 + 62 + 92 + 122 \\
&:= 3^4 + 5^2 + 5^2 + 10^2 + 11^2 &&= 34 + 52 + 52 + 102 + 112
\end{aligned}
$$

$$
\begin{aligned}
\mathbf{354} &:= 2^3 + 2^5 + 7^2 + 11^2 + 12^2 &&= 23 + 25 + 72 + 112 + 122 \\
&:= 2^3 + 2^5 + 8^2 + 9^2 + 13^2 &&= 23 + 25 + 82 + 92 + 132 \\
&:= 2^6 + 3^2 + 9^2 + 10^2 + 10^2 &&= 26 + 32 + 92 + 102 + 102 \\
&:= 2^6 + 4^2 + 7^2 + 9^2 + 12^2 &&= 26 + 42 + 72 + 92 + 122 \\
&:= 2^6 + 6^2 + 6^2 + 7^2 + 13^2 &&= 26 + 62 + 62 + 72 + 132
\end{aligned}
$$

$$
\begin{aligned}
\mathbf{361} &:= 2^2 + 2^3 + 6^2 + 12^2 + 13^2 &&= 22 + 23 + 62 + 122 + 132 \\
&:= 2^2 + 4^3 + 7^2 + 10^2 + 12^2 &&= 22 + 43 + 72 + 102 + 122 \\
&:= 2^3 + 5^2 + 6^2 + 6^2 + 16^2 &&= 23 + 52 + 62 + 62 + 162 \\
&:= 3^2 + 3^3 + 6^2 + 8^2 + 15^2 &&= 32 + 33 + 62 + 82 + 152 \\
&:= 4^2 + 4^2 + 4^3 + 11^2 + 12^2 &&= 42 + 42 + 43 + 112 + 122 \\
&:= 4^2 + 4^3 + 6^2 + 7^2 + 14^2 &&= 42 + 43 + 62 + 72 + 142 \\
&:= 5^2 + 5^3 + 7^2 + 9^2 + 9^2 &&= 52 + 53 + 72 + 92 + 92 \\
&:= 5^3 + 6^2 + 6^2 + 8^2 + 10^2 &&= 53 + 62 + 62 + 82 + 102
\end{aligned}
$$

$$
\begin{aligned}
\mathbf{363} &:= 2^3 + 2^4 + 7^2 + 11^2 + 13^2 &&= 23 + 24 + 72 + 112 + 132 \\
&:= 2^4 + 4^3 + 9^2 + 9^2 + 11^2 &&= 24 + 43 + 92 + 92 + 112 \\
&:= 2^5 + 4^2 + 5^2 + 11^2 + 13^2 &&= 25 + 42 + 52 + 112 + 132
\end{aligned}
$$

$$
\begin{aligned}
\mathbf{370} &:= 2^2 + 2^2 + 7^2 + 12^2 + 13^2 &&= 22 + 22 + 72 + 122 + 132 \\
&:= 2^2 + 4^2 + 5^2 + 10^2 + 15^2 &&= 22 + 42 + 52 + 102 + 152 \\
&:= 2^2 + 5^2 + 6^2 + 7^2 + 16^2 &&= 22 + 52 + 62 + 72 + 162 \\
&:= 3^2 + 4^2 + 5^2 + 8^2 + 16^2 &&= 32 + 42 + 52 + 82 + 162
\end{aligned}
$$

$$
\begin{aligned}
\mathbf{372} &:= 2^2 + 2^4 + 8^2 + 12^2 + 12^2 &&= 22 + 24 + 82 + 122 + 122 \\
&:= 2^3 + 3^3 + 7^2 + 12^2 + 12^2 &&= 23 + 33 + 72 + 122 + 122 \\
&:= 2^3 + 4^3 + 10^2 + 10^2 + 10^2 &&= 23 + 43 + 102 + 102 + 102 \\
&:= 2^4 + 5^2 + 5^2 + 9^2 + 15^2 &&= 24 + 52 + 52 + 92 + 152 \\
&:= 3^3 + 3^3 + 7^2 + 10^2 + 13^2 &&= 33 + 33 + 72 + 102 + 132 \\
&:= 3^3 + 4^3 + 9^2 + 10^2 + 10^2 &&= 33 + 43 + 92 + 102 + 102 \\
&:= 3^4 + 5^2 + 8^2 + 9^2 + 11^2 &&= 34 + 52 + 82 + 92 + 112
\end{aligned}
$$

$$:= 3^4 + 7^2 + 7^2 + 7^2 + 12^2 \qquad = 34 + 72 + 72 + 72 + 122$$

$$\mathbf{374} := 2^4 + 2^4 + 10^2 + 11^2 + 11^2 \quad = 24 + 24 + 102 + 112 + 112$$
$$:= 2^6 + 5^2 + 8^2 + 10^2 + 11^2 \quad = 26 + 52 + 82 + 102 + 112$$
$$:= 2^6 + 6^2 + 7^2 + 9^2 + 12^2 \quad = 26 + 62 + 72 + 92 + 122$$

$$\mathbf{381} := 2^2 + 2^3 + 10^2 + 10^2 + 13^2 \quad = 22 + 23 + 102 + 102 + 132$$
$$:= 2^2 + 2^3 + 9^2 + 12^2 + 12^2 \quad = 22 + 23 + 92 + 122 + 122$$
$$:= 2^2 + 3^3 + 9^2 + 10^2 + 13^2 \quad = 22 + 33 + 92 + 102 + 132$$
$$:= 3^2 + 3^3 + 7^2 + 10^2 + 14^2 \quad = 32 + 33 + 72 + 102 + 142$$
$$:= 3^2 + 4^3 + 8^2 + 10^2 + 12^2 \quad = 32 + 43 + 82 + 102 + 122$$
$$:= 3^3 + 4^2 + 5^2 + 12^2 + 13^2 \quad = 33 + 42 + 52 + 122 + 132$$
$$:= 3^3 + 4^2 + 7^2 + 8^2 + 15^2 \quad = 33 + 42 + 72 + 82 + 152$$
$$:= 4^2 + 4^3 + 6^2 + 11^2 + 12^2 \quad = 42 + 43 + 62 + 112 + 122$$
$$:= 4^3 + 6^2 + 6^2 + 7^2 + 14^2 \quad = 43 + 62 + 62 + 72 + 142$$
$$:= 5^3 + 8^2 + 8^2 + 8^2 + 8^2 \quad = 53 + 82 + 82 + 82 + 82$$

$$\mathbf{383} := 2^5 + 3^2 + 10^2 + 11^2 + 11^2 \quad = 25 + 32 + 102 + 112 + 112$$
$$:= 2^5 + 5^2 + 6^2 + 11^2 + 13^2 \quad = 25 + 52 + 62 + 112 + 132$$
$$:= 2^5 + 5^2 + 7^2 + 9^2 + 14^2 \quad = 25 + 52 + 72 + 92 + 142$$

$$\mathbf{390} := 2^2 + 3^2 + 8^2 + 12^2 + 13^2 \quad = 22 + 32 + 82 + 122 + 132$$
$$:= 2^2 + 3^2 + 9^2 + 10^2 + 14^2 \quad = 22 + 32 + 92 + 102 + 142$$
$$:= 2^2 + 4^2 + 8^2 + 9^2 + 15^2 \quad = 22 + 42 + 82 + 92 + 152$$
$$:= 2^2 + 5^2 + 6^2 + 10^2 + 15^2 \quad = 22 + 52 + 62 + 102 + 152$$
$$:= 3^2 + 4^2 + 5^2 + 12^2 + 14^2 \quad = 32 + 42 + 52 + 122 + 142$$
$$:= 3^2 + 5^2 + 6^2 + 8^2 + 16^2 \quad = 32 + 52 + 62 + 82 + 162$$

$$\mathbf{392} := 2^4 + 4^2 + 8^2 + 10^2 + 14^2 \quad = 24 + 42 + 82 + 102 + 142$$
$$:= 3^4 + 7^2 + 9^2 + 9^2 + 10^2 \quad = 34 + 72 + 92 + 92 + 102$$

$$\mathbf{394} := 2^6 + 7^2 + 9^2 + 10^2 + 10^2 \quad = 26 + 72 + 92 + 102 + 102$$
$$:= 2^6 + 8^2 + 8^2 + 9^2 + 11^2 \quad = 26 + 82 + 82 + 92 + 112$$

$$\mathbf{401} := 2^3 + 4^2 + 8^2 + 12^2 + 13^2 \quad = 23 + 42 + 82 + 122 + 132$$
$$:= 2^3 + 4^2 + 9^2 + 10^2 + 14^2 \quad = 23 + 42 + 92 + 102 + 142$$
$$:= 3^2 + 3^3 + 10^2 + 11^2 + 12^2 \quad = 32 + 33 + 102 + 112 + 122$$

$$:= 3^3 + 4^2 + 9^2 + 9^2 + 14^2 \quad = 33 + 42 + 92 + 92 + 142$$
$$:= 3^3 + 5^2 + 6^2 + 12^2 + 13^2 \quad = 33 + 52 + 62 + 122 + 132$$
$$:= 3^3 + 6^2 + 7^2 + 8^2 + 15^2 \quad = 33 + 62 + 72 + 82 + 152$$
$$:= 4^2 + 4^3 + 10^2 + 10^2 + 11^2 = 42 + 43 + 102 + 102 + 112$$
$$:= 4^3 + 6^2 + 6^2 + 11^2 + 12^2 \quad = 43 + 62 + 62 + 112 + 122$$

$$\mathbf{403} := 2^5 + 5^2 + 9^2 + 11^2 + 12^2 \quad = 25 + 52 + 92 + 112 + 122$$

$$\mathbf{410} := 2^2 + 4^2 + 10^2 + 11^2 + 13^2 \quad = 22 + 42 + 102 + 112 + 132$$
$$:= 2^2 + 5^2 + 8^2 + 11^2 + 14^2 \quad = 22 + 52 + 82 + 112 + 142$$
$$:= 2^2 + 6^2 + 8^2 + 9^2 + 15^2 \quad = 22 + 62 + 82 + 92 + 152$$
$$:= 3^2 + 5^2 + 6^2 + 12^2 + 14^2 \quad = 32 + 52 + 62 + 122 + 142$$
$$:= 4^2 + 5^2 + 7^2 + 8^2 + 16^2 \quad = 42 + 52 + 72 + 82 + 162$$

$$\mathbf{412} := 2^4 + 5^2 + 9^2 + 11^2 + 13^2 \quad = 24 + 52 + 92 + 112 + 132$$
$$:= 2^4 + 6^2 + 8^2 + 10^2 + 14^2 \quad = 24 + 62 + 82 + 102 + 142$$

$$\mathbf{421} := 2^3 + 5^2 + 10^2 + 12^2 + 12^2 \quad = 23 + 52 + 102 + 122 + 122$$
$$:= 2^3 + 6^2 + 8^2 + 12^2 + 13^2 \quad = 23 + 62 + 82 + 122 + 132$$
$$:= 2^3 + 6^2 + 9^2 + 10^2 + 14^2 \quad = 23 + 62 + 92 + 102 + 142$$
$$:= 3^3 + 5^2 + 10^2 + 10^2 + 13^2 \quad = 33 + 52 + 102 + 102 + 132$$
$$:= 3^3 + 5^2 + 9^2 + 12^2 + 12^2 \quad = 33 + 52 + 92 + 122 + 122$$
$$:= 3^3 + 6^2 + 9^2 + 9^2 + 14^2 \quad = 33 + 62 + 92 + 92 + 142$$
$$:= 3^3 + 7^2 + 7^2 + 10^2 + 14^2 \quad = 33 + 72 + 72 + 102 + 142$$
$$:= 4^3 + 6^2 + 10^2 + 10^2 + 11^2 \quad = 43 + 62 + 102 + 102 + 112$$
$$:= 4^3 + 7^2 + 8^2 + 10^2 + 12^2 \quad = 43 + 72 + 82 + 102 + 122$$

$$\mathbf{423} := 2^5 + 7^2 + 10^2 + 11^2 + 11^2 \quad = 25 + 72 + 102 + 112 + 112$$

$$\mathbf{430} := 2^2 + 6^2 + 10^2 + 11^2 + 13^2 \quad = 22 + 62 + 102 + 112 + 132$$
$$:= 2^2 + 7^2 + 8^2 + 12^2 + 13^2 \quad = 22 + 72 + 82 + 122 + 132$$
$$:= 2^2 + 7^2 + 9^2 + 10^2 + 14^2 \quad = 22 + 72 + 92 + 102 + 142$$
$$:= 3^2 + 5^2 + 10^2 + 10^2 + 14^2 \quad = 32 + 52 + 102 + 102 + 142$$
$$:= 4^2 + 4^2 + 9^2 + 11^2 + 14^2 \quad = 42 + 42 + 92 + 112 + 142$$
$$:= 4^2 + 5^2 + 7^2 + 12^2 + 14^2 \quad = 42 + 52 + 72 + 122 + 142$$
$$:= 4^2 + 5^2 + 8^2 + 10^2 + 15^2 \quad = 42 + 52 + 82 + 102 + 152$$
$$:= 5^2 + 6^2 + 7^2 + 8^2 + 16^2 \quad = 52 + 62 + 72 + 82 + 162$$

$$432 := 2^4 + 8^2 + 8^2 + 12^2 + 12^2 \quad = 24 + 82 + 82 + 122 + 122$$

$$441 := 2^3 + 8^2 + 10^2 + 10^2 + 13^2 \quad = 23 + 82 + 102 + 102 + 132$$
$$:= 2^3 + 8^2 + 9^2 + 12^2 + 12^2 \quad = 23 + 82 + 92 + 122 + 122$$
$$:= 3^3 + 7^2 + 10^2 + 11^2 + 12^2 \quad = 33 + 72 + 102 + 112 + 122$$
$$:= 3^3 + 8^2 + 9^2 + 10^2 + 13^2 \quad = 33 + 82 + 92 + 102 + 132$$

$$450 := 2^2 + 9^2 + 10^2 + 11^2 + 12^2 \quad = 22 + 92 + 102 + 112 + 122$$
$$:= 3^2 + 8^2 + 8^2 + 12^2 + 13^2 \quad = 32 + 82 + 82 + 122 + 132$$
$$:= 3^2 + 8^2 + 9^2 + 10^2 + 14^2 \quad = 32 + 82 + 92 + 102 + 142$$
$$:= 4^2 + 5^2 + 11^2 + 12^2 + 12^2 \quad = 42 + 52 + 112 + 122 + 122$$
$$:= 4^2 + 6^2 + 9^2 + 11^2 + 14^2 \quad = 42 + 62 + 92 + 112 + 142$$
$$:= 4^2 + 8^2 + 8^2 + 9^2 + 15^2 \quad = 42 + 82 + 82 + 92 + 152$$
$$:= 5^2 + 6^2 + 7^2 + 12^2 + 14^2 \quad = 52 + 62 + 72 + 122 + 142$$
$$:= 5^2 + 6^2 + 8^2 + 10^2 + 15^2 \quad = 52 + 62 + 82 + 102 + 152$$

$$470 := 4^2 + 8^2 + 10^2 + 11^2 + 13^2 \quad = 42 + 82 + 102 + 112 + 132$$
$$:= 5^2 + 6^2 + 11^2 + 12^2 + 12^2 \quad = 52 + 62 + 112 + 122 + 122$$
$$:= 5^2 + 7^2 + 10^2 + 10^2 + 14^2 \quad = 52 + 72 + 102 + 102 + 142$$
$$:= 5^2 + 8^2 + 8^2 + 11^2 + 14^2 \quad = 52 + 82 + 82 + 112 + 142$$
$$:= 6^2 + 6^2 + 9^2 + 11^2 + 14^2 \quad = 62 + 62 + 92 + 112 + 142$$
$$:= 6^2 + 8^2 + 8^2 + 9^2 + 15^2 \quad = 62 + 82 + 82 + 92 + 152$$

$$490 := 5^2 + 10^2 + 10^2 + 11^2 + 12^2 = 52 + 102 + 102 + 112 + 122$$
$$:= 6^2 + 8^2 + 10^2 + 11^2 + 13^2 \quad = 62 + 82 + 102 + 112 + 132$$
$$:= 7^2 + 8^2 + 8^2 + 12^2 + 13^2 \quad = 72 + 82 + 82 + 122 + 132$$
$$:= 7^2 + 8^2 + 9^2 + 10^2 + 14^2 \quad = 72 + 82 + 92 + 102 + 142$$
$$510 := 8^2 + 9^2 + 10^2 + 11^2 + 12^2 \quad = 82 + 92 + 102 + 112 + 122$$

7.2 Six Terms Expressions

This section deals with six terms equality expressions, where we have considered only positive expressions with both powers and bases bigger than one.

$$153 := 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 3^4 \quad = 23 + 24 + 24 + 24 + 24 + 34$$
$$155 := 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^3 \quad = 24 + 24 + 24 + 24 + 26 + 33$$

$$160 := 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 4^3 \quad = 22 + 22 + 23 + 24 + 26 + 43$$

$$:= 2^2 + 2^3 + 2^3 + 2^5 + 3^3 + 3^4 \qquad = 22 + 23 + 23 + 25 + 33 + 34$$

$$162 := 2^2 + 2^3 + 2^5 + 2^6 + 3^3 + 3^3 \qquad = 22 + 23 + 25 + 26 + 33 + 33$$
$$:= 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 \qquad = 23 + 23 + 26 + 26 + 32 + 32$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 3^2 + 3^4 \qquad = 23 + 24 + 24 + 25 + 32 + 34$$

$$164 := 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 4^2 \qquad = 22 + 24 + 25 + 25 + 26 + 42$$
$$:= 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^3 \qquad = 24 + 24 + 25 + 26 + 32 + 33$$

$$171 := 2^3 + 2^5 + 2^5 + 3^2 + 3^2 + 3^4 \qquad = 23 + 25 + 25 + 32 + 32 + 34$$
$$173 := 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 \qquad = 25 + 25 + 26 + 32 + 32 + 33$$
$$176 := 2^2 + 2^2 + 2^3 + 2^3 + 3^3 + 5^3 \qquad = 22 + 22 + 23 + 23 + 33 + 53$$

$$178 := 2^2 + 2^2 + 2^3 + 2^7 + 3^2 + 5^2 \qquad = 22 + 22 + 23 + 27 + 32 + 52$$
$$:= 2^2 + 2^2 + 2^6 + 3^2 + 3^4 + 4^2 \qquad = 22 + 22 + 26 + 32 + 34 + 42$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 3^2 + 5^3 \qquad = 22 + 23 + 24 + 24 + 32 + 53$$
$$:= 2^3 + 2^3 + 2^3 + 3^2 + 3^4 + 4^3 \qquad = 23 + 23 + 23 + 32 + 34 + 43$$

$$180 := 2^2 + 2^4 + 2^4 + 2^4 + 4^3 + 4^3 \qquad = 22 + 24 + 24 + 24 + 43 + 43$$
$$:= 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 4^3 \qquad = 23 + 23 + 26 + 32 + 33 + 43$$

$$182 := 2^2 + 2^4 + 2^6 + 2^6 + 3^2 + 5^2 \qquad = 22 + 24 + 26 + 26 + 32 + 52$$
$$:= 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 4^3 \qquad = 24 + 24 + 25 + 33 + 33 + 43$$

$$184 := 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 6^2 \qquad = 22 + 24 + 25 + 25 + 26 + 62$$
$$187 := 2^2 + 2^3 + 2^5 + 3^2 + 3^2 + 5^3 \qquad = 22 + 23 + 25 + 32 + 32 + 53$$

$$189 := 2^2 + 2^3 + 2^3 + 2^7 + 4^2 + 5^2 \qquad = 22 + 23 + 23 + 27 + 42 + 52$$
$$:= 2^2 + 2^3 + 2^6 + 3^4 + 4^2 + 4^2 \qquad = 22 + 23 + 26 + 34 + 42 + 42$$
$$:= 2^2 + 2^4 + 2^5 + 3^2 + 4^3 + 4^3 \qquad = 22 + 24 + 25 + 32 + 43 + 43$$
$$:= 2^2 + 2^4 + 2^7 + 3^2 + 4^2 + 4^2 \qquad = 22 + 24 + 27 + 32 + 42 + 42$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 4^2 + 5^3 \qquad = 23 + 23 + 24 + 24 + 42 + 53$$

$$191 := 2^2 + 2^6 + 2^6 + 3^3 + 4^2 + 4^2 \qquad = 22 + 26 + 26 + 33 + 42 + 42$$
$$:= 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 4^3 \qquad = 25 + 25 + 32 + 33 + 33 + 43$$

$$193 := 2^3 + 2^4 + 2^6 + 2^6 + 4^2 + 5^2 \qquad = 23 + 24 + 26 + 26 + 42 + 52$$

$$:= 2^3 + 2^5 + 2^5 + 2^5 + 4^3 + 5^2 \qquad = 23 + 25 + 25 + 25 + 43 + 52$$

$$\mathbf{196} := 2^2 + 2^2 + 3^3 + 3^4 + 4^2 + 4^3 \qquad = 22 + 22 + 33 + 34 + 42 + 43$$

$$\mathbf{198} := 2^2 + 2^2 + 2^6 + 3^2 + 3^4 + 6^2 \qquad = 22 + 22 + 26 + 32 + 34 + 62$$
$$:= 2^2 + 2^3 + 2^4 + 3^4 + 4^3 + 5^2 \qquad = 22 + 23 + 24 + 34 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^5 + 3^2 + 4^2 + 5^3 \qquad = 23 + 23 + 25 + 32 + 42 + 53$$
$$:= 2^3 + 2^3 + 3^3 + 3^3 + 4^3 + 4^3 \qquad = 23 + 23 + 33 + 33 + 43 + 43$$
$$:= 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 4^2 \qquad = 27 + 32 + 32 + 32 + 33 + 42$$
$$:= 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 \qquad = 32 + 33 + 33 + 33 + 33 + 34$$

$$\mathbf{200} := 2^2 + 2^4 + 2^6 + 3^3 + 4^3 + 5^2 \qquad = 22 + 24 + 26 + 33 + 43 + 52$$
$$:= 2^3 + 2^4 + 2^5 + 4^2 + 4^3 + 4^3 \qquad = 23 + 24 + 25 + 42 + 43 + 43$$
$$:= 2^3 + 2^4 + 2^7 + 4^2 + 4^2 + 4^2 \qquad = 23 + 24 + 27 + 42 + 42 + 42$$
$$:= 2^3 + 2^5 + 3^3 + 3^3 + 3^4 + 5^2 \qquad = 23 + 25 + 33 + 33 + 34 + 52$$

$$\mathbf{202} := 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 7^2 \qquad = 23 + 23 + 26 + 26 + 32 + 72$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 3^4 + 7^2 \qquad = 23 + 24 + 24 + 25 + 34 + 72$$
$$:= 2^4 + 2^5 + 2^5 + 3^4 + 4^2 + 5^2 \qquad = 24 + 25 + 25 + 34 + 42 + 52$$
$$:= 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 5^2 \qquad = 25 + 26 + 33 + 33 + 33 + 52$$

$$\mathbf{204} := 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 7^2 \qquad = 24 + 24 + 25 + 26 + 33 + 72$$

$$\mathbf{209} := 2^2 + 2^3 + 2^3 + 2^7 + 5^2 + 6^2 \qquad = 22 + 23 + 23 + 27 + 52 + 62$$
$$:= 2^2 + 2^3 + 2^6 + 3^4 + 4^2 + 6^2 \qquad = 22 + 23 + 26 + 34 + 42 + 62$$
$$:= 2^2 + 2^4 + 2^7 + 3^2 + 4^2 + 6^2 \qquad = 22 + 24 + 27 + 32 + 42 + 62$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 5^3 + 6^2 \qquad = 23 + 23 + 24 + 24 + 53 + 62$$
$$:= 2^4 + 2^4 + 3^4 + 4^2 + 4^2 + 4^3 \qquad = 24 + 24 + 34 + 42 + 42 + 43$$

$$\mathbf{211} := 2^2 + 2^6 + 2^6 + 3^3 + 4^2 + 6^2 \qquad = 22 + 26 + 26 + 33 + 42 + 62$$
$$:= 2^3 + 2^5 + 2^5 + 3^2 + 3^4 + 7^2 \qquad = 23 + 25 + 25 + 32 + 34 + 72$$

$$\mathbf{213} := 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 9^2 \qquad = 22 + 24 + 24 + 25 + 26 + 92$$
$$:= 2^3 + 2^4 + 2^6 + 2^6 + 5^2 + 6^2 \qquad = 23 + 24 + 26 + 26 + 52 + 62$$
$$:= 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 7^2 \qquad = 25 + 25 + 26 + 32 + 33 + 72$$

$$\mathbf{216} := 2^2 + 2^2 + 3^3 + 3^4 + 4^3 + 6^2 \qquad = 22 + 22 + 33 + 34 + 43 + 62$$

$$:= 2^2 + 2^3 + 3^3 + 3^3 + 5^2 + 5^3 \qquad = 22 + 23 + 33 + 33 + 52 + 53$$
$$:= 2^2 + 3^2 + 3^4 + 3^4 + 4^2 + 5^2 \qquad = 22 + 32 + 34 + 34 + 42 + 52$$

$$218 := 2^2 + 2^2 + 2^3 + 2^7 + 5^2 + 7^2 \qquad = 22 + 22 + 23 + 27 + 52 + 72$$
$$:= 2^2 + 2^2 + 2^6 + 3^4 + 4^2 + 7^2 \qquad = 22 + 22 + 26 + 34 + 42 + 72$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 5^3 + 7^2 \qquad = 22 + 23 + 24 + 24 + 53 + 72$$
$$:= 2^2 + 2^4 + 2^5 + 4^2 + 5^2 + 5^3 \qquad = 22 + 24 + 25 + 42 + 52 + 53$$
$$:= 2^2 + 2^7 + 3^2 + 3^3 + 5^2 + 5^2 \qquad = 22 + 27 + 32 + 33 + 52 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 3^4 + 4^3 + 7^2 \qquad = 23 + 23 + 23 + 34 + 43 + 72$$
$$:= 2^3 + 2^3 + 2^5 + 3^2 + 5^3 + 6^2 \qquad = 23 + 23 + 25 + 32 + 53 + 62$$
$$:= 2^4 + 2^4 + 3^2 + 3^3 + 5^2 + 5^3 \qquad = 24 + 24 + 32 + 33 + 52 + 53$$
$$:= 2^5 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 \qquad = 25 + 32 + 34 + 42 + 42 + 43$$
$$:= 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 6^2 \qquad = 27 + 32 + 32 + 32 + 33 + 62$$

$$220 := 2^2 + 2^3 + 2^4 + 2^6 + 4^3 + 8^2 \qquad = 22 + 23 + 24 + 26 + 43 + 82$$
$$:= 2^3 + 2^3 + 2^5 + 3^3 + 3^4 + 8^2 \qquad = 23 + 23 + 25 + 33 + 34 + 82$$
$$:= 2^3 + 2^3 + 2^6 + 3^3 + 4^3 + 7^2 \qquad = 23 + 23 + 26 + 33 + 43 + 72$$
$$:= 2^3 + 2^4 + 2^5 + 4^3 + 4^3 + 6^2 \qquad = 23 + 24 + 25 + 43 + 43 + 62$$
$$:= 2^3 + 2^4 + 2^7 + 4^2 + 4^2 + 6^2 \qquad = 23 + 24 + 27 + 42 + 42 + 62$$
$$:= 2^4 + 2^6 + 3^2 + 3^4 + 5^2 + 5^2 \qquad = 24 + 26 + 32 + 34 + 52 + 52$$

$$222 := 2^2 + 2^4 + 2^6 + 2^6 + 5^2 + 7^2 \qquad = 22 + 24 + 26 + 26 + 52 + 72$$
$$:= 2^2 + 2^5 + 2^5 + 2^6 + 3^2 + 9^2 \qquad = 22 + 25 + 25 + 26 + 32 + 92$$
$$:= 2^3 + 2^5 + 2^6 + 3^3 + 3^3 + 8^2 \qquad = 23 + 25 + 26 + 33 + 33 + 82$$
$$:= 2^4 + 2^5 + 2^5 + 3^4 + 5^2 + 6^2 \qquad = 24 + 25 + 25 + 34 + 52 + 62$$

$$224 := 2^4 + 2^5 + 2^5 + 2^6 + 4^2 + 8^2 \qquad = 24 + 25 + 25 + 26 + 42 + 82$$

$$225 := 2^2 + 2^2 + 4^3 + 4^3 + 4^3 + 5^2 \qquad = 22 + 22 + 43 + 43 + 43 + 52$$

$$227 := 2^2 + 2^3 + 2^5 + 3^2 + 5^3 + 7^2 \qquad = 22 + 23 + 25 + 32 + 53 + 72$$
$$:= 2^3 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 \qquad = 23 + 34 + 34 + 42 + 42 + 52$$
$$:= 2^4 + 3^3 + 3^3 + 4^2 + 4^2 + 5^3 \qquad = 24 + 33 + 33 + 42 + 42 + 53$$
$$:= 2^5 + 3^2 + 3^2 + 3^3 + 5^2 + 5^3 \qquad = 25 + 32 + 32 + 33 + 52 + 53$$

$$229 := 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 11^2 \qquad = 22 + 22 + 22 + 25 + 26 + 112$$
$$:= 2^2 + 2^3 + 2^3 + 2^6 + 4^3 + 9^2 \qquad = 22 + 23 + 23 + 26 + 43 + 92$$

$$:= 2^2 + 2^3 + 2^6 + 3^4 + 6^2 + 6^2 \qquad = 22 + 23 + 26 + 34 + 62 + 62$$

$$:= 2^2 + 2^4 + 2^5 + 4^3 + 4^3 + 7^2 \qquad = 22 + 24 + 25 + 43 + 43 + 72$$

$$:= 2^2 + 2^4 + 2^7 + 3^2 + 6^2 + 6^2 \qquad = 22 + 24 + 27 + 32 + 62 + 62$$

$$:= 2^2 + 2^4 + 2^7 + 4^2 + 4^2 + 7^2 \qquad = 22 + 24 + 27 + 42 + 42 + 72$$

$$:= 2^3 + 2^7 + 3^3 + 4^2 + 5^2 + 5^2 \qquad = 23 + 27 + 33 + 42 + 52 + 52$$

$$:= 2^4 + 2^4 + 3^4 + 4^2 + 4^3 + 6^2 \qquad = 24 + 24 + 34 + 42 + 43 + 62$$

$$:= 2^6 + 3^3 + 3^4 + 4^2 + 4^2 + 5^2 \qquad = 26 + 33 + 34 + 42 + 42 + 52$$

$$\mathbf{231} := 2^2 + 2^6 + 2^6 + 3^3 + 6^2 + 6^2 \qquad = 22 + 26 + 26 + 33 + 62 + 62$$

$$:= 2^5 + 2^5 + 3^3 + 3^3 + 4^3 + 7^2 \qquad = 25 + 25 + 33 + 33 + 43 + 72$$

$$\mathbf{233} := 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 11^2 \qquad = 23 + 23 + 25 + 25 + 25 + 112$$

$$:= 2^3 + 2^5 + 2^5 + 2^6 + 4^2 + 9^2 \qquad = 23 + 25 + 25 + 26 + 42 + 92$$

$$\mathbf{234} := 2^2 + 3^2 + 4^2 + 4^2 + 4^3 + 5^3 \qquad = 22 + 32 + 42 + 42 + 43 + 53$$

$$\mathbf{236} := 2^2 + 2^3 + 2^3 + 3^3 + 5^3 + 8^2 \qquad = 22 + 23 + 23 + 33 + 53 + 82$$

$$:= 2^2 + 3^2 + 3^4 + 3^4 + 5^2 + 6^2 \qquad = 22 + 32 + 34 + 34 + 52 + 62$$

$$\mathbf{238} := 2^2 + 2^2 + 2^6 + 3^4 + 6^2 + 7^2 \qquad = 22 + 22 + 26 + 34 + 62 + 72$$

$$:= 2^2 + 2^3 + 2^3 + 2^4 + 3^4 + 11^2 \qquad = 22 + 23 + 23 + 24 + 34 + 112$$

$$:= 2^2 + 2^3 + 2^7 + 3^2 + 5^2 + 8^2 \qquad = 22 + 23 + 27 + 32 + 52 + 82$$

$$:= 2^2 + 2^4 + 2^5 + 5^2 + 5^3 + 6^2 \qquad = 22 + 24 + 25 + 52 + 53 + 62$$

$$:= 2^2 + 2^6 + 3^2 + 3^4 + 4^2 + 8^2 \qquad = 22 + 26 + 32 + 34 + 42 + 82$$

$$:= 2^3 + 2^3 + 2^5 + 4^2 + 5^3 + 7^2 \qquad = 23 + 23 + 25 + 42 + 53 + 72$$

$$:= 2^3 + 2^4 + 2^4 + 3^2 + 5^3 + 8^2 \qquad = 23 + 24 + 24 + 32 + 53 + 82$$

$$:= 2^4 + 3^3 + 3^4 + 4^3 + 5^2 + 5^2 \qquad = 24 + 33 + 34 + 43 + 52 + 52$$

$$:= 2^5 + 3^2 + 3^4 + 4^2 + 4^3 + 6^2 \qquad = 25 + 32 + 34 + 42 + 43 + 62$$

$$:= 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 7^2 \qquad = 27 + 32 + 32 + 33 + 42 + 72$$

$$:= 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 7^2 \qquad = 33 + 33 + 33 + 33 + 34 + 72$$

$$\mathbf{240} := 2^2 + 2^3 + 2^4 + 2^6 + 3^3 + 11^2 \qquad = 22 + 23 + 24 + 26 + 33 + 112$$

$$:= 2^2 + 2^3 + 2^5 + 2^5 + 4^3 + 10^2 \qquad = 22 + 23 + 25 + 25 + 43 + 102$$

$$:= 2^2 + 2^5 + 2^5 + 3^3 + 4^3 + 9^2 \qquad = 22 + 25 + 25 + 33 + 43 + 92$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 12^2 \qquad = 23 + 23 + 23 + 23 + 26 + 122$$

$$:= 2^3 + 2^4 + 2^7 + 4^2 + 6^2 + 6^2 \qquad = 23 + 24 + 27 + 42 + 62 + 62$$

$$:= 2^4 + 2^4 + 2^4 + 4^3 + 4^3 + 8^2 \qquad = 24 + 24 + 24 + 43 + 43 + 82$$

$$242 := 2^3 + 2^3 + 2^6 + 2^6 + 7^2 + 7^2 \qquad = 23 + 23 + 26 + 26 + 72 + 72$$
$$:= 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 11^2 \qquad = 24 + 24 + 24 + 26 + 32 + 112$$
$$:= 2^4 + 2^6 + 2^6 + 3^2 + 5^2 + 8^2 \qquad = 24 + 26 + 26 + 32 + 52 + 82$$

$$244 := 2^4 + 2^5 + 2^5 + 2^6 + 6^2 + 8^2 \qquad = 24 + 25 + 25 + 26 + 62 + 82$$
$$:= 2^5 + 2^5 + 2^5 + 2^5 + 4^2 + 10^2 \qquad = 25 + 25 + 25 + 25 + 42 + 102$$

$$245 := 2^2 + 2^2 + 2^2 + 2^3 + 3^4 + 12^2 \qquad = 22 + 22 + 22 + 23 + 34 + 122$$
$$:= 2^3 + 4^2 + 4^2 + 4^2 + 4^3 + 5^3 \qquad = 23 + 42 + 42 + 42 + 43 + 53$$

$$247 := 2^2 + 2^2 + 2^2 + 2^6 + 3^3 + 12^2 \qquad = 22 + 22 + 22 + 26 + 33 + 122$$
$$:= 2^2 + 2^3 + 3^3 + 3^3 + 3^4 + 10^2 \qquad = 22 + 23 + 33 + 33 + 34 + 102$$
$$:= 2^2 + 2^7 + 3^2 + 3^2 + 4^2 + 9^2 \qquad = 22 + 27 + 32 + 32 + 42 + 92$$
$$:= 2^2 + 3^3 + 3^3 + 3^3 + 3^4 + 9^2 \qquad = 22 + 33 + 33 + 33 + 34 + 92$$
$$:= 2^3 + 2^3 + 2^4 + 3^2 + 5^3 + 9^2 \qquad = 23 + 23 + 24 + 32 + 53 + 92$$
$$:= 2^3 + 2^5 + 3^2 + 3^2 + 5^3 + 8^2 \qquad = 23 + 25 + 32 + 32 + 53 + 82$$
$$:= 2^3 + 3^4 + 3^4 + 4^2 + 5^2 + 6^2 \qquad = 23 + 34 + 34 + 42 + 52 + 62$$
$$:= 2^4 + 3^3 + 3^3 + 4^2 + 5^3 + 6^2 \qquad = 24 + 33 + 33 + 42 + 53 + 62$$

$$249 := 2^2 + 2^4 + 2^5 + 3^4 + 4^2 + 10^2 \qquad = 22 + 24 + 25 + 34 + 42 + 102$$
$$:= 2^2 + 2^4 + 2^7 + 4^2 + 6^2 + 7^2 \qquad = 22 + 24 + 27 + 42 + 62 + 72$$
$$:= 2^2 + 2^6 + 3^3 + 3^3 + 3^3 + 10^2 \qquad = 22 + 26 + 33 + 33 + 33 + 102$$
$$:= 2^3 + 2^3 + 2^7 + 4^2 + 5^2 + 8^2 \qquad = 23 + 23 + 27 + 42 + 52 + 82$$
$$:= 2^3 + 2^4 + 2^4 + 4^3 + 4^3 + 9^2 \qquad = 23 + 24 + 24 + 43 + 43 + 92$$
$$:= 2^3 + 2^6 + 3^4 + 4^2 + 4^2 + 8^2 \qquad = 23 + 26 + 34 + 42 + 42 + 82$$
$$:= 2^3 + 2^7 + 3^3 + 5^2 + 5^2 + 6^2 \qquad = 23 + 27 + 33 + 52 + 52 + 62$$
$$:= 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 10^2 \qquad = 24 + 24 + 32 + 33 + 34 + 102$$
$$:= 2^4 + 2^4 + 3^4 + 4^3 + 6^2 + 6^2 \qquad = 24 + 24 + 34 + 43 + 62 + 62$$
$$:= 2^4 + 2^5 + 3^2 + 4^3 + 4^3 + 8^2 \qquad = 24 + 25 + 32 + 43 + 43 + 82$$
$$:= 2^4 + 2^7 + 3^2 + 4^2 + 4^2 + 8^2 \qquad = 24 + 27 + 32 + 42 + 42 + 82$$
$$:= 2^6 + 3^3 + 3^4 + 4^2 + 5^2 + 6^2 \qquad = 26 + 33 + 34 + 42 + 52 + 62$$

$$251 := 2^3 + 2^3 + 2^5 + 2^5 + 3^3 + 12^2 \qquad = 23 + 23 + 25 + 25 + 33 + 122$$
$$:= 2^3 + 2^5 + 2^5 + 3^4 + 7^2 + 7^2 \qquad = 23 + 25 + 25 + 34 + 72 + 72$$
$$:= 2^3 + 2^6 + 2^6 + 3^2 + 5^2 + 9^2 \qquad = 23 + 26 + 26 + 32 + 52 + 92$$
$$:= 2^4 + 2^4 + 2^5 + 3^4 + 5^2 + 9^2 \qquad = 24 + 24 + 25 + 34 + 52 + 92$$

$$:= 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 11^2 \qquad = 24 + 25 + 26 + 32 + 32 + 112$$
$$:= 2^6 + 2^6 + 3^3 + 4^2 + 4^2 + 8^2 \qquad = 26 + 26 + 33 + 42 + 42 + 82$$

$$253 := 2^3 + 2^5 + 2^5 + 2^6 + 6^2 + 9^2 \qquad = 23 + 25 + 25 + 26 + 62 + 92$$
$$:= 2^4 + 2^4 + 2^5 + 2^6 + 5^2 + 10^2 \qquad = 24 + 24 + 25 + 26 + 52 + 102$$
$$:= 2^5 + 2^5 + 2^6 + 3^3 + 7^2 + 7^2 \qquad = 25 + 25 + 26 + 33 + 72 + 72$$

$$254 := 2^2 + 3^2 + 4^2 + 4^3 + 5^3 + 6^2 \qquad = 22 + 32 + 42 + 43 + 53 + 62$$

$$256 := 2^2 + 3^3 + 3^4 + 4^2 + 4^3 + 8^2 \qquad = 22 + 33 + 34 + 42 + 43 + 82$$
$$:= 2^2 + 3^4 + 3^4 + 4^2 + 5^2 + 7^2 \qquad = 22 + 34 + 34 + 42 + 52 + 72$$
$$:= 3^3 + 3^3 + 3^3 + 5^2 + 5^2 + 5^3 \qquad = 33 + 33 + 33 + 52 + 52 + 53$$

$$258 := 2^2 + 2^6 + 3^2 + 3^4 + 6^2 + 8^2 \qquad = 22 + 26 + 32 + 34 + 62 + 82$$
$$:= 2^2 + 2^7 + 3^3 + 5^2 + 5^2 + 7^2 \qquad = 22 + 27 + 33 + 52 + 52 + 72$$
$$:= 2^3 + 2^3 + 2^5 + 5^3 + 6^2 + 7^2 \qquad = 23 + 23 + 25 + 53 + 62 + 72$$
$$:= 2^3 + 2^4 + 3^4 + 4^3 + 5^2 + 8^2 \qquad = 23 + 24 + 34 + 43 + 52 + 82$$
$$:= 2^3 + 2^5 + 3^2 + 4^3 + 4^3 + 9^2 \qquad = 23 + 25 + 32 + 43 + 43 + 92$$
$$:= 2^3 + 2^7 + 3^2 + 4^2 + 4^2 + 9^2 \qquad = 23 + 27 + 32 + 42 + 42 + 92$$
$$:= 2^4 + 2^4 + 3^3 + 5^2 + 5^3 + 7^2 \qquad = 24 + 24 + 33 + 52 + 53 + 72$$
$$:= 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 10^2 \qquad = 25 + 32 + 32 + 33 + 34 + 102$$
$$:= 2^5 + 3^2 + 3^4 + 4^3 + 6^2 + 6^2 \qquad = 25 + 32 + 34 + 43 + 62 + 62$$
$$:= 2^5 + 3^4 + 4^2 + 4^2 + 4^3 + 7^2 \qquad = 25 + 34 + 42 + 42 + 43 + 72$$
$$:= 2^6 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 \qquad = 26 + 42 + 43 + 43 + 52 + 52$$
$$:= 2^7 + 3^2 + 3^2 + 3^3 + 6^2 + 7^2 \qquad = 27 + 32 + 32 + 33 + 62 + 72$$

$$260 := 2^2 + 2^4 + 2^4 + 2^6 + 4^2 + 12^2 \qquad = 22 + 24 + 24 + 26 + 42 + 122$$
$$:= 2^3 + 2^4 + 2^7 + 6^2 + 6^2 + 6^2 \qquad = 23 + 24 + 27 + 62 + 62 + 62$$
$$:= 2^4 + 2^4 + 2^4 + 3^3 + 4^3 + 11^2 \qquad = 24 + 24 + 24 + 33 + 43 + 112$$
$$:= 2^4 + 2^6 + 3^3 + 4^3 + 5^2 + 8^2 \qquad = 24 + 26 + 33 + 43 + 52 + 82$$
$$:= 2^4 + 2^6 + 3^4 + 5^2 + 5^2 + 7^2 \qquad = 24 + 26 + 34 + 52 + 52 + 72$$
$$:= 2^5 + 2^5 + 3^2 + 3^4 + 5^2 + 9^2 \qquad = 25 + 25 + 32 + 34 + 52 + 92$$
$$:= 2^5 + 2^7 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 25 + 27 + 52 + 52 + 52 + 52$$

$$262 := 2^2 + 2^5 + 2^5 + 2^6 + 7^2 + 9^2 \qquad = 22 + 25 + 25 + 26 + 72 + 92$$
$$:= 2^5 + 2^5 + 2^6 + 3^2 + 5^2 + 10^2 \qquad = 25 + 25 + 26 + 32 + 52 + 102$$

$$264 := 2^5 + 2^5 + 2^5 + 2^5 + 6^2 + 10^2 \qquad = 25 + 25 + 25 + 25 + 62 + 102$$

$$265 := 2^2 + 2^2 + 2^3 + 4^3 + 4^3 + 11^2 \qquad = 22 + 22 + 23 + 43 + 43 + 112$$
$$:= 2^2 + 2^2 + 2^4 + 4^2 + 5^3 + 10^2 \qquad = 22 + 22 + 24 + 42 + 53 + 102$$
$$:= 2^3 + 4^2 + 4^2 + 4^3 + 5^3 + 6^2 \qquad = 23 + 42 + 42 + 43 + 53 + 62$$

$$267 := 2^2 + 2^2 + 2^5 + 3^4 + 5^2 + 11^2 \qquad = 22 + 22 + 25 + 34 + 52 + 112$$
$$:= 2^2 + 2^2 + 2^7 + 5^2 + 5^2 + 9^2 \qquad = 22 + 22 + 27 + 52 + 52 + 92$$
$$:= 2^2 + 2^3 + 2^5 + 5^3 + 7^2 + 7^2 \qquad = 22 + 23 + 25 + 53 + 72 + 72$$
$$:= 2^2 + 2^4 + 2^4 + 5^2 + 5^3 + 9^2 \qquad = 22 + 24 + 24 + 52 + 53 + 92$$
$$:= 2^2 + 2^7 + 3^2 + 3^2 + 6^2 + 9^2 \qquad = 22 + 27 + 32 + 32 + 62 + 92$$
$$:= 2^3 + 2^3 + 3^4 + 4^3 + 5^2 + 9^2 \qquad = 23 + 23 + 34 + 43 + 52 + 92$$
$$:= 2^3 + 2^4 + 3^2 + 3^2 + 3^4 + 12^2 \qquad = 23 + 24 + 32 + 32 + 34 + 122$$
$$:= 2^3 + 3^4 + 3^4 + 5^2 + 6^2 + 6^2 \qquad = 23 + 34 + 34 + 52 + 62 + 62$$
$$:= 2^4 + 3^2 + 3^4 + 4^2 + 4^3 + 9^2 \qquad = 24 + 32 + 34 + 42 + 43 + 92$$
$$:= 2^4 + 3^3 + 3^3 + 5^3 + 6^2 + 6^2 \qquad = 24 + 33 + 33 + 53 + 62 + 62$$
$$:= 2^5 + 3^2 + 3^3 + 5^2 + 5^3 + 7^2 \qquad = 25 + 32 + 33 + 52 + 53 + 72$$

$$269 := 2^2 + 2^4 + 2^5 + 3^4 + 6^2 + 10^2 \qquad = 22 + 24 + 25 + 34 + 62 + 102$$
$$:= 2^2 + 2^4 + 2^7 + 6^2 + 6^2 + 7^2 \qquad = 22 + 24 + 27 + 62 + 62 + 72$$
$$:= 2^2 + 2^5 + 2^5 + 4^2 + 4^3 + 11^2 \qquad = 22 + 25 + 25 + 42 + 43 + 112$$
$$:= 2^2 + 2^5 + 2^6 + 3^2 + 4^2 + 12^2 \qquad = 22 + 25 + 26 + 32 + 42 + 122$$
$$:= 2^3 + 2^3 + 2^6 + 4^3 + 5^2 + 10^2 \qquad = 23 + 23 + 26 + 43 + 52 + 102$$
$$:= 2^3 + 2^3 + 2^7 + 5^2 + 6^2 + 8^2 \qquad = 23 + 23 + 27 + 52 + 62 + 82$$
$$:= 2^3 + 2^6 + 3^3 + 4^3 + 5^2 + 9^2 \qquad = 23 + 26 + 33 + 43 + 52 + 92$$
$$:= 2^3 + 2^6 + 3^4 + 4^2 + 6^2 + 8^2 \qquad = 23 + 26 + 34 + 42 + 62 + 82$$
$$:= 2^4 + 2^5 + 3^2 + 3^3 + 4^3 + 11^2 \qquad = 24 + 25 + 32 + 33 + 43 + 112$$
$$:= 2^4 + 2^6 + 3^2 + 3^2 + 3^3 + 12^2 \qquad = 24 + 26 + 32 + 32 + 33 + 122$$
$$:= 2^4 + 2^6 + 3^2 + 4^2 + 4^3 + 10^2 \qquad = 24 + 26 + 32 + 42 + 43 + 102$$
$$:= 2^4 + 2^7 + 3^2 + 4^2 + 6^2 + 8^2 \qquad = 24 + 27 + 32 + 42 + 62 + 82$$
$$:= 2^6 + 3^3 + 3^4 + 5^2 + 6^2 + 6^2 \qquad = 26 + 33 + 34 + 52 + 62 + 62$$

$$271 := 2^6 + 2^6 + 3^3 + 4^2 + 6^2 + 8^2 \qquad = 26 + 26 + 33 + 42 + 62 + 82$$
$$273 := 2^4 + 2^4 + 2^5 + 2^6 + 8^2 + 9^2 \qquad = 24 + 24 + 25 + 26 + 82 + 92$$

$$274 := 2^2 + 3^2 + 3^2 + 3^3 + 5^3 + 10^2 \qquad = 22 + 32 + 32 + 33 + 53 + 102$$
$$:= 2^2 + 3^2 + 4^3 + 5^3 + 6^2 + 6^2 \qquad = 22 + 32 + 43 + 53 + 62 + 62$$

$$:= 2^2 + 4^2 + 4^2 + 4^3 + 5^3 + 7^2 \qquad = 22 + 42 + 42 + 43 + 53 + 72$$

$$276 := 2^2 + 2^5 + 3^2 + 5^2 + 5^3 + 9^2 \qquad = 22 + 25 + 32 + 52 + 53 + 92$$
$$:= 2^2 + 3^3 + 3^3 + 3^4 + 4^2 + 11^2 \qquad = 22 + 33 + 33 + 34 + 42 + 112$$
$$:= 2^2 + 3^3 + 3^4 + 4^3 + 6^2 + 8^2 \qquad = 22 + 33 + 34 + 43 + 62 + 82$$
$$:= 2^2 + 3^4 + 3^4 + 5^2 + 6^2 + 7^2 \qquad = 22 + 34 + 34 + 52 + 62 + 72$$
$$:= 2^3 + 3^3 + 3^3 + 5^2 + 5^3 + 8^2 \qquad = 23 + 33 + 33 + 52 + 53 + 82$$
$$:= 3^2 + 3^4 + 3^4 + 4^2 + 5^2 + 8^2 \qquad = 32 + 34 + 34 + 42 + 52 + 82$$

$$278 := 2^2 + 2^3 + 2^7 + 5^2 + 7^2 + 8^2 \qquad = 22 + 23 + 27 + 52 + 72 + 82$$
$$:= 2^2 + 2^6 + 3^4 + 4^2 + 7^2 + 8^2 \qquad = 22 + 26 + 34 + 42 + 72 + 82$$
$$:= 2^3 + 2^4 + 2^4 + 5^3 + 7^2 + 8^2 \qquad = 23 + 24 + 24 + 53 + 72 + 82$$
$$:= 2^3 + 2^4 + 3^3 + 3^4 + 5^2 + 11^2 \qquad = 23 + 24 + 33 + 34 + 52 + 112$$
$$:= 2^3 + 2^7 + 3^2 + 4^2 + 6^2 + 9^2 \qquad = 23 + 27 + 32 + 42 + 62 + 92$$
$$:= 2^4 + 2^5 + 4^2 + 5^2 + 5^3 + 8^2 \qquad = 24 + 25 + 42 + 52 + 53 + 82$$
$$:= 2^5 + 3^4 + 4^2 + 4^3 + 6^2 + 7^2 \qquad = 25 + 34 + 42 + 43 + 62 + 72$$
$$:= 2^6 + 4^3 + 4^3 + 5^2 + 5^2 + 6^2 \qquad = 26 + 43 + 43 + 52 + 52 + 62$$
$$:= 2^7 + 3^2 + 3^3 + 4^2 + 7^2 + 7^2 \qquad = 27 + 32 + 33 + 42 + 72 + 72$$
$$:= 2^7 + 3^2 + 3^3 + 5^2 + 5^2 + 8^2 \qquad = 27 + 32 + 33 + 52 + 52 + 82$$

$$280 := 2^2 + 2^4 + 2^4 + 2^6 + 6^2 + 12^2 \qquad = 22 + 24 + 24 + 26 + 62 + 122$$
$$:= 2^3 + 2^4 + 2^6 + 4^3 + 8^2 + 8^2 \qquad = 23 + 24 + 26 + 43 + 82 + 82$$
$$:= 2^3 + 2^5 + 2^6 + 4^2 + 4^2 + 12^2 \qquad = 23 + 25 + 26 + 42 + 42 + 122$$
$$:= 2^4 + 2^6 + 3^3 + 3^3 + 5^2 + 11^2 \qquad = 24 + 26 + 33 + 33 + 52 + 112$$
$$:= 2^5 + 2^5 + 3^3 + 4^3 + 5^2 + 10^2 \qquad = 25 + 25 + 33 + 43 + 52 + 102$$

$$282 := 2^3 + 2^4 + 2^5 + 2^6 + 9^2 + 9^2 \qquad = 23 + 24 + 25 + 26 + 92 + 92$$
$$:= 2^4 + 2^4 + 2^4 + 2^6 + 7^2 + 11^2 \qquad = 24 + 24 + 24 + 26 + 72 + 112$$
$$:= 2^4 + 2^6 + 2^6 + 5^2 + 7^2 + 8^2 \qquad = 24 + 26 + 26 + 52 + 72 + 82$$
$$:= 2^5 + 2^5 + 2^6 + 3^2 + 8^2 + 9^2 \qquad = 25 + 25 + 26 + 32 + 82 + 92$$

$$283 := 2^2 + 2^2 + 2^2 + 5^2 + 5^3 + 11^2 \qquad = 22 + 22 + 22 + 52 + 53 + 112$$

$$285 := 2^2 + 2^2 + 2^4 + 5^3 + 6^2 + 10^2 \qquad = 22 + 22 + 24 + 53 + 62 + 102$$
$$:= 2^2 + 2^2 + 3^3 + 3^4 + 5^2 + 12^2 \qquad = 22 + 22 + 33 + 34 + 52 + 122$$
$$:= 2^2 + 4^3 + 4^3 + 4^3 + 5^2 + 8^2 \qquad = 22 + 43 + 43 + 43 + 52 + 82$$
$$:= 2^3 + 3^2 + 3^3 + 4^2 + 5^3 + 10^2 \qquad = 23 + 32 + 33 + 42 + 53 + 102$$

$$:= 2^3 + 4^2 + 4^3 + 5^3 + 6^2 + 6^2 \qquad = 23 + 42 + 43 + 53 + 62 + 62$$
$$:= 3^2 + 3^3 + 3^3 + 4^2 + 5^3 + 9^2 \qquad = 32 + 33 + 33 + 42 + 53 + 92$$

$$\mathbf{287} := 2^2 + 2^5 + 3^3 + 4^2 + 4^3 + 12^2 \qquad = 22 + 25 + 33 + 42 + 43 + 122$$
$$:= 2^2 + 2^6 + 3^2 + 4^3 + 5^2 + 11^2 \qquad = 22 + 26 + 32 + 43 + 52 + 112$$
$$:= 2^2 + 2^7 + 3^2 + 4^2 + 7^2 + 9^2 \qquad = 22 + 27 + 32 + 42 + 72 + 92$$
$$:= 2^3 + 2^3 + 2^4 + 5^3 + 7^2 + 9^2 \qquad = 23 + 23 + 24 + 53 + 72 + 92$$
$$:= 2^3 + 2^5 + 3^2 + 5^3 + 7^2 + 8^2 \qquad = 23 + 25 + 32 + 53 + 72 + 82$$
$$:= 2^3 + 2^5 + 4^2 + 5^2 + 5^3 + 9^2 \qquad = 23 + 25 + 42 + 52 + 53 + 92$$
$$:= 2^4 + 3^2 + 3^3 + 3^3 + 4^3 + 12^2 \qquad = 24 + 32 + 33 + 33 + 43 + 122$$
$$:= 2^4 + 3^2 + 3^4 + 4^3 + 6^2 + 9^2 \qquad = 24 + 32 + 34 + 43 + 62 + 92$$
$$:= 2^4 + 3^3 + 4^2 + 4^3 + 4^3 + 10^2 \qquad = 24 + 33 + 42 + 43 + 43 + 102$$
$$:= 2^7 + 3^2 + 3^2 + 4^2 + 5^2 + 10^2 \qquad = 27 + 32 + 32 + 42 + 52 + 102$$
$$:= 3^3 + 3^3 + 3^3 + 3^4 + 5^2 + 10^2 \qquad = 33 + 33 + 33 + 34 + 52 + 102$$

$$\mathbf{289} := 2^2 + 2^2 + 2^5 + 2^6 + 8^2 + 11^2 \qquad = 22 + 22 + 25 + 26 + 82 + 112$$
$$:= 2^2 + 2^5 + 2^5 + 4^3 + 6^2 + 11^2 \qquad = 22 + 25 + 25 + 43 + 62 + 112$$
$$:= 2^2 + 2^5 + 2^6 + 3^2 + 6^2 + 12^2 \qquad = 22 + 25 + 26 + 32 + 62 + 122$$
$$:= 2^3 + 2^3 + 2^6 + 4^3 + 8^2 + 9^2 \qquad = 23 + 23 + 26 + 43 + 82 + 92$$
$$:= 2^3 + 2^4 + 2^5 + 4^3 + 5^2 + 12^2 \qquad = 23 + 24 + 25 + 43 + 52 + 122$$
$$:= 2^3 + 2^6 + 3^4 + 6^2 + 6^2 + 8^2 \qquad = 23 + 26 + 34 + 62 + 62 + 82$$
$$:= 2^4 + 2^4 + 3^3 + 3^4 + 7^2 + 10^2 \qquad = 24 + 24 + 33 + 34 + 72 + 102$$
$$:= 2^4 + 2^5 + 4^3 + 4^3 + 7^2 + 8^2 \qquad = 24 + 25 + 43 + 43 + 72 + 82$$
$$:= 2^4 + 2^6 + 3^2 + 4^3 + 6^2 + 10^2 \qquad = 24 + 26 + 32 + 43 + 62 + 102$$
$$:= 2^4 + 2^7 + 3^2 + 6^2 + 6^2 + 8^2 \qquad = 24 + 27 + 32 + 62 + 62 + 82$$
$$:= 2^4 + 2^7 + 4^2 + 4^2 + 7^2 + 8^2 \qquad = 24 + 27 + 42 + 42 + 72 + 82$$

$$\mathbf{291} := 2^3 + 2^6 + 2^6 + 5^2 + 7^2 + 9^2 \qquad = 23 + 26 + 26 + 52 + 72 + 92$$
$$:= 2^4 + 2^5 + 2^6 + 3^2 + 7^2 + 11^2 \qquad = 24 + 25 + 26 + 32 + 72 + 112$$
$$:= 2^6 + 2^6 + 3^3 + 6^2 + 6^2 + 8^2 \qquad = 26 + 26 + 33 + 62 + 62 + 82$$

$$\mathbf{293} := 2^4 + 2^5 + 2^5 + 2^5 + 9^2 + 10^2 \qquad = 24 + 25 + 25 + 25 + 92 + 102$$

$$\mathbf{294} := 2^2 + 3^2 + 3^2 + 4^3 + 4^3 + 12^2 \qquad = 22 + 32 + 32 + 43 + 43 + 122$$
$$:= 2^2 + 4^2 + 4^3 + 5^3 + 6^2 + 7^2 \qquad = 22 + 42 + 43 + 53 + 62 + 72$$
$$:= 3^2 + 4^2 + 4^2 + 4^3 + 5^3 + 8^2 \qquad = 32 + 42 + 42 + 43 + 53 + 82$$

$$296 := 2^2 + 3^3 + 3^3 + 3^4 + 6^2 + 11^2 \qquad = 22 + 33 + 33 + 34 + 62 + 112$$
$$:= 2^3 + 2^3 + 3^3 + 5^3 + 8^2 + 8^2 \qquad = 23 + 23 + 33 + 53 + 82 + 82$$
$$:= 3^2 + 3^4 + 3^4 + 5^2 + 6^2 + 8^2 \qquad = 32 + 34 + 34 + 52 + 62 + 82$$

$$298 := 2^2 + 2^4 + 2^4 + 3^4 + 9^2 + 10^2 \qquad = 22 + 24 + 24 + 34 + 92 + 102$$
$$:= 2^2 + 2^6 + 3^4 + 6^2 + 7^2 + 8^2 \qquad = 22 + 26 + 34 + 62 + 72 + 82$$
$$:= 2^3 + 2^3 + 2^4 + 3^4 + 8^2 + 11^2 \qquad = 23 + 23 + 24 + 34 + 82 + 112$$
$$:= 2^3 + 2^5 + 4^3 + 4^3 + 7^2 + 9^2 \qquad = 23 + 25 + 43 + 43 + 72 + 92$$
$$:= 2^3 + 2^6 + 4^2 + 4^3 + 5^2 + 11^2 \qquad = 23 + 26 + 42 + 43 + 52 + 112$$
$$:= 2^3 + 2^7 + 3^2 + 5^2 + 8^2 + 8^2 \qquad = 23 + 27 + 32 + 52 + 82 + 82$$
$$:= 2^3 + 2^7 + 3^2 + 6^2 + 6^2 + 9^2 \qquad = 23 + 27 + 32 + 62 + 62 + 92$$
$$:= 2^3 + 2^7 + 4^2 + 4^2 + 7^2 + 9^2 \qquad = 23 + 27 + 42 + 42 + 72 + 92$$
$$:= 2^4 + 2^4 + 3^4 + 4^2 + 5^2 + 12^2 \qquad = 24 + 24 + 34 + 42 + 52 + 122$$
$$:= 2^4 + 2^5 + 5^2 + 5^3 + 6^2 + 8^2 \qquad = 24 + 25 + 52 + 53 + 62 + 82$$
$$:= 2^5 + 3^2 + 3^3 + 3^4 + 7^2 + 10^2 \qquad = 25 + 32 + 33 + 34 + 72 + 102$$
$$:= 2^5 + 3^4 + 4^3 + 6^2 + 6^2 + 7^2 \qquad = 25 + 34 + 43 + 62 + 62 + 72$$
$$:= 2^6 + 3^2 + 3^4 + 4^2 + 8^2 + 8^2 \qquad = 26 + 32 + 34 + 42 + 82 + 82$$
$$:= 2^7 + 3^2 + 3^3 + 6^2 + 7^2 + 7^2 \qquad = 27 + 32 + 33 + 62 + 72 + 72$$

$$300 := 2^2 + 2^4 + 2^4 + 2^6 + 10^2 + 10^2 \qquad = 22 + 24 + 24 + 26 + 102 + 102$$
$$:= 2^3 + 2^4 + 2^6 + 3^3 + 8^2 + 11^2 \qquad = 23 + 24 + 26 + 33 + 82 + 112$$
$$:= 2^3 + 2^5 + 2^5 + 4^3 + 8^2 + 10^2 \qquad = 23 + 25 + 25 + 43 + 82 + 102$$
$$:= 2^3 + 2^5 + 2^6 + 4^2 + 6^2 + 12^2 \qquad = 23 + 25 + 26 + 42 + 62 + 122$$
$$:= 2^5 + 2^5 + 3^3 + 4^3 + 8^2 + 9^2 \qquad = 25 + 25 + 33 + 43 + 82 + 92$$
$$:= 2^5 + 2^5 + 3^4 + 5^2 + 7^2 + 9^2 \qquad = 25 + 25 + 34 + 52 + 72 + 92$$

$$302 := 2^5 + 2^5 + 2^6 + 5^2 + 7^2 + 10^2 \qquad = 25 + 25 + 26 + 52 + 72 + 102$$

$$305 := 2^2 + 2^2 + 2^3 + 3^4 + 8^2 + 12^2 \qquad = 22 + 22 + 23 + 34 + 82 + 122$$
$$:= 2^2 + 3^3 + 4^3 + 4^3 + 5^2 + 11^2 \qquad = 22 + 33 + 43 + 43 + 52 + 112$$
$$:= 2^3 + 3^2 + 3^3 + 5^3 + 6^2 + 10^2 \qquad = 23 + 32 + 33 + 53 + 62 + 102$$
$$:= 2^3 + 3^2 + 4^2 + 4^3 + 4^3 + 12^2 \qquad = 23 + 32 + 42 + 43 + 43 + 122$$
$$:= 2^3 + 4^3 + 5^3 + 6^2 + 6^2 + 6^2 \qquad = 23 + 43 + 53 + 62 + 62 + 62$$
$$:= 2^4 + 3^2 + 3^2 + 5^2 + 5^3 + 11^2 \qquad = 24 + 32 + 32 + 52 + 53 + 112$$
$$:= 3^2 + 3^3 + 3^3 + 5^3 + 6^2 + 9^2 \qquad = 32 + 33 + 33 + 53 + 62 + 92$$
$$:= 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 9^2 \qquad = 42 + 42 + 43 + 43 + 43 + 92$$

$$307 := 2^2 + 2^2 + 2^6 + 3^3 + 8^2 + 12^2 \qquad = 22 + 22 + 26 + 33 + 82 + 122$$
$$:= 2^2 + 2^5 + 3^2 + 3^4 + 9^2 + 10^2 \qquad = 22 + 25 + 32 + 34 + 92 + 102$$
$$:= 2^2 + 2^5 + 3^3 + 4^3 + 6^2 + 12^2 \qquad = 22 + 25 + 33 + 43 + 62 + 122$$
$$:= 2^2 + 2^7 + 3^2 + 6^2 + 7^2 + 9^2 \qquad = 22 + 27 + 32 + 62 + 72 + 92$$
$$:= 2^2 + 2^7 + 5^2 + 5^2 + 5^2 + 10^2 \qquad = 22 + 27 + 52 + 52 + 52 + 102$$
$$:= 2^3 + 2^3 + 2^3 + 3^4 + 9^2 + 11^2 \qquad = 23 + 23 + 23 + 34 + 92 + 112$$
$$:= 2^3 + 2^4 + 3^2 + 3^4 + 7^2 + 12^2 \qquad = 23 + 24 + 32 + 34 + 72 + 122$$
$$:= 2^3 + 2^5 + 5^2 + 5^3 + 6^2 + 9^2 \qquad = 23 + 25 + 52 + 53 + 62 + 92$$
$$:= 2^3 + 3^3 + 3^3 + 3^4 + 8^2 + 10^2 \qquad = 23 + 33 + 33 + 34 + 82 + 102$$
$$:= 2^4 + 2^4 + 5^2 + 5^2 + 5^3 + 10^2 \qquad = 24 + 24 + 52 + 52 + 53 + 102$$
$$:= 2^4 + 3^3 + 4^3 + 4^3 + 6^2 + 10^2 \qquad = 24 + 33 + 43 + 43 + 62 + 102$$
$$:= 2^4 + 3^4 + 4^2 + 4^3 + 7^2 + 9^2 \qquad = 24 + 34 + 42 + 43 + 72 + 92$$
$$:= 2^5 + 3^2 + 3^4 + 4^2 + 5^2 + 12^2 \qquad = 25 + 32 + 34 + 42 + 52 + 122$$
$$:= 2^5 + 3^3 + 5^2 + 5^3 + 7^2 + 7^2 \qquad = 25 + 33 + 52 + 53 + 72 + 72$$
$$:= 2^7 + 3^2 + 3^2 + 4^2 + 8^2 + 9^2 \qquad = 27 + 32 + 32 + 42 + 82 + 92$$
$$:= 2^7 + 3^2 + 3^2 + 5^2 + 6^2 + 10^2 \qquad = 27 + 32 + 32 + 52 + 62 + 102$$
$$:= 3^3 + 3^3 + 3^3 + 3^4 + 8^2 + 9^2 \qquad = 33 + 33 + 33 + 34 + 82 + 92$$

$$309 := 2^2 + 2^5 + 2^6 + 3^2 + 10^2 + 10^2 \qquad = 22 + 25 + 26 + 32 + 102 + 102$$
$$:= 2^2 + 2^5 + 2^6 + 4^2 + 7^2 + 12^2 \qquad = 22 + 25 + 26 + 42 + 72 + 122$$
$$:= 2^3 + 2^3 + 2^3 + 2^6 + 10^2 + 11^2 \qquad = 23 + 23 + 23 + 26 + 102 + 112$$
$$:= 2^3 + 2^3 + 2^6 + 3^3 + 9^2 + 11^2 \qquad = 23 + 23 + 26 + 33 + 92 + 112$$
$$:= 2^4 + 2^5 + 3^3 + 4^3 + 7^2 + 11^2 \qquad = 24 + 25 + 33 + 43 + 72 + 112$$
$$:= 2^4 + 2^5 + 3^4 + 4^2 + 8^2 + 10^2 \qquad = 24 + 25 + 34 + 42 + 82 + 102$$
$$:= 2^4 + 2^6 + 3^2 + 3^3 + 7^2 + 12^2 \qquad = 24 + 26 + 32 + 33 + 72 + 122$$
$$:= 2^4 + 2^6 + 4^2 + 4^3 + 7^2 + 10^2 \qquad = 24 + 26 + 42 + 43 + 72 + 102$$
$$:= 2^4 + 2^7 + 4^2 + 6^2 + 7^2 + 8^2 \qquad = 24 + 27 + 42 + 62 + 72 + 82$$
$$:= 2^6 + 3^3 + 3^3 + 3^3 + 8^2 + 10^2 \qquad = 26 + 33 + 33 + 33 + 82 + 102$$

$$314 := 2^2 + 2^2 + 2^2 + 3^4 + 10^2 + 11^2 \qquad = 22 + 22 + 22 + 34 + 102 + 112$$
$$:= 2^2 + 3^2 + 3^3 + 5^3 + 7^2 + 10^2 \qquad = 22 + 32 + 33 + 53 + 72 + 102$$
$$:= 2^2 + 4^3 + 5^3 + 6^2 + 6^2 + 7^2 \qquad = 22 + 43 + 53 + 62 + 62 + 72$$
$$:= 3^2 + 3^3 + 4^2 + 4^2 + 5^3 + 11^2 \qquad = 32 + 33 + 42 + 42 + 53 + 112$$
$$:= 3^2 + 4^2 + 4^3 + 5^3 + 6^2 + 8^2 \qquad = 32 + 42 + 43 + 53 + 62 + 82$$

$$316 := 2^2 + 2^5 + 5^2 + 5^3 + 7^2 + 9^2 \qquad = 22 + 25 + 52 + 53 + 72 + 92$$
$$:= 2^5 + 3^2 + 5^2 + 5^2 + 5^3 + 10^2 \qquad = 25 + 32 + 52 + 52 + 53 + 102$$

$$:= 3^3 + 3^4 + 4^2 + 4^3 + 8^2 + 8^2 \qquad = 33 + 34 + 42 + 43 + 82 + 82$$
$$:= 3^4 + 3^4 + 4^2 + 5^2 + 7^2 + 8^2 \qquad = 34 + 34 + 42 + 52 + 72 + 82$$

$$\mathbf{318} := 2^2 + 2^4 + 2^5 + 4^3 + 9^2 + 11^2 \qquad = 22 + 24 + 25 + 43 + 92 + 112$$
$$:= 2^2 + 2^4 + 2^6 + 3^2 + 9^2 + 12^2 \qquad = 22 + 24 + 26 + 32 + 92 + 122$$
$$:= 2^3 + 2^5 + 3^4 + 4^2 + 9^2 + 10^2 \qquad = 23 + 25 + 34 + 42 + 92 + 102$$
$$:= 2^3 + 2^6 + 4^3 + 5^2 + 6^2 + 11^2 \qquad = 23 + 26 + 43 + 52 + 62 + 112$$
$$:= 2^3 + 2^7 + 4^2 + 6^2 + 7^2 + 9^2 \qquad = 23 + 27 + 42 + 62 + 72 + 92$$
$$:= 2^4 + 2^4 + 3^4 + 5^2 + 6^2 + 12^2 \qquad = 24 + 24 + 34 + 52 + 62 + 122$$
$$:= 2^5 + 3^3 + 3^4 + 4^2 + 9^2 + 9^2 \qquad = 25 + 33 + 34 + 42 + 92 + 92$$
$$:= 2^6 + 3^2 + 3^4 + 6^2 + 8^2 + 8^2 \qquad = 26 + 32 + 34 + 62 + 82 + 82$$
$$:= 2^7 + 3^3 + 4^2 + 7^2 + 7^2 + 7^2 \qquad = 27 + 33 + 42 + 72 + 72 + 72$$
$$:= 2^7 + 3^3 + 5^2 + 5^2 + 7^2 + 8^2 \qquad = 27 + 33 + 52 + 52 + 72 + 82$$

$$\mathbf{320} := 2^3 + 2^5 + 2^5 + 3^3 + 10^2 + 11^2 \qquad = 23 + 25 + 25 + 33 + 102 + 112$$
$$:= 2^3 + 2^5 + 2^6 + 4^2 + 10^2 + 10^2 \qquad = 23 + 25 + 26 + 42 + 102 + 102$$
$$:= 2^3 + 2^5 + 2^6 + 6^2 + 6^2 + 12^2 \qquad = 23 + 25 + 26 + 62 + 62 + 122$$
$$:= 2^4 + 2^4 + 2^6 + 4^2 + 8^2 + 12^2 \qquad = 24 + 24 + 26 + 42 + 82 + 122$$
$$:= 2^5 + 2^5 + 3^3 + 3^3 + 9^2 + 11^2 \qquad = 25 + 25 + 33 + 33 + 92 + 112$$
$$:= 2^5 + 2^6 + 3^3 + 4^2 + 9^2 + 10^2 \qquad = 25 + 26 + 33 + 42 + 92 + 102$$

$$\mathbf{322} := 2^5 + 2^5 + 2^6 + 7^2 + 8^2 + 9^2 \qquad = 25 + 25 + 26 + 72 + 82 + 92$$

$$\mathbf{323} := 2^2 + 2^2 + 3^2 + 5^3 + 9^2 + 10^2 \qquad = 22 + 22 + 32 + 53 + 92 + 102$$
$$:= 2^2 + 3^2 + 4^2 + 5^2 + 5^3 + 12^2 \qquad = 22 + 32 + 42 + 52 + 53 + 122$$

$$\mathbf{325} := 2^2 + 2^3 + 4^3 + 4^3 + 8^2 + 11^2 \qquad = 22 + 23 + 43 + 43 + 82 + 112$$
$$:= 2^2 + 2^4 + 4^2 + 5^3 + 8^2 + 10^2 \qquad = 22 + 24 + 42 + 53 + 82 + 102$$
$$:= 2^3 + 3^2 + 4^3 + 4^3 + 6^2 + 12^2 \qquad = 23 + 32 + 43 + 43 + 62 + 122$$
$$:= 2^3 + 3^3 + 4^2 + 5^3 + 7^2 + 10^2 \qquad = 23 + 33 + 42 + 53 + 72 + 102$$
$$:= 3^2 + 3^2 + 3^4 + 4^3 + 9^2 + 9^2 \qquad = 32 + 32 + 34 + 43 + 92 + 92$$
$$:= 3^2 + 3^4 + 4^3 + 5^2 + 5^2 + 11^2 \qquad = 32 + 34 + 43 + 52 + 52 + 112$$
$$:= 3^3 + 3^3 + 4^2 + 5^3 + 7^2 + 9^2 \qquad = 33 + 33 + 42 + 53 + 72 + 92$$
$$:= 4^2 + 4^3 + 4^3 + 4^3 + 6^2 + 9^2 \qquad = 42 + 43 + 43 + 43 + 62 + 92$$

$$\mathbf{327} := 2^2 + 2^3 + 2^6 + 3^2 + 11^2 + 11^2 \qquad = 22 + 23 + 26 + 32 + 112 + 112$$
$$:= 2^2 + 2^5 + 3^3 + 4^3 + 10^2 + 10^2 \qquad = 22 + 25 + 33 + 43 + 102 + 102$$

$$:= 2^2 + 2^5 + 3^4 + 5^2 + 8^2 + 11^2 \qquad = 22 + 25 + 34 + 52 + 82 + 112$$

$$:= 2^2 + 2^6 + 4^3 + 5^2 + 7^2 + 11^2 \qquad = 22 + 26 + 43 + 52 + 72 + 112$$

$$:= 2^2 + 2^7 + 4^2 + 7^2 + 7^2 + 9^2 \qquad = 22 + 27 + 42 + 72 + 72 + 92$$

$$:= 2^2 + 2^7 + 5^2 + 5^2 + 8^2 + 9^2 \qquad = 22 + 27 + 52 + 52 + 82 + 92$$

$$:= 2^3 + 2^5 + 5^3 + 7^2 + 7^2 + 8^2 \qquad = 23 + 25 + 53 + 72 + 72 + 82$$

$$:= 2^4 + 2^4 + 5^2 + 5^3 + 8^2 + 9^2 \qquad = 24 + 24 + 52 + 53 + 82 + 92$$

$$:= 2^4 + 3^3 + 3^3 + 4^3 + 7^2 + 12^2 \qquad = 24 + 33 + 33 + 43 + 72 + 122$$

$$:= 2^4 + 3^4 + 4^3 + 6^2 + 7^2 + 9^2 \qquad = 24 + 34 + 43 + 62 + 72 + 92$$

$$:= 2^5 + 3^2 + 3^4 + 5^2 + 6^2 + 12^2 \qquad = 25 + 32 + 34 + 52 + 62 + 122$$

$$:= 2^6 + 3^2 + 3^2 + 4^3 + 9^2 + 10^2 \qquad = 26 + 32 + 32 + 43 + 92 + 102$$

$$:= 2^7 + 3^2 + 3^2 + 6^2 + 8^2 + 9^2 \qquad = 27 + 32 + 32 + 62 + 82 + 92$$

$$:= 2^7 + 3^2 + 4^2 + 5^2 + 7^2 + 10^2 \qquad = 27 + 32 + 42 + 52 + 72 + 102$$

$$\mathbf{329} := 2^2 + 2^5 + 2^6 + 6^2 + 7^2 + 12^2 \qquad = 22 + 25 + 26 + 62 + 72 + 122$$

$$:= 2^3 + 2^3 + 2^4 + 2^5 + 11^2 + 12^2 \qquad = 23 + 23 + 24 + 25 + 112 + 122$$

$$:= 2^3 + 2^4 + 2^6 + 4^2 + 9^2 + 12^2 \qquad = 23 + 24 + 26 + 42 + 92 + 122$$

$$:= 2^4 + 2^5 + 3^4 + 6^2 + 8^2 + 10^2 \qquad = 24 + 25 + 34 + 62 + 82 + 102$$

$$:= 2^4 + 2^6 + 4^3 + 6^2 + 7^2 + 10^2 \qquad = 24 + 26 + 43 + 62 + 72 + 102$$

$$:= 2^4 + 2^7 + 6^2 + 6^2 + 7^2 + 8^2 \qquad = 24 + 27 + 62 + 62 + 72 + 82$$

$$:= 2^5 + 2^5 + 4^2 + 4^3 + 8^2 + 11^2 \qquad = 25 + 25 + 42 + 43 + 82 + 112$$

$$:= 2^5 + 2^6 + 3^2 + 4^2 + 8^2 + 12^2 \qquad = 25 + 26 + 32 + 42 + 82 + 122$$

$$\mathbf{331} := 2^4 + 2^5 + 2^6 + 7^2 + 7^2 + 11^2 \qquad = 24 + 25 + 26 + 72 + 72 + 112$$

$$\mathbf{334} := 2^2 + 2^3 + 4^2 + 5^3 + 9^2 + 10^2 \qquad = 22 + 23 + 42 + 53 + 92 + 102$$

$$:= 2^2 + 3^2 + 4^3 + 4^3 + 7^2 + 12^2 \qquad = 22 + 32 + 43 + 43 + 72 + 122$$

$$:= 2^2 + 3^3 + 4^2 + 5^3 + 9^2 + 9^2 \qquad = 22 + 33 + 42 + 53 + 92 + 92$$

$$:= 2^3 + 4^2 + 4^2 + 5^2 + 5^3 + 12^2 \qquad = 23 + 42 + 42 + 52 + 53 + 122$$

$$:= 3^2 + 3^2 + 3^3 + 5^3 + 8^2 + 10^2 \qquad = 32 + 32 + 33 + 53 + 82 + 102$$

$$:= 3^2 + 3^3 + 4^2 + 5^3 + 6^2 + 11^2 \qquad = 32 + 33 + 42 + 53 + 62 + 112$$

$$:= 3^2 + 4^3 + 5^3 + 6^2 + 6^2 + 8^2 \qquad = 32 + 43 + 53 + 62 + 62 + 82$$

$$:= 4^2 + 4^2 + 4^3 + 5^3 + 7^2 + 8^2 \qquad = 42 + 42 + 43 + 53 + 72 + 82$$

$$\mathbf{336} := 2^2 + 2^2 + 2^3 + 2^5 + 12^2 + 12^2 \qquad = 22 + 22 + 23 + 25 + 122 + 122$$

$$:= 2^2 + 2^3 + 2^4 + 4^3 + 10^2 + 12^2 \qquad = 22 + 23 + 24 + 43 + 102 + 122$$

$$:= 2^2 + 2^4 + 3^3 + 4^3 + 9^2 + 12^2 \qquad = 22 + 24 + 33 + 43 + 92 + 122$$

$$:= 2^3 + 2^4 + 5^2 + 5^3 + 9^2 + 9^2 \qquad = 23 + 24 + 52 + 53 + 92 + 92$$

$$:= 2^4 + 3^2 + 3^2 + 3^4 + 10^2 + 11^2 \qquad = 24 + 32 + 32 + 34 + 102 + 112$$
$$:= 2^5 + 3^2 + 5^2 + 5^3 + 8^2 + 9^2 \qquad = 25 + 32 + 52 + 53 + 82 + 92$$
$$:= 3^3 + 3^3 + 3^4 + 4^2 + 8^2 + 11^2 \qquad = 33 + 33 + 34 + 42 + 82 + 112$$
$$:= 3^3 + 3^4 + 4^3 + 6^2 + 8^2 + 8^2 \qquad = 33 + 34 + 43 + 62 + 82 + 82$$
$$:= 3^4 + 3^4 + 5^2 + 6^2 + 7^2 + 8^2 \qquad = 34 + 34 + 52 + 62 + 72 + 82$$

$$338 := 2^3 + 2^3 + 2^6 + 4^2 + 11^2 + 11^2 \qquad = 23 + 23 + 26 + 42 + 112 + 112$$
$$:= 2^3 + 2^5 + 3^3 + 3^3 + 10^2 + 12^2 \qquad = 23 + 25 + 33 + 33 + 102 + 122$$
$$:= 2^3 + 2^5 + 3^4 + 6^2 + 9^2 + 10^2 \qquad = 23 + 25 + 34 + 62 + 92 + 102$$
$$:= 2^3 + 2^7 + 5^2 + 7^2 + 8^2 + 8^2 \qquad = 23 + 27 + 52 + 72 + 82 + 82$$
$$:= 2^3 + 2^7 + 6^2 + 6^2 + 7^2 + 9^2 \qquad = 23 + 27 + 62 + 62 + 72 + 92$$
$$:= 2^4 + 2^4 + 3^4 + 5^2 + 10^2 + 10^2 \qquad = 24 + 24 + 34 + 52 + 102 + 102$$
$$:= 2^5 + 3^3 + 3^3 + 3^3 + 9^2 + 12^2 \qquad = 25 + 33 + 33 + 33 + 92 + 122$$
$$:= 2^5 + 3^3 + 3^4 + 6^2 + 9^2 + 9^2 \qquad = 25 + 33 + 34 + 62 + 92 + 92$$
$$:= 2^5 + 3^3 + 3^4 + 7^2 + 7^2 + 10^2 \qquad = 25 + 33 + 34 + 72 + 72 + 102$$
$$:= 2^6 + 3^4 + 4^2 + 7^2 + 8^2 + 8^2 \qquad = 26 + 34 + 42 + 72 + 82 + 82$$
$$:= 2^7 + 3^3 + 6^2 + 7^2 + 7^2 + 7^2 \qquad = 27 + 33 + 62 + 72 + 72 + 72$$

$$340 := 2^3 + 2^5 + 2^6 + 6^2 + 10^2 + 10^2 \qquad = 23 + 25 + 26 + 62 + 102 + 102$$
$$:= 2^4 + 2^4 + 2^6 + 6^2 + 8^2 + 12^2 \qquad = 24 + 24 + 26 + 62 + 82 + 122$$
$$:= 2^4 + 2^5 + 2^5 + 4^2 + 10^2 + 12^2 \qquad = 24 + 25 + 25 + 42 + 102 + 122$$
$$:= 2^5 + 2^6 + 3^3 + 6^2 + 9^2 + 10^2 \qquad = 25 + 26 + 33 + 62 + 92 + 102$$
$$:= 2^6 + 2^6 + 5^2 + 5^2 + 9^2 + 9^2 \qquad = 26 + 26 + 52 + 52 + 92 + 92$$

$$343 := 2^2 + 2^2 + 5^2 + 5^3 + 8^2 + 11^2 \qquad = 22 + 22 + 52 + 53 + 82 + 112$$
$$:= 2^2 + 3^2 + 5^2 + 5^3 + 6^2 + 12^2 \qquad = 22 + 32 + 52 + 53 + 62 + 122$$

$$345 := 2^2 + 2^3 + 3^3 + 4^3 + 11^2 + 11^2 \qquad = 22 + 23 + 33 + 43 + 112 + 112$$
$$:= 2^2 + 2^4 + 5^3 + 6^2 + 8^2 + 10^2 \qquad = 22 + 24 + 53 + 62 + 82 + 102$$
$$:= 2^2 + 3^3 + 3^4 + 5^2 + 8^2 + 12^2 \qquad = 22 + 33 + 34 + 52 + 82 + 122$$
$$:= 2^3 + 3^2 + 4^3 + 4^3 + 10^2 + 10^2 \qquad = 23 + 32 + 43 + 43 + 102 + 102$$
$$:= 2^3 + 3^3 + 5^3 + 6^2 + 7^2 + 10^2 \qquad = 23 + 33 + 53 + 62 + 72 + 102$$
$$:= 2^3 + 4^2 + 4^3 + 4^3 + 7^2 + 12^2 \qquad = 23 + 42 + 43 + 43 + 72 + 122$$
$$:= 2^4 + 3^2 + 5^2 + 5^3 + 7^2 + 11^2 \qquad = 24 + 32 + 52 + 53 + 72 + 112$$
$$:= 3^2 + 3^3 + 4^3 + 4^3 + 9^2 + 10^2 \qquad = 32 + 33 + 43 + 43 + 92 + 102$$
$$:= 3^3 + 3^3 + 5^3 + 6^2 + 7^2 + 9^2 \qquad = 33 + 33 + 53 + 62 + 72 + 92$$
$$:= 4^3 + 4^3 + 4^3 + 5^2 + 8^2 + 8^2 \qquad = 43 + 43 + 43 + 52 + 82 + 82$$

$$:= 4^3 + 4^3 + 4^3 + 6^2 + 6^2 + 9^2 \qquad = 43 + 43 + 43 + 62 + 62 + 92$$

$$347 := 2^2 + 2^5 + 3^4 + 7^2 + 9^2 + 10^2 \qquad = 22 + 25 + 34 + 72 + 92 + 102$$
$$:= 2^2 + 2^7 + 6^2 + 7^2 + 7^2 + 9^2 \qquad = 22 + 27 + 62 + 72 + 72 + 92$$
$$:= 2^3 + 2^3 + 2^4 + 3^3 + 12^2 + 12^2 \qquad = 23 + 23 + 24 + 33 + 122 + 122$$
$$:= 2^3 + 2^4 + 3^4 + 7^2 + 7^2 + 12^2 \qquad = 23 + 24 + 34 + 72 + 72 + 122$$
$$:= 2^4 + 2^4 + 3^2 + 4^3 + 11^2 + 11^2 \qquad = 24 + 24 + 32 + 43 + 112 + 112$$
$$:= 2^5 + 3^2 + 3^4 + 5^2 + 10^2 + 10^2 \qquad = 25 + 32 + 34 + 52 + 102 + 102$$
$$:= 2^5 + 3^3 + 4^2 + 4^3 + 8^2 + 12^2 \qquad = 25 + 33 + 42 + 43 + 82 + 122$$
$$:= 2^5 + 3^4 + 4^2 + 4^2 + 9^2 + 11^2 \qquad = 25 + 34 + 42 + 42 + 92 + 112$$
$$:= 2^5 + 3^4 + 4^2 + 5^2 + 7^2 + 12^2 \qquad = 25 + 34 + 42 + 52 + 72 + 122$$
$$:= 2^5 + 4^3 + 4^3 + 5^2 + 9^2 + 9^2 \qquad = 25 + 43 + 43 + 52 + 92 + 92$$
$$:= 2^6 + 3^2 + 4^3 + 5^2 + 8^2 + 11^2 \qquad = 26 + 32 + 43 + 52 + 82 + 112$$
$$:= 2^6 + 4^3 + 5^2 + 5^2 + 5^2 + 12^2 \qquad = 26 + 43 + 52 + 52 + 52 + 122$$
$$:= 2^7 + 3^2 + 4^2 + 7^2 + 8^2 + 9^2 \qquad = 27 + 32 + 42 + 72 + 82 + 92$$
$$:= 2^7 + 3^2 + 5^2 + 6^2 + 7^2 + 10^2 \qquad = 27 + 32 + 52 + 62 + 72 + 102$$
$$:= 2^7 + 4^2 + 4^2 + 5^2 + 9^2 + 9^2 \qquad = 27 + 42 + 42 + 52 + 92 + 92$$

$$349 := 2^2 + 2^5 + 2^6 + 7^2 + 10^2 + 10^2 \qquad = 22 + 25 + 26 + 72 + 102 + 102$$
$$:= 2^2 + 2^5 + 2^6 + 8^2 + 8^2 + 11^2 \qquad = 22 + 25 + 26 + 82 + 82 + 112$$
$$:= 2^3 + 2^4 + 2^6 + 6^2 + 9^2 + 12^2 \qquad = 23 + 24 + 26 + 62 + 92 + 122$$
$$:= 2^4 + 2^6 + 3^3 + 7^2 + 7^2 + 12^2 \qquad = 24 + 26 + 33 + 72 + 72 + 122$$
$$:= 2^5 + 2^5 + 3^3 + 4^2 + 11^2 + 11^2 \qquad = 25 + 25 + 33 + 42 + 112 + 112$$
$$:= 2^5 + 2^5 + 4^3 + 6^2 + 8^2 + 11^2 \qquad = 25 + 25 + 43 + 62 + 82 + 112$$
$$:= 2^5 + 2^6 + 3^2 + 6^2 + 8^2 + 12^2 \qquad = 25 + 26 + 32 + 62 + 82 + 122$$
$$:= 2^5 + 2^6 + 4^2 + 4^2 + 10^2 + 11^2 \qquad = 25 + 26 + 42 + 42 + 102 + 112$$

$$354 := 2^2 + 2^3 + 5^3 + 6^2 + 9^2 + 10^2 \qquad = 22 + 23 + 53 + 62 + 92 + 102$$
$$:= 2^2 + 3^2 + 3^4 + 4^2 + 10^2 + 12^2 \qquad = 22 + 32 + 34 + 42 + 102 + 122$$
$$:= 2^2 + 3^3 + 5^3 + 6^2 + 9^2 + 9^2 \qquad = 22 + 33 + 53 + 62 + 92 + 92$$
$$:= 2^2 + 3^3 + 5^3 + 7^2 + 7^2 + 10^2 \qquad = 22 + 33 + 53 + 72 + 72 + 102$$
$$:= 2^3 + 4^2 + 5^2 + 5^3 + 6^2 + 12^2 \qquad = 23 + 42 + 52 + 53 + 62 + 122$$
$$:= 3^2 + 3^2 + 4^3 + 4^3 + 8^2 + 12^2 \qquad = 32 + 32 + 43 + 43 + 82 + 122$$
$$:= 3^2 + 3^3 + 5^3 + 6^2 + 6^2 + 11^2 \qquad = 32 + 33 + 53 + 62 + 62 + 112$$
$$:= 3^3 + 4^2 + 4^2 + 5^3 + 7^2 + 11^2 \qquad = 33 + 42 + 42 + 53 + 72 + 112$$
$$:= 4^2 + 4^3 + 5^3 + 6^2 + 7^2 + 8^2 \qquad = 42 + 43 + 53 + 62 + 72 + 82$$

$$356 := 2^4 + 3^2 + 3^4 + 5^2 + 9^2 + 12^2 \qquad = 24 + 32 + 34 + 52 + 92 + 122$$
$$:= 2^5 + 3^2 + 3^2 + 4^3 + 11^2 + 11^2 \qquad = 25 + 32 + 32 + 43 + 112 + 112$$
$$:= 2^5 + 5^2 + 5^2 + 5^3 + 7^2 + 10^2 \qquad = 25 + 52 + 52 + 53 + 72 + 102$$
$$:= 2^6 + 3^2 + 3^2 + 3^2 + 11^2 + 12^2 \qquad = 26 + 32 + 32 + 32 + 112 + 122$$
$$:= 3^3 + 3^3 + 3^4 + 6^2 + 8^2 + 11^2 \qquad = 33 + 33 + 34 + 62 + 82 + 112$$

$$358 := 2^2 + 2^4 + 2^6 + 7^2 + 9^2 + 12^2 \qquad = 22 + 24 + 26 + 72 + 92 + 122$$
$$:= 2^2 + 2^5 + 2^5 + 5^2 + 11^2 + 12^2 \qquad = 22 + 25 + 25 + 52 + 112 + 122$$
$$:= 2^3 + 2^3 + 2^6 + 6^2 + 11^2 + 11^2 \qquad = 23 + 23 + 26 + 62 + 112 + 112$$
$$:= 2^4 + 2^4 + 3^4 + 8^2 + 9^2 + 10^2 \qquad = 24 + 24 + 34 + 82 + 92 + 102$$
$$:= 2^4 + 2^5 + 4^3 + 5^2 + 10^2 + 11^2 \qquad = 24 + 25 + 43 + 52 + 102 + 112$$
$$:= 2^4 + 2^6 + 3^2 + 5^2 + 10^2 + 12^2 \qquad = 24 + 26 + 32 + 52 + 102 + 122$$
$$:= 2^6 + 3^4 + 6^2 + 7^2 + 8^2 + 8^2 \qquad = 26 + 34 + 62 + 72 + 82 + 82$$

$$360 := 2^4 + 2^4 + 2^6 + 8^2 + 10^2 + 10^2 \qquad = 24 + 24 + 26 + 82 + 102 + 102$$
$$:= 2^4 + 2^5 + 2^5 + 6^2 + 10^2 + 12^2 \qquad = 24 + 25 + 25 + 62 + 102 + 122$$

$$363 := 2^2 + 2^2 + 5^3 + 7^2 + 9^2 + 10^2 \qquad = 22 + 22 + 53 + 72 + 92 + 102$$
$$:= 2^2 + 3^2 + 5^2 + 5^3 + 10^2 + 10^2 \qquad = 22 + 32 + 52 + 53 + 102 + 102$$
$$:= 2^2 + 4^2 + 4^2 + 5^3 + 9^2 + 11^2 \qquad = 22 + 42 + 42 + 53 + 92 + 112$$
$$:= 2^2 + 4^2 + 5^2 + 5^3 + 7^2 + 12^2 \qquad = 22 + 42 + 52 + 53 + 72 + 122$$

$$365 := 2^2 + 2^3 + 3^4 + 8^2 + 8^2 + 12^2 \qquad = 22 + 23 + 34 + 82 + 82 + 122$$
$$:= 2^2 + 2^4 + 4^2 + 4^3 + 11^2 + 12^2 \qquad = 22 + 24 + 42 + 43 + 112 + 122$$
$$:= 2^3 + 3^2 + 3^4 + 5^2 + 11^2 + 11^2 \qquad = 23 + 32 + 34 + 52 + 112 + 112$$
$$:= 2^3 + 3^4 + 4^2 + 4^2 + 10^2 + 12^2 \qquad = 23 + 34 + 42 + 42 + 102 + 122$$
$$:= 2^3 + 4^3 + 4^3 + 6^2 + 7^2 + 12^2 \qquad = 23 + 43 + 43 + 62 + 72 + 122$$
$$:= 3^2 + 3^4 + 4^3 + 7^2 + 9^2 + 9^2 \qquad = 32 + 34 + 43 + 72 + 92 + 92$$
$$:= 3^3 + 3^4 + 4^2 + 4^2 + 9^2 + 12^2 \qquad = 33 + 34 + 42 + 42 + 92 + 122$$
$$:= 3^3 + 4^3 + 4^3 + 5^2 + 8^2 + 11^2 \qquad = 33 + 43 + 43 + 52 + 82 + 112$$
$$:= 3^4 + 4^3 + 5^2 + 5^2 + 7^2 + 11^2 \qquad = 34 + 43 + 52 + 52 + 72 + 112$$

$$367 := 2^2 + 2^3 + 2^6 + 7^2 + 11^2 + 11^2 \qquad = 22 + 23 + 26 + 72 + 112 + 112$$
$$:= 2^2 + 2^6 + 3^3 + 8^2 + 8^2 + 12^2 \qquad = 22 + 26 + 33 + 82 + 82 + 122$$
$$:= 2^3 + 2^4 + 3^4 + 9^2 + 9^2 + 10^2 \qquad = 23 + 24 + 34 + 92 + 92 + 102$$
$$:= 2^4 + 3^3 + 3^4 + 9^2 + 9^2 + 9^2 \qquad = 24 + 33 + 34 + 92 + 92 + 92$$
$$:= 2^5 + 3^2 + 3^4 + 8^2 + 9^2 + 10^2 \qquad = 25 + 32 + 34 + 82 + 92 + 102$$

$$:= 2^5 + 3^3 + 3^3 + 4^2 + 11^2 + 12^2 \qquad = 25 + 33 + 33 + 42 + 112 + 122$$
$$:= 2^5 + 3^3 + 4^3 + 6^2 + 8^2 + 12^2 \qquad = 25 + 33 + 43 + 62 + 82 + 122$$
$$:= 2^5 + 3^4 + 4^2 + 6^2 + 9^2 + 11^2 \qquad = 25 + 34 + 42 + 62 + 92 + 112$$
$$:= 2^5 + 3^4 + 5^2 + 6^2 + 7^2 + 12^2 \qquad = 25 + 34 + 52 + 62 + 72 + 122$$
$$:= 2^6 + 3^2 + 3^3 + 5^2 + 11^2 + 11^2 \qquad = 26 + 32 + 33 + 52 + 112 + 112$$
$$:= 2^6 + 3^2 + 4^3 + 7^2 + 9^2 + 10^2 \qquad = 26 + 32 + 43 + 72 + 92 + 102$$
$$:= 2^6 + 3^3 + 4^2 + 4^2 + 10^2 + 12^2 \qquad = 26 + 33 + 42 + 42 + 102 + 122$$
$$:= 2^7 + 3^2 + 6^2 + 7^2 + 8^2 + 9^2 \qquad = 27 + 32 + 62 + 72 + 82 + 92$$
$$:= 2^7 + 4^2 + 5^2 + 6^2 + 9^2 + 9^2 \qquad = 27 + 42 + 52 + 62 + 92 + 92$$
$$:= 2^7 + 4^2 + 5^2 + 7^2 + 7^2 + 10^2 \qquad = 27 + 42 + 52 + 72 + 72 + 102$$
$$:= 2^7 + 5^2 + 5^2 + 5^2 + 8^2 + 10^2 \qquad = 27 + 52 + 52 + 52 + 82 + 102$$

$$369 := 2^3 + 2^4 + 2^6 + 9^2 + 10^2 + 10^2 \qquad = 23 + 24 + 26 + 92 + 102 + 102$$
$$:= 2^4 + 2^6 + 3^3 + 9^2 + 9^2 + 10^2 \qquad = 24 + 26 + 33 + 92 + 92 + 102$$
$$:= 2^5 + 2^5 + 3^3 + 6^2 + 11^2 + 11^2 \qquad = 25 + 25 + 33 + 62 + 112 + 112$$
$$:= 2^5 + 2^6 + 3^2 + 8^2 + 10^2 + 10^2 \qquad = 25 + 26 + 32 + 82 + 102 + 102$$
$$:= 2^5 + 2^6 + 4^2 + 6^2 + 10^2 + 11^2 \qquad = 25 + 26 + 42 + 62 + 102 + 112$$
$$:= 2^5 + 2^6 + 4^2 + 7^2 + 8^2 + 12^2 \qquad = 25 + 26 + 42 + 72 + 82 + 122$$

$$374 := 2^2 + 2^2 + 3^4 + 8^2 + 10^2 + 11^2 \qquad = 22 + 22 + 34 + 82 + 102 + 112$$
$$:= 2^2 + 3^2 + 3^4 + 6^2 + 10^2 + 12^2 \qquad = 22 + 32 + 34 + 62 + 102 + 122$$
$$:= 2^2 + 4^3 + 4^3 + 7^2 + 7^2 + 12^2 \qquad = 22 + 43 + 43 + 72 + 72 + 122$$
$$:= 2^3 + 4^2 + 5^2 + 5^3 + 10^2 + 10^2 \qquad = 23 + 42 + 52 + 53 + 102 + 102$$
$$:= 2^3 + 5^2 + 5^3 + 6^2 + 6^2 + 12^2 \qquad = 23 + 52 + 53 + 62 + 62 + 122$$
$$:= 3^2 + 3^2 + 3^3 + 4^3 + 11^2 + 12^2 \qquad = 32 + 32 + 33 + 43 + 112 + 122$$
$$:= 3^2 + 3^3 + 5^3 + 7^2 + 8^2 + 10^2 \qquad = 32 + 33 + 53 + 72 + 82 + 102$$
$$:= 3^2 + 4^2 + 4^3 + 4^3 + 10^2 + 11^2 \qquad = 32 + 42 + 43 + 43 + 102 + 112$$
$$:= 3^3 + 4^2 + 5^2 + 5^3 + 9^2 + 10^2 \qquad = 33 + 42 + 52 + 53 + 92 + 102$$
$$:= 3^3 + 4^2 + 5^3 + 6^2 + 7^2 + 11^2 \qquad = 33 + 42 + 53 + 62 + 72 + 112$$
$$:= 4^3 + 5^3 + 6^2 + 6^2 + 7^2 + 8^2 \qquad = 43 + 53 + 62 + 62 + 72 + 82$$

$$376 := 2^2 + 2^5 + 3^3 + 5^2 + 12^2 + 12^2 \qquad = 22 + 25 + 33 + 52 + 122 + 122$$
$$:= 2^4 + 3^2 + 3^4 + 7^2 + 10^2 + 11^2 \qquad = 24 + 32 + 34 + 72 + 102 + 112$$
$$:= 2^4 + 3^3 + 4^3 + 5^2 + 10^2 + 12^2 \qquad = 24 + 33 + 43 + 52 + 102 + 122$$
$$:= 2^5 + 5^2 + 5^3 + 7^2 + 8^2 + 9^2 \qquad = 25 + 52 + 53 + 72 + 82 + 92$$

$$378 := 2^4 + 2^5 + 4^3 + 8^2 + 9^2 + 11^2 \qquad = 24 + 25 + 43 + 82 + 92 + 112$$

$$:= 2^4 + 2^6 + 3^2 + 8^2 + 9^2 + 12^2 \qquad = 24 + 26 + 32 + 82 + 92 + 122$$

$$380 := 2^4 + 2^5 + 2^5 + 10^2 + 10^2 + 10^2 \qquad = 24 + 25 + 25 + 102 + 102 + 102$$

$$383 := 2^2 + 3^2 + 5^3 + 8^2 + 9^2 + 10^2 \qquad = 22 + 32 + 53 + 82 + 92 + 102$$
$$:= 2^2 + 4^2 + 5^3 + 6^2 + 9^2 + 11^2 \qquad = 22 + 42 + 53 + 62 + 92 + 112$$
$$:= 2^2 + 5^2 + 5^3 + 6^2 + 7^2 + 12^2 \qquad = 22 + 52 + 53 + 62 + 72 + 122$$
$$:= 3^2 + 4^2 + 5^2 + 5^3 + 8^2 + 12^2 \qquad = 32 + 42 + 52 + 53 + 82 + 122$$
$$:= 2^2 + 2^4 + 4^3 + 6^2 + 11^2 + 12^2 \qquad = 22 + 24 + 43 + 62 + 112 + 122$$
$$:= 2^3 + 3^4 + 4^2 + 6^2 + 10^2 + 12^2 \qquad = 23 + 34 + 42 + 62 + 102 + 122$$
$$:= 2^3 + 4^3 + 4^3 + 7^2 + 10^2 + 10^2 \qquad = 23 + 43 + 43 + 72 + 102 + 102$$
$$:= 2^3 + 4^3 + 4^3 + 8^2 + 8^2 + 11^2 \qquad = 23 + 43 + 43 + 82 + 82 + 112$$
$$:= 2^4 + 4^2 + 5^3 + 8^2 + 8^2 + 10^2 \qquad = 24 + 42 + 53 + 82 + 82 + 102$$
$$:= 2^4 + 5^2 + 5^3 + 7^2 + 7^2 + 11^2 \qquad = 24 + 52 + 53 + 72 + 72 + 112$$
$$:= 3^3 + 3^3 + 3^3 + 4^2 + 12^2 + 12^2 \qquad = 33 + 33 + 33 + 42 + 122 + 122$$
$$:= 3^3 + 3^3 + 4^3 + 5^2 + 11^2 + 11^2 \qquad = 33 + 33 + 43 + 52 + 112 + 112$$
$$:= 3^3 + 3^4 + 4^2 + 6^2 + 9^2 + 12^2 \qquad = 33 + 34 + 42 + 62 + 92 + 122$$
$$:= 3^3 + 4^3 + 4^3 + 7^2 + 9^2 + 10^2 \qquad = 33 + 43 + 43 + 72 + 92 + 102$$

$$387 := 2^3 + 2^5 + 4^3 + 9^2 + 9^2 + 11^2 \qquad = 23 + 25 + 43 + 92 + 92 + 112$$
$$:= 2^3 + 2^6 + 3^2 + 8^2 + 11^2 + 11^2 \qquad = 23 + 26 + 32 + 82 + 112 + 112$$
$$:= 2^3 + 2^6 + 3^2 + 9^2 + 9^2 + 12^2 \qquad = 23 + 26 + 32 + 92 + 92 + 122$$
$$:= 2^3 + 2^6 + 5^2 + 5^2 + 11^2 + 12^2 \qquad = 23 + 26 + 52 + 52 + 112 + 122$$
$$:= 2^4 + 2^4 + 4^3 + 7^2 + 11^2 + 11^2 \qquad = 24 + 24 + 43 + 72 + 112 + 112$$
$$:= 2^5 + 3^3 + 3^3 + 6^2 + 11^2 + 12^2 \qquad = 25 + 33 + 33 + 62 + 112 + 122$$
$$:= 2^5 + 3^3 + 4^3 + 8^2 + 10^2 + 10^2 \qquad = 25 + 33 + 43 + 82 + 102 + 102$$
$$:= 2^5 + 3^4 + 5^2 + 7^2 + 10^2 + 10^2 \qquad = 25 + 34 + 52 + 72 + 102 + 102$$
$$:= 2^5 + 3^4 + 5^2 + 8^2 + 8^2 + 11^2 \qquad = 25 + 34 + 52 + 82 + 82 + 112$$
$$:= 2^5 + 3^4 + 6^2 + 6^2 + 9^2 + 11^2 \qquad = 25 + 34 + 62 + 62 + 92 + 112$$
$$:= 2^6 + 3^3 + 4^2 + 6^2 + 10^2 + 12^2 \qquad = 26 + 33 + 42 + 62 + 102 + 122$$
$$:= 2^6 + 4^2 + 4^3 + 9^2 + 9^2 + 9^2 \qquad = 26 + 42 + 43 + 92 + 92 + 92$$
$$:= 2^6 + 4^3 + 5^2 + 7^2 + 8^2 + 11^2 \qquad = 26 + 43 + 52 + 72 + 82 + 112$$
$$:= 2^7 + 4^2 + 7^2 + 7^2 + 8^2 + 9^2 \qquad = 27 + 42 + 72 + 72 + 82 + 92$$
$$:= 2^7 + 5^2 + 5^2 + 8^2 + 8^2 + 9^2 \qquad = 27 + 52 + 52 + 82 + 82 + 92$$
$$:= 2^7 + 5^2 + 6^2 + 6^2 + 9^2 + 9^2 \qquad = 27 + 52 + 62 + 62 + 92 + 92$$
$$:= 2^7 + 5^2 + 6^2 + 7^2 + 7^2 + 10^2 \qquad = 27 + 52 + 62 + 72 + 72 + 102$$

$$389 := 2^4 + 2^4 + 2^5 + 9^2 + 10^2 + 12^2 \qquad = 24 + 24 + 25 + 92 + 102 + 122$$
$$:= 2^5 + 2^6 + 6^2 + 6^2 + 10^2 + 11^2 \qquad = 25 + 26 + 62 + 62 + 102 + 112$$
$$:= 2^5 + 2^6 + 6^2 + 7^2 + 8^2 + 12^2 \qquad = 25 + 26 + 62 + 72 + 82 + 122$$

$$394 := 2^2 + 3^2 + 3^4 + 10^2 + 10^2 + 10^2 \qquad = 22 + 32 + 34 + 102 + 102 + 102$$
$$:= 2^2 + 3^4 + 4^2 + 7^2 + 10^2 + 12^2 \qquad = 22 + 34 + 42 + 72 + 102 + 122$$
$$:= 2^2 + 4^3 + 4^3 + 9^2 + 9^2 + 10^2 \qquad = 22 + 43 + 43 + 92 + 92 + 102$$
$$:= 2^3 + 3^2 + 4^3 + 5^2 + 12^2 + 12^2 \qquad = 23 + 32 + 43 + 52 + 122 + 122$$
$$:= 2^3 + 4^2 + 5^3 + 8^2 + 9^2 + 10^2 \qquad = 23 + 42 + 53 + 82 + 92 + 102$$
$$:= 2^3 + 5^2 + 5^3 + 6^2 + 10^2 + 10^2 \qquad = 23 + 52 + 53 + 62 + 102 + 102$$
$$:= 3^2 + 4^3 + 4^3 + 6^2 + 10^2 + 11^2 \qquad = 32 + 43 + 43 + 62 + 102 + 112$$
$$:= 3^2 + 4^3 + 4^3 + 7^2 + 8^2 + 12^2 \qquad = 32 + 43 + 43 + 72 + 82 + 122$$
$$:= 3^3 + 4^2 + 5^3 + 8^2 + 9^2 + 9^2 \qquad = 33 + 42 + 53 + 82 + 92 + 92$$
$$:= 3^3 + 5^2 + 5^3 + 6^2 + 9^2 + 10^2 \qquad = 33 + 52 + 53 + 62 + 92 + 102$$
$$:= 3^3 + 5^3 + 6^2 + 6^2 + 7^2 + 11^2 \qquad = 33 + 53 + 62 + 62 + 72 + 112$$
$$:= 3^4 + 4^2 + 4^2 + 4^2 + 11^2 + 12^2 \qquad = 34 + 42 + 42 + 42 + 112 + 122$$
$$:= 4^2 + 4^3 + 4^3 + 5^2 + 9^2 + 12^2 \qquad = 42 + 43 + 43 + 52 + 92 + 122$$

$$396 := 2^2 + 2^3 + 2^5 + 8^2 + 12^2 + 12^2 \qquad = 22 + 23 + 25 + 82 + 122 + 122$$
$$:= 2^3 + 2^4 + 4^3 + 8^2 + 10^2 + 12^2 \qquad = 23 + 24 + 43 + 82 + 102 + 122$$
$$:= 2^4 + 3^3 + 4^3 + 8^2 + 9^2 + 12^2 \qquad = 24 + 33 + 43 + 82 + 92 + 122$$
$$:= 2^4 + 3^4 + 4^2 + 9^2 + 9^2 + 11^2 \qquad = 24 + 34 + 42 + 92 + 92 + 112$$
$$:= 2^4 + 3^4 + 5^2 + 7^2 + 9^2 + 12^2 \qquad = 24 + 34 + 52 + 72 + 92 + 122$$
$$:= 2^5 + 3^2 + 4^3 + 7^2 + 11^2 + 11^2 \qquad = 25 + 32 + 43 + 72 + 112 + 112$$
$$:= 2^6 + 3^2 + 3^2 + 7^2 + 11^2 + 12^2 \qquad = 26 + 32 + 32 + 72 + 112 + 122$$

$$398 := 2^3 + 2^4 + 2^5 + 10^2 + 11^2 + 11^2 \qquad = 23 + 24 + 25 + 102 + 112 + 112$$
$$:= 2^4 + 2^5 + 3^3 + 9^2 + 11^2 + 11^2 \qquad = 24 + 25 + 33 + 92 + 112 + 112$$
$$:= 2^4 + 2^6 + 4^2 + 9^2 + 10^2 + 11^2 \qquad = 24 + 26 + 42 + 92 + 102 + 112$$
$$:= 2^4 + 2^6 + 5^2 + 7^2 + 10^2 + 12^2 \qquad = 24 + 26 + 52 + 72 + 102 + 122$$
$$:= 2^5 + 2^5 + 3^2 + 9^2 + 10^2 + 12^2 \qquad = 25 + 25 + 32 + 92 + 102 + 122$$

$$403 := 2^2 + 5^2 + 5^3 + 7^2 + 10^2 + 10^2 \qquad = 22 + 52 + 53 + 72 + 102 + 102$$
$$:= 2^2 + 5^2 + 5^3 + 8^2 + 8^2 + 11^2 \qquad = 22 + 52 + 53 + 82 + 82 + 112$$
$$:= 2^2 + 5^3 + 6^2 + 6^2 + 9^2 + 11^2 \qquad = 22 + 53 + 62 + 62 + 92 + 112$$
$$:= 3^2 + 5^2 + 5^3 + 6^2 + 8^2 + 12^2 \qquad = 32 + 52 + 53 + 62 + 82 + 122$$
$$:= 4^2 + 4^2 + 5^2 + 5^3 + 10^2 + 11^2 \qquad = 42 + 42 + 52 + 53 + 102 + 112$$

$$
\begin{aligned}
\mathbf{405} &:= 2^2 + 2^2 + 2^5 + 10^2 + 11^2 + 12^2 & &= 22 + 22 + 25 + 102 + 112 + 122 \\
&:= 2^2 + 2^4 + 4^3 + 10^2 + 10^2 + 11^2 & &= 22 + 24 + 43 + 102 + 102 + 112 \\
&:= 2^3 + 2^3 + 4^3 + 9^2 + 10^2 + 12^2 & &= 23 + 23 + 43 + 92 + 102 + 122 \\
&:= 2^3 + 3^3 + 4^3 + 8^2 + 11^2 + 11^2 & &= 23 + 33 + 43 + 82 + 112 + 112 \\
&:= 2^3 + 3^3 + 4^3 + 9^2 + 9^2 + 12^2 & &= 23 + 33 + 43 + 92 + 92 + 122 \\
&:= 2^3 + 3^4 + 4^2 + 10^2 + 10^2 + 10^2 & &= 23 + 34 + 42 + 102 + 102 + 102 \\
&:= 2^3 + 3^4 + 5^2 + 7^2 + 11^2 + 11^2 & &= 23 + 34 + 52 + 72 + 112 + 112 \\
&:= 2^3 + 3^4 + 6^2 + 6^2 + 10^2 + 12^2 & &= 23 + 34 + 62 + 62 + 102 + 122 \\
&:= 2^4 + 5^3 + 6^2 + 8^2 + 8^2 + 10^2 & &= 24 + 53 + 62 + 82 + 82 + 102 \\
&:= 3^3 + 3^3 + 3^3 + 6^2 + 12^2 + 12^2 & &= 33 + 33 + 33 + 62 + 122 + 122 \\
&:= 3^3 + 3^4 + 4^2 + 9^2 + 10^2 + 10^2 & &= 33 + 34 + 42 + 92 + 102 + 102 \\
&:= 3^3 + 3^4 + 5^2 + 8^2 + 8^2 + 12^2 & &= 33 + 34 + 52 + 82 + 82 + 122 \\
&:= 3^3 + 3^4 + 6^2 + 6^2 + 9^2 + 12^2 & &= 33 + 34 + 62 + 62 + 92 + 122 \\
&:= 3^4 + 4^3 + 7^2 + 7^2 + 9^2 + 9^2 & &= 34 + 43 + 72 + 72 + 92 + 92 \\
\\
\mathbf{407} &:= 2^5 + 3^3 + 3^3 + 10^2 + 10^2 + 11^2 & &= 25 + 33 + 33 + 102 + 102 + 112 \\
&:= 2^5 + 3^4 + 7^2 + 8^2 + 9^2 + 10^2 & &= 25 + 34 + 72 + 82 + 92 + 102 \\
&:= 2^6 + 3^3 + 4^2 + 10^2 + 10^2 + 10^2 & &= 26 + 33 + 42 + 102 + 102 + 102 \\
&:= 2^6 + 3^3 + 5^2 + 7^2 + 11^2 + 11^2 & &= 26 + 33 + 52 + 72 + 112 + 112 \\
&:= 2^6 + 3^3 + 6^2 + 6^2 + 10^2 + 12^2 & &= 26 + 33 + 62 + 62 + 102 + 122 \\
&:= 2^6 + 4^3 + 6^2 + 9^2 + 9^2 + 9^2 & &= 26 + 43 + 62 + 92 + 92 + 92 \\
&:= 2^6 + 4^3 + 7^2 + 7^2 + 9^2 + 10^2 & &= 26 + 43 + 72 + 72 + 92 + 102 \\
&:= 2^7 + 6^2 + 7^2 + 7^2 + 8^2 + 9^2 & &= 27 + 62 + 72 + 72 + 82 + 92 \\
\\
\mathbf{409} &:= 2^5 + 2^6 + 7^2 + 8^2 + 10^2 + 10^2 & &= 25 + 26 + 72 + 82 + 102 + 102 \\
&:= 2^5 + 2^6 + 8^2 + 8^2 + 8^2 + 11^2 & &= 25 + 26 + 82 + 82 + 82 + 112 \\
\\
\mathbf{414} &:= 2^2 + 3^4 + 6^2 + 7^2 + 10^2 + 12^2 & &= 22 + 34 + 62 + 72 + 102 + 122 \\
&:= 2^3 + 5^3 + 6^2 + 8^2 + 9^2 + 10^2 & &= 23 + 53 + 62 + 82 + 92 + 102 \\
&:= 3^2 + 3^3 + 4^3 + 7^2 + 11^2 + 12^2 & &= 32 + 33 + 43 + 72 + 112 + 122 \\
&:= 3^2 + 3^4 + 4^2 + 8^2 + 10^2 + 12^2 & &= 32 + 34 + 42 + 82 + 102 + 122 \\
&:= 3^3 + 5^3 + 6^2 + 8^2 + 9^2 + 9^2 & &= 33 + 53 + 62 + 82 + 92 + 92 \\
&:= 3^3 + 5^3 + 7^2 + 7^2 + 8^2 + 10^2 & &= 33 + 53 + 72 + 72 + 82 + 102 \\
&:= 3^4 + 4^2 + 4^2 + 6^2 + 11^2 + 12^2 & &= 34 + 42 + 42 + 62 + 112 + 122 \\
&:= 4^2 + 4^3 + 4^3 + 7^2 + 10^2 + 11^2 & &= 42 + 43 + 43 + 72 + 102 + 112 \\
&:= 4^3 + 4^3 + 5^2 + 6^2 + 9^2 + 12^2 & &= 43 + 43 + 52 + 62 + 92 + 122
\end{aligned}
$$

$$416 := 2^2 + 2^6 + 5^2 + 9^2 + 11^2 + 11^2 \quad = 22 + 26 + 52 + 92 + 112 + 112$$
$$:= 2^3 + 2^4 + 3^3 + 10^2 + 11^2 + 12^2 \quad = 23 + 24 + 33 + 102 + 112 + 122$$
$$:= 2^4 + 3^3 + 3^3 + 9^2 + 11^2 + 12^2 \quad = 24 + 33 + 33 + 92 + 112 + 122$$
$$:= 2^4 + 3^4 + 6^2 + 9^2 + 9^2 + 11^2 \quad = 24 + 34 + 62 + 92 + 92 + 112$$
$$:= 2^4 + 3^4 + 7^2 + 7^2 + 10^2 + 11^2 \quad = 24 + 34 + 72 + 72 + 102 + 112$$

$$418 := 2^4 + 2^6 + 6^2 + 9^2 + 10^2 + 11^2 \quad = 24 + 26 + 62 + 92 + 102 + 112$$
$$:= 2^4 + 2^6 + 7^2 + 8^2 + 9^2 + 12^2 \quad = 24 + 26 + 72 + 82 + 92 + 122$$
$$:= 2^5 + 2^5 + 5^2 + 8^2 + 11^2 + 12^2 \quad = 25 + 25 + 52 + 82 + 112 + 122$$

$$423 := 2^2 + 2^2 + 3^3 + 10^2 + 12^2 + 12^2 \quad = 22 + 22 + 33 + 102 + 122 + 122$$
$$:= 2^2 + 3^2 + 4^3 + 9^2 + 11^2 + 12^2 \quad = 22 + 32 + 43 + 92 + 112 + 122$$
$$:= 2^2 + 5^3 + 7^2 + 8^2 + 9^2 + 10^2 \quad = 22 + 53 + 72 + 82 + 92 + 102$$
$$:= 3^2 + 5^2 + 5^3 + 8^2 + 10^2 + 10^2 \quad = 32 + 52 + 53 + 82 + 102 + 102$$
$$:= 4^2 + 4^2 + 5^3 + 8^2 + 9^2 + 11^2 \quad = 42 + 42 + 53 + 82 + 92 + 112$$
$$:= 4^2 + 5^2 + 5^3 + 6^2 + 10^2 + 11^2 \quad = 42 + 52 + 53 + 62 + 102 + 112$$
$$:= 4^2 + 5^2 + 5^3 + 7^2 + 8^2 + 12^2 \quad = 42 + 52 + 53 + 72 + 82 + 122$$

$$425 := 2^3 + 3^3 + 3^3 + 11^2 + 11^2 + 11^2 \quad = 23 + 33 + 33 + 112 + 112 + 112$$
$$:= 2^3 + 3^4 + 6^2 + 10^2 + 10^2 + 10^2 \quad = 23 + 34 + 62 + 102 + 102 + 102$$
$$:= 2^3 + 3^4 + 8^2 + 8^2 + 8^2 + 12^2 \quad = 23 + 34 + 82 + 82 + 82 + 122$$
$$:= 2^4 + 4^2 + 4^3 + 8^2 + 11^2 + 12^2 \quad = 24 + 42 + 43 + 82 + 112 + 122$$
$$:= 3^3 + 3^3 + 3^3 + 10^2 + 10^2 + 12^2 \quad = 33 + 33 + 33 + 102 + 102 + 122$$
$$:= 3^3 + 3^4 + 6^2 + 9^2 + 10^2 + 10^2 \quad = 33 + 34 + 62 + 92 + 102 + 102$$

$$427 := 2^3 + 2^6 + 7^2 + 8^2 + 11^2 + 11^2 \quad = 23 + 26 + 72 + 82 + 112 + 112$$
$$:= 2^3 + 2^6 + 7^2 + 9^2 + 9^2 + 12^2 \quad = 23 + 26 + 72 + 92 + 92 + 122$$
$$:= 2^4 + 2^5 + 4^2 + 11^2 + 11^2 + 11^2 \quad = 24 + 25 + 42 + 112 + 112 + 112$$
$$:= 2^6 + 3^3 + 6^2 + 10^2 + 10^2 + 10^2 \quad = 26 + 33 + 62 + 102 + 102 + 102$$
$$:= 2^6 + 3^3 + 8^2 + 8^2 + 8^2 + 12^2 \quad = 26 + 33 + 82 + 82 + 82 + 122$$

$$434 := 2^2 + 3^4 + 7^2 + 10^2 + 10^2 + 10^2 \quad = 22 + 34 + 72 + 102 + 102 + 102$$
$$:= 2^2 + 3^4 + 8^2 + 8^2 + 10^2 + 11^2 \quad = 22 + 34 + 82 + 82 + 102 + 112$$
$$:= 2^3 + 2^3 + 3^2 + 11^2 + 12^2 + 12^2 \quad = 23 + 23 + 32 + 112 + 122 + 122$$
$$:= 2^3 + 4^2 + 4^3 + 9^2 + 11^2 + 12^2 \quad = 23 + 42 + 43 + 92 + 112 + 122$$
$$:= 2^3 + 4^3 + 5^2 + 7^2 + 12^2 + 12^2 \quad = 23 + 43 + 52 + 72 + 122 + 122$$

$$:= 3^2 + 3^4 + 6^2 + 8^2 + 10^2 + 12^2 \qquad = 32 + 34 + 62 + 82 + 102 + 122$$
$$:= 3^4 + 4^2 + 4^2 + 10^2 + 10^2 + 11^2 \qquad = 34 + 42 + 42 + 102 + 102 + 112$$
$$:= 3^4 + 4^2 + 6^2 + 6^2 + 11^2 + 12^2 \qquad = 34 + 42 + 62 + 62 + 112 + 122$$
$$:= 4^3 + 4^3 + 5^2 + 9^2 + 10^2 + 10^2 \qquad = 43 + 43 + 52 + 92 + 102 + 102$$
$$:= 4^3 + 4^3 + 6^2 + 7^2 + 10^2 + 11^2 \qquad = 43 + 43 + 62 + 72 + 102 + 112$$
$$:= 4^3 + 4^3 + 7^2 + 7^2 + 8^2 + 12^2 \qquad = 43 + 43 + 72 + 72 + 82 + 122$$

$$\mathbf{436} := 2^4 + 2^4 + 4^2 + 10^2 + 12^2 + 12^2 \qquad = 24 + 24 + 42 + 102 + 122 + 122$$
$$:= 2^5 + 3^3 + 5^2 + 8^2 + 12^2 + 12^2 \qquad = 25 + 33 + 52 + 82 + 122 + 122$$
$$:= 2^5 + 4^3 + 7^2 + 7^2 + 11^2 + 11^2 \qquad = 25 + 43 + 72 + 72 + 112 + 112$$
$$:= 2^6 + 3^2 + 7^2 + 7^2 + 11^2 + 12^2 \qquad = 26 + 32 + 72 + 72 + 112 + 122$$

$$\mathbf{438} := 2^5 + 2^5 + 7^2 + 9^2 + 10^2 + 12^2 \qquad = 25 + 25 + 72 + 92 + 102 + 122$$

$$\mathbf{443} := 3^2 + 5^3 + 8^2 + 8^2 + 9^2 + 10^2 \qquad = 32 + 53 + 82 + 82 + 92 + 102$$
$$:= 4^2 + 5^3 + 6^2 + 8^2 + 9^2 + 11^2 \qquad = 42 + 53 + 62 + 82 + 92 + 112$$
$$:= 5^2 + 5^3 + 6^2 + 6^2 + 10^2 + 11^2 \qquad = 52 + 53 + 62 + 62 + 102 + 112$$
$$:= 5^2 + 5^3 + 6^2 + 7^2 + 8^2 + 12^2 \qquad = 52 + 53 + 62 + 72 + 82 + 122$$

$$\mathbf{445} := 2^4 + 3^3 + 4^2 + 11^2 + 11^2 + 12^2 \qquad = 24 + 33 + 42 + 112 + 112 + 122$$
$$:= 2^4 + 4^3 + 6^2 + 8^2 + 11^2 + 12^2 \qquad = 24 + 43 + 62 + 82 + 112 + 122$$
$$:= 2^5 + 3^2 + 4^2 + 10^2 + 12^2 + 12^2 \qquad = 25 + 32 + 42 + 102 + 122 + 122$$

$$\mathbf{447} := 2^4 + 2^5 + 6^2 + 11^2 + 11^2 + 11^2 \qquad = 24 + 25 + 62 + 112 + 112 + 112$$

$$\mathbf{454} := 2^2 + 2^4 + 5^2 + 11^2 + 12^2 + 12^2 \qquad = 22 + 24 + 52 + 112 + 122 + 122$$
$$:= 2^3 + 4^3 + 6^2 + 9^2 + 11^2 + 12^2 \qquad = 23 + 43 + 62 + 92 + 112 + 122$$
$$:= 3^2 + 3^4 + 8^2 + 10^2 + 10^2 + 10^2 \qquad = 32 + 34 + 82 + 102 + 102 + 102$$
$$:= 3^2 + 3^4 + 9^2 + 9^2 + 9^2 + 11^2 \qquad = 32 + 34 + 92 + 92 + 92 + 112$$
$$:= 3^3 + 4^3 + 7^2 + 7^2 + 11^2 + 12^2 \qquad = 33 + 43 + 72 + 72 + 112 + 122$$
$$:= 3^4 + 4^2 + 6^2 + 10^2 + 10^2 + 11^2 \qquad = 34 + 42 + 62 + 102 + 102 + 112$$
$$:= 3^4 + 4^2 + 7^2 + 8^2 + 10^2 + 12^2 \qquad = 34 + 42 + 72 + 82 + 102 + 122$$
$$:= 3^4 + 5^2 + 5^2 + 9^2 + 11^2 + 11^2 \qquad = 34 + 52 + 52 + 92 + 112 + 112$$
$$:= 3^4 + 6^2 + 6^2 + 6^2 + 11^2 + 12^2 \qquad = 34 + 62 + 62 + 62 + 112 + 122$$
$$:= 4^3 + 4^3 + 8^2 + 9^2 + 9^2 + 10^2 \qquad = 43 + 43 + 82 + 92 + 92 + 102$$

$$\mathbf{456} := 2^3 + 2^5 + 8^2 + 8^2 + 12^2 + 12^2 \qquad = 23 + 25 + 82 + 82 + 122 + 122$$

$$:= 2^4 + 2^4 + 6^2 + 10^2 + 12^2 + 12^2 \quad = 24 + 24 + 62 + 102 + 122 + 122$$
$$:= 2^6 + 3^2 + 9^2 + 9^2 + 10^2 + 11^2 \quad = 26 + 32 + 92 + 92 + 102 + 112$$
$$:= 2^6 + 5^2 + 5^2 + 10^2 + 11^2 + 11^2 \quad = 26 + 52 + 52 + 102 + 112 + 112$$

$$\mathbf{463} := 2^2 + 4^3 + 7^2 + 9^2 + 11^2 + 12^2 \quad = 22 + 43 + 72 + 92 + 112 + 122$$
$$:= 3^2 + 4^3 + 5^2 + 10^2 + 11^2 + 12^2 \quad = 32 + 43 + 52 + 102 + 112 + 122$$
$$:= 5^2 + 5^3 + 7^2 + 8^2 + 10^2 + 10^2 \quad = 52 + 53 + 72 + 82 + 102 + 102$$
$$:= 5^2 + 5^3 + 8^2 + 8^2 + 8^2 + 11^2 \quad = 52 + 53 + 82 + 82 + 82 + 112$$
$$:= 5^3 + 6^2 + 6^2 + 8^2 + 9^2 + 11^2 \quad = 53 + 62 + 62 + 82 + 92 + 112$$

$$\mathbf{465} := 2^2 + 2^5 + 8^2 + 10^2 + 11^2 + 12^2 \quad = 22 + 25 + 82 + 102 + 112 + 122$$
$$:= 2^4 + 3^3 + 6^2 + 11^2 + 11^2 + 12^2 \quad = 24 + 33 + 62 + 112 + 112 + 122$$
$$:= 2^4 + 4^3 + 8^2 + 10^2 + 10^2 + 11^2 \quad = 24 + 43 + 82 + 102 + 102 + 112$$
$$:= 2^5 + 3^2 + 6^2 + 10^2 + 12^2 + 12^2 \quad = 25 + 32 + 62 + 102 + 122 + 122$$

$$\mathbf{474} := 2^3 + 2^3 + 7^2 + 11^2 + 12^2 + 12^2 \quad = 23 + 23 + 72 + 112 + 122 + 122$$
$$:= 2^3 + 4^3 + 9^2 + 10^2 + 10^2 + 11^2 \quad = 23 + 43 + 92 + 102 + 102 + 112$$
$$:= 3^3 + 4^3 + 9^2 + 9^2 + 10^2 + 11^2 \quad = 33 + 43 + 92 + 92 + 102 + 112$$
$$:= 3^4 + 6^2 + 6^2 + 10^2 + 10^2 + 11^2 \quad = 34 + 62 + 62 + 102 + 102 + 112$$
$$:= 3^4 + 6^2 + 7^2 + 8^2 + 10^2 + 12^2 \quad = 34 + 62 + 72 + 82 + 102 + 122$$

$$\mathbf{476} := 2^4 + 2^4 + 10^2 + 10^2 + 10^2 + 12^2 \quad = 24 + 24 + 102 + 102 + 102 + 122$$
$$:= 2^4 + 2^4 + 9^2 + 11^2 + 11^2 + 11^2 \quad = 24 + 24 + 92 + 112 + 112 + 112$$
$$:= 2^6 + 5^2 + 8^2 + 9^2 + 11^2 + 11^2 \quad = 26 + 52 + 82 + 92 + 112 + 112$$
$$:= 2^6 + 5^2 + 9^2 + 9^2 + 9^2 + 12^2 \quad = 26 + 52 + 92 + 92 + 92 + 122$$
$$:= 2^6 + 7^2 + 7^2 + 7^2 + 11^2 + 12^2 \quad = 26 + 72 + 72 + 72 + 112 + 122$$

$$\mathbf{483} := 2^2 + 3^3 + 8^2 + 10^2 + 12^2 + 12^2 \quad = 22 + 33 + 82 + 102 + 122 + 122$$
$$:= 3^2 + 4^3 + 8^2 + 9^2 + 11^2 + 12^2 \quad = 32 + 43 + 82 + 92 + 112 + 122$$
$$:= 4^3 + 5^2 + 5^2 + 9^2 + 12^2 + 12^2 \quad = 43 + 52 + 52 + 92 + 122 + 122$$
$$:= 5^3 + 7^2 + 8^2 + 8^2 + 9^2 + 10^2 \quad = 53 + 72 + 82 + 82 + 92 + 102$$

$$\mathbf{485} := 2^4 + 3^3 + 10^2 + 10^2 + 11^2 + 11^2 \quad = 24 + 33 + 102 + 102 + 112 + 112$$
$$:= 2^5 + 3^2 + 10^2 + 10^2 + 10^2 + 12^2 \quad = 25 + 32 + 102 + 102 + 102 + 122$$
$$:= 2^5 + 3^2 + 9^2 + 11^2 + 11^2 + 11^2 \quad = 25 + 32 + 92 + 112 + 112 + 112$$
$$:= 2^5 + 4^2 + 7^2 + 10^2 + 12^2 + 12^2 \quad = 25 + 42 + 72 + 102 + 122 + 122$$

$492 := 2^2 + 2^2 + 11^2 + 11^2 + 11^2 + 11^2 \quad = 22 + 22 + 112 + 112 + 112 + 112$

$494 := 2^4 + 3^2 + 9^2 + 10^2 + 12^2 + 12^2 \quad = 24 + 32 + 92 + 102 + 122 + 122$
$:= 3^4 + 7^2 + 8^2 + 10^2 + 10^2 + 10^2 \quad = 34 + 72 + 82 + 102 + 102 + 102$
$:= 3^4 + 7^2 + 9^2 + 9^2 + 9^2 + 11^2 \quad = 34 + 72 + 92 + 92 + 92 + 112$
$:= 3^4 + 8^2 + 8^2 + 8^2 + 10^2 + 11^2 \quad = 34 + 82 + 82 + 82 + 102 + 112$

$496 := 2^6 + 7^2 + 9^2 + 9^2 + 10^2 + 11^2 \quad = 26 + 72 + 92 + 92 + 102 + 112$

$503 := 2^3 + 3^2 + 10^2 + 11^2 + 11^2 + 12^2 \quad = 23 + 32 + 102 + 112 + 112 + 122$
$:= 3^2 + 3^3 + 9^2 + 11^2 + 11^2 + 12^2 \quad = 32 + 33 + 92 + 112 + 112 + 122$
$:= 4^2 + 4^3 + 9^2 + 10^2 + 11^2 + 11^2 \quad = 42 + 43 + 92 + 102 + 112 + 112$
$:= 4^3 + 5^2 + 7^2 + 10^2 + 11^2 + 12^2 \quad = 43 + 52 + 72 + 102 + 112 + 122$

$505 := 2^5 + 6^2 + 7^2 + 10^2 + 12^2 + 12^2 \quad = 25 + 62 + 72 + 102 + 122 + 122$
$514 := 2^4 + 5^2 + 8^2 + 11^2 + 12^2 + 12^2 \quad = 24 + 52 + 82 + 112 + 122 + 122$

$523 := 2^3 + 5^2 + 9^2 + 11^2 + 12^2 + 12^2 \quad = 23 + 52 + 92 + 112 + 122 + 122$
$:= 4^3 + 6^2 + 9^2 + 10^2 + 11^2 + 11^2 \quad = 43 + 62 + 92 + 102 + 112 + 112$
$:= 4^3 + 7^2 + 8^2 + 9^2 + 11^2 + 12^2 \quad = 43 + 72 + 82 + 92 + 112 + 122$

$525 := 2^5 + 7^2 + 10^2 + 10^2 + 10^2 + 12^2 \quad = 25 + 72 + 102 + 102 + 102 + 122$
$:= 2^5 + 7^2 + 9^2 + 11^2 + 11^2 + 11^2 \quad = 25 + 72 + 92 + 112 + 112 + 112$
$:= 2^5 + 8^2 + 8^2 + 10^2 + 11^2 + 12^2 \quad = 25 + 82 + 82 + 102 + 112 + 122$

$532 := 3^2 + 4^2 + 11^2 + 11^2 + 11^2 + 12^2 \quad = 32 + 42 + 112 + 112 + 112 + 122$
$534 := 2^4 + 7^2 + 9^2 + 10^2 + 12^2 + 12^2 \quad = 24 + 72 + 92 + 102 + 122 + 122$

$543 := 2^3 + 7^2 + 10^2 + 11^2 + 11^2 + 12^2 \quad = 23 + 72 + 102 + 112 + 112 + 122$
$:= 3^3 + 7^2 + 9^2 + 11^2 + 11^2 + 12^2 \quad = 33 + 72 + 92 + 112 + 112 + 122$
$:= 3^3 + 8^2 + 8^2 + 10^2 + 12^2 + 12^2 \quad = 33 + 82 + 82 + 102 + 122 + 122$

$552 := 2^2 + 8^2 + 11^2 + 11^2 + 11^2 + 11^2 \quad = 22 + 82 + 112 + 112 + 112 + 112$
$:= 2^2 + 9^2 + 9^2 + 11^2 + 11^2 + 12^2 \quad = 22 + 92 + 92 + 112 + 112 + 122$
$:= 3^2 + 6^2 + 11^2 + 11^2 + 11^2 + 12^2 \quad = 32 + 62 + 112 + 112 + 112 + 122$
$:= 3^2 + 10^2 + 10^2 + 11^2 + 11^2 + 11^2 = 32 + 102 + 102 + 112 + 112 + 112$
$:= 4^2 + 7^2 + 11^2 + 11^2 + 11^2 + 12^2 \quad = 42 + 72 + 112 + 112 + 112 + 122$

$$592 := 5^2 + 9^2 + 10^2 + 11^2 + 11^2 + 12^2 = 52 + 92 + 102 + 112 + 112 + 122$$
$$:= 6^2 + 7^2 + 11^2 + 11^2 + 11^2 + 12^2 = 62 + 72 + 112 + 112 + 112 + 122$$

$$612 := 7^2 + 10^2 + 10^2 + 11^2 + 11^2 + 11^2 = 72 + 102 + 102 + 112 + 112 + 112$$
$$:= 8^2 + 8^2 + 11^2 + 11^2 + 11^2 + 11^2 = 82 + 82 + 112 + 112 + 112 + 112$$
$$:= 8^2 + 9^2 + 9^2 + 11^2 + 11^2 + 12^2 = 82 + 92 + 92 + 112 + 112 + 122$$
$$:= 9^2 + 9^2 + 9^2 + 9^2 + 12^2 + 12^2 = 92 + 92 + 92 + 92 + 122 + 122$$

7.3 Seven Terms Expressions

This section deals with seven terms equality expressions, where we have considered only positive expressions with both powers and bases bigger than one.

$$168 := 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 = 22 + 22 + 24 + 24 + 25 + 25 + 26$$
$$173 := 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 3^2 = 22 + 23 + 23 + 23 + 23 + 27 + 32$$

$$177 := 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 = 22 + 22 + 25 + 25 + 25 + 26 + 32$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 = 23 + 23 + 23 + 24 + 26 + 26 + 32$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 3^4 = 23 + 23 + 24 + 24 + 24 + 25 + 34$$

$$179 := 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 = 23 + 24 + 24 + 24 + 25 + 26 + 33$$
$$180 := 2^2 + 2^2 + 2^2 + 2^2 + 2^7 + 3^2 + 3^3 = 22 + 22 + 22 + 22 + 27 + 32 + 33$$
$$182 := 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 3^2 + 3^4 = 22 + 22 + 22 + 24 + 26 + 32 + 34$$

$$184 := 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 4^3 = 22 + 22 + 23 + 23 + 25 + 26 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 4^2 = 23 + 23 + 23 + 23 + 23 + 27 + 42$$

$$186 := 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^2 + 3^4 = 23 + 23 + 24 + 25 + 25 + 32 + 34$$

$$188 := 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 4^2 = 22 + 23 + 25 + 25 + 25 + 26 + 42$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 = 23 + 24 + 25 + 25 + 26 + 32 + 33$$

$$191 := 2^2 + 2^2 + 2^2 + 2^3 + 2^7 + 3^3 + 4^2 = 22 + 22 + 22 + 23 + 27 + 33 + 42$$

$$193 := 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^7 + 5^2 = 22 + 22 + 23 + 23 + 24 + 27 + 52$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 3^4 + 4^2 = 22 + 22 + 23 + 24 + 26 + 34 + 42$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 3^2 + 4^2 = 22 + 22 + 24 + 24 + 27 + 32 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 5^3 = 22 + 23 + 23 + 24 + 24 + 24 + 53$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 3^4 + 4^3 = 23 + 23 + 23 + 23 + 24 + 34 + 43$$

$$\mathbf{195} := 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 3^3 + 4^2 = 22 + 22 + 24 + 26 + 26 + 33 + 42$$
$$:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 3^3 + 4^3 = 22 + 22 + 25 + 25 + 25 + 33 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 3^3 + 4^3 = 23 + 23 + 23 + 24 + 26 + 33 + 43$$

$$\mathbf{197} := 2^2 + 2^3 + 2^4 + 2^4 + 2^6 + 2^6 + 5^2 = 22 + 23 + 24 + 24 + 26 + 26 + 52$$

$$\mathbf{200} := 2^2 + 2^2 + 2^2 + 2^4 + 3^3 + 3^4 + 4^3 = 22 + 22 + 22 + 24 + 33 + 34 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 3^2 + 3^2 + 3^4 + 3^4 = 22 + 23 + 23 + 32 + 32 + 34 + 34$$

$$\mathbf{201} := 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 5^2 = 24 + 25 + 25 + 25 + 25 + 25 + 52$$

$$\mathbf{202} := 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 3^2 + 4^2 = 22 + 22 + 25 + 27 + 32 + 32 + 42$$
$$:= 2^2 + 2^2 + 2^5 + 3^3 + 3^3 + 3^3 + 3^4 = 22 + 22 + 25 + 33 + 33 + 33 + 34$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 3^2 + 5^3 = 22 + 23 + 23 + 24 + 25 + 32 + 53$$
$$:= 2^2 + 2^3 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 = 22 + 23 + 26 + 32 + 32 + 33 + 34$$
$$:= 2^2 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 = 22 + 24 + 27 + 32 + 32 + 32 + 33$$

$$\mathbf{204} := 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 4^3 + 4^3 = 22 + 23 + 24 + 24 + 25 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^7 + 4^2 + 4^2 = 22 + 23 + 24 + 24 + 27 + 42 + 42$$
$$:= 2^2 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 = 22 + 26 + 26 + 32 + 32 + 33 + 33$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 6^2 = 23 + 23 + 23 + 23 + 23 + 27 + 62$$
$$:= 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 = 24 + 24 + 26 + 32 + 32 + 32 + 34$$

$$\mathbf{206} := 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 3^2 + 5^2 = 22 + 23 + 25 + 26 + 26 + 32 + 52$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 3^4 + 5^2 = 22 + 24 + 24 + 25 + 25 + 34 + 52$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 4^3 = 23 + 24 + 25 + 25 + 33 + 33 + 43$$

$$\mathbf{208} := 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 6^2 = 22 + 23 + 25 + 25 + 25 + 26 + 62$$
$$:= 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 4^2 + 4^2 = 24 + 24 + 24 + 26 + 26 + 42 + 42$$
$$:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 4^2 + 4^3 = 24 + 24 + 25 + 25 + 25 + 42 + 43$$

$$\mathbf{211} := 2^2 + 2^2 + 2^2 + 2^3 + 2^7 + 3^3 + 6^2 = 22 + 22 + 22 + 23 + 27 + 33 + 62$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 3^3 + 3^3 + 5^3 = 23 + 23 + 23 + 23 + 33 + 33 + 53$$
$$:= 2^3 + 2^3 + 2^3 + 3^2 + 3^4 + 3^4 + 4^2 = 23 + 23 + 23 + 32 + 34 + 34 + 42$$

$213 := 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 3^4 + 6^2 = 22 + 22 + 23 + 24 + 26 + 34 + 62$
$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 3^2 + 6^2 = 22 + 22 + 24 + 24 + 27 + 32 + 62$
$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 7^2 = 22 + 23 + 23 + 23 + 23 + 27 + 72$
$:= 2^2 + 2^3 + 2^5 + 2^5 + 3^2 + 4^3 + 4^3 = 22 + 23 + 25 + 25 + 32 + 43 + 43$
$:= 2^2 + 2^3 + 2^5 + 2^7 + 3^2 + 4^2 + 4^2 = 22 + 23 + 25 + 27 + 32 + 42 + 42$
$:= 2^2 + 2^4 + 2^4 + 2^4 + 3^4 + 4^2 + 4^3 = 22 + 24 + 24 + 24 + 34 + 42 + 43$

$213 := 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 4^2 + 5^3 = 23 + 23 + 23 + 24 + 25 + 42 + 53$
$:= 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 3^3 + 5^2 = 23 + 23 + 23 + 27 + 32 + 33 + 52$
$:= 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 3^4 + 4^2 = 23 + 23 + 26 + 32 + 33 + 34 + 42$
$:= 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 = 23 + 24 + 27 + 32 + 32 + 33 + 42$
$:= 2^3 + 2^4 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 23 + 24 + 33 + 33 + 33 + 33 + 34$
$:= 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 = 25 + 26 + 32 + 32 + 32 + 32 + 34$

$215 := 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 3^3 + 6^2 = 22 + 22 + 24 + 26 + 26 + 33 + 62$
$:= 2^2 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 5^2 = 22 + 25 + 25 + 25 + 32 + 34 + 52$
$:= 2^3 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 4^2 = 23 + 26 + 26 + 32 + 33 + 33 + 42$
$:= 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^4 + 4^2 = 24 + 24 + 25 + 33 + 33 + 34 + 42$
$:= 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 = 24 + 26 + 33 + 33 + 33 + 33 + 33$

$217 := 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 7^2 = 22 + 22 + 25 + 25 + 25 + 26 + 72$
$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 7^2 = 23 + 23 + 23 + 24 + 26 + 26 + 72$
$:= 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 4^2 + 5^2 = 23 + 23 + 25 + 26 + 26 + 42 + 52$
$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 4^3 + 5^2 = 24 + 24 + 24 + 24 + 26 + 43 + 52$
$:= 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 + 4^2 = 24 + 25 + 26 + 26 + 32 + 42 + 42$
$:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 4^2 + 4^3 = 25 + 25 + 25 + 25 + 32 + 42 + 43$

$218 := 2^2 + 2^2 + 2^2 + 3^3 + 3^3 + 3^3 + 5^3 = 22 + 22 + 22 + 33 + 33 + 33 + 53$

$220 := 2^2 + 2^2 + 2^2 + 2^2 + 2^7 + 3^3 + 7^2 = 22 + 22 + 22 + 22 + 27 + 33 + 72$
$:= 2^2 + 2^2 + 2^2 + 2^6 + 4^2 + 4^3 + 4^3 = 22 + 22 + 22 + 26 + 42 + 43 + 43$
$:= 2^2 + 2^2 + 2^4 + 3^2 + 3^4 + 3^4 + 5^2 = 22 + 22 + 24 + 32 + 34 + 34 + 52$
$:= 2^2 + 2^3 + 2^3 + 2^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 23 + 23 + 43 + 43 + 43$
$:= 2^2 + 2^3 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 23 + 32 + 33 + 33 + 34 + 43$

$222 := 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 3^4 + 7^2 = 22 + 22 + 22 + 24 + 26 + 34 + 72$
$:= 2^2 + 2^2 + 2^2 + 2^5 + 2^7 + 5^2 + 5^2 = 22 + 22 + 22 + 25 + 27 + 52 + 52$

$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 5^2 + 5^3 = 22 + 22 + 24 + 24 + 25 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 3^2 + 6^2 = 22 + 22 + 25 + 27 + 32 + 32 + 62$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 3^4 + 4^3 + 5^2 = 22 + 23 + 23 + 25 + 34 + 43 + 52$$
$$:= 2^2 + 2^4 + 2^5 + 3^2 + 3^4 + 4^2 + 4^3 = 22 + 24 + 25 + 32 + 34 + 42 + 43$$
$$:= 2^2 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 = 22 + 26 + 32 + 33 + 33 + 33 + 43$$
$$:= 2^4 + 2^4 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 24 + 24 + 32 + 32 + 33 + 34 + 43$$

$$224 := 2^2 + 2^3 + 2^4 + 2^4 + 2^7 + 4^2 + 6^2 = 22 + 23 + 24 + 24 + 27 + 42 + 62$$
$$:= 2^2 + 2^3 + 2^5 + 2^6 + 3^3 + 4^3 + 5^2 = 22 + 23 + 25 + 26 + 33 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 4^2 + 4^3 + 4^3 = 23 + 23 + 25 + 25 + 42 + 43 + 43$$
$$:= 2^3 + 2^3 + 2^5 + 2^7 + 4^2 + 4^2 + 4^2 = 23 + 23 + 25 + 27 + 42 + 42 + 42$$
$$:= 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 = 25 + 25 + 32 + 33 + 33 + 34 + 42$$

$$226 := 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^4 + 7^2 = 23 + 23 + 24 + 25 + 25 + 34 + 72$$
$$:= 2^3 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 5^2 = 23 + 25 + 25 + 25 + 34 + 42 + 52$$
$$:= 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 4^3 + 5^2 = 24 + 24 + 25 + 26 + 32 + 43 + 52$$

$$228 := 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 8^2 = 22 + 24 + 24 + 25 + 25 + 26 + 82$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 7^2 = 23 + 24 + 25 + 25 + 26 + 33 + 72$$
$$:= 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 4^2 + 6^2 = 24 + 24 + 24 + 26 + 26 + 42 + 62$$
$$:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 4^3 + 6^2 = 24 + 24 + 25 + 25 + 25 + 43 + 62$$
$$:= 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 5^2 = 25 + 25 + 25 + 26 + 33 + 42 + 52$$

$$229 := 2^2 + 2^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 22 + 33 + 34 + 34 + 42 + 42$$
$$:= 2^2 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 5^3 = 22 + 26 + 32 + 32 + 32 + 32 + 53$$

$$231 := 2^2 + 2^2 + 2^5 + 2^5 + 3^2 + 5^2 + 5^3 = 22 + 22 + 25 + 25 + 32 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^7 + 3^3 + 3^3 + 4^2 + 5^2 = 22 + 22 + 27 + 33 + 33 + 42 + 52$$
$$:= 2^2 + 2^3 + 2^4 + 3^4 + 3^4 + 4^2 + 5^2 = 22 + 23 + 24 + 34 + 34 + 42 + 52$$
$$:= 2^2 + 2^4 + 2^4 + 3^3 + 3^3 + 4^2 + 5^3 = 22 + 24 + 24 + 33 + 33 + 42 + 53$$
$$:= 2^3 + 2^3 + 2^3 + 3^2 + 3^4 + 3^4 + 6^2 = 23 + 23 + 23 + 32 + 34 + 34 + 62$$
$$:= 2^3 + 2^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 23 + 23 + 33 + 33 + 34 + 42 + 43$$
$$:= 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 25 + 32 + 32 + 32 + 33 + 34 + 43$$

$$233 := 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 4^2 + 7^2 = 22 + 22 + 24 + 24 + 27 + 42 + 72$$
$$:= 2^2 + 2^3 + 2^4 + 2^7 + 3^3 + 5^2 + 5^2 = 22 + 23 + 24 + 27 + 33 + 52 + 52$$
$$:= 2^2 + 2^3 + 2^5 + 2^7 + 3^2 + 4^2 + 6^2 = 22 + 23 + 25 + 27 + 32 + 42 + 62$$

$$:= 2^2 + 2^4 + 2^4 + 2^4 + 3^4 + 4^3 + 6^2 = 22 + 24 + 24 + 24 + 34 + 43 + 62$$
$$:= 2^2 + 2^4 + 2^6 + 3^3 + 3^4 + 4^2 + 5^2 = 22 + 24 + 26 + 33 + 34 + 42 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 8^2 = 23 + 23 + 23 + 23 + 27 + 32 + 82$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 5^3 + 6^2 = 23 + 23 + 23 + 24 + 25 + 53 + 62$$
$$:= 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 3^4 + 6^2 = 23 + 23 + 26 + 32 + 33 + 34 + 62$$
$$:= 2^3 + 2^4 + 2^4 + 2^4 + 3^3 + 5^2 + 5^3 = 23 + 24 + 24 + 24 + 33 + 52 + 53$$
$$:= 2^3 + 2^4 + 2^5 + 3^4 + 4^2 + 4^2 + 4^3 = 23 + 24 + 25 + 34 + 42 + 42 + 43$$
$$:= 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 6^2 = 23 + 24 + 27 + 32 + 32 + 33 + 62$$
$$:= 2^3 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 = 23 + 26 + 33 + 33 + 33 + 42 + 43$$

$$\mathbf{235} := 2^3 + 2^4 + 2^4 + 2^6 + 3^4 + 5^2 + 5^2 = 23 + 24 + 24 + 26 + 34 + 52 + 52$$
$$:= 2^3 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 6^2 = 23 + 26 + 26 + 32 + 33 + 33 + 62$$
$$:= 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 5^2 + 5^2 = 24 + 24 + 24 + 27 + 32 + 52 + 52$$
$$:= 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^4 + 6^2 = 24 + 24 + 25 + 33 + 33 + 34 + 62$$
$$:= 2^4 + 2^5 + 2^6 + 3^3 + 4^2 + 4^2 + 4^3 = 24 + 25 + 26 + 33 + 42 + 42 + 43$$
$$:= 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 4^3 + 5^2 = 25 + 25 + 26 + 32 + 32 + 43 + 52$$

$$\mathbf{237} := 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 8^2 = 22 + 25 + 25 + 25 + 26 + 32 + 82$$
$$:= 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 5^2 + 6^2 = 23 + 23 + 25 + 26 + 26 + 52 + 62$$
$$:= 2^4 + 2^4 + 2^6 + 2^6 + 3^3 + 5^2 + 5^2 = 24 + 24 + 26 + 26 + 33 + 52 + 52$$
$$:= 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 + 6^2 = 24 + 25 + 26 + 26 + 32 + 42 + 62$$
$$:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 4^3 + 6^2 = 25 + 25 + 25 + 25 + 32 + 43 + 62$$

$$\mathbf{238} := 2^2 + 2^2 + 2^3 + 2^3 + 4^3 + 5^2 + 5^3 = 22 + 22 + 23 + 23 + 43 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^4 + 3^2 + 4^2 + 4^3 + 5^3 = 22 + 22 + 24 + 32 + 42 + 43 + 53$$

$$\mathbf{240} := 2^2 + 2^2 + 2^2 + 2^6 + 4^3 + 4^3 + 6^2 = 22 + 22 + 22 + 26 + 43 + 43 + 62$$
$$:= 2^2 + 2^2 + 2^2 + 2^7 + 3^2 + 3^3 + 8^2 = 22 + 22 + 22 + 27 + 32 + 33 + 82$$
$$:= 2^2 + 2^3 + 2^3 + 3^2 + 3^4 + 3^4 + 7^2 = 22 + 23 + 23 + 32 + 34 + 34 + 72$$
$$:= 2^2 + 2^5 + 3^2 + 3^3 + 3^3 + 4^2 + 5^3 = 22 + 25 + 32 + 33 + 33 + 42 + 53$$
$$:= 2^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 22 + 33 + 33 + 33 + 33 + 43 + 43$$
$$:= 2^3 + 2^6 + 3^2 + 3^2 + 3^2 + 4^2 + 5^3 = 23 + 26 + 32 + 32 + 32 + 42 + 53$$
$$:= 2^3 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 5^2 = 23 + 32 + 32 + 33 + 34 + 34 + 52$$
$$:= 2^4 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 5^3 = 24 + 32 + 32 + 33 + 33 + 33 + 53$$

$$\mathbf{242} := 2^2 + 2^2 + 2^4 + 2^6 + 3^2 + 3^4 + 8^2 = 22 + 22 + 24 + 26 + 32 + 34 + 82$$
$$:= 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 4^2 + 7^2 = 22 + 22 + 25 + 27 + 32 + 42 + 72$$

$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 5^3 + 7^2 = 22 + 23 + 23 + 24 + 25 + 53 + 72$$
$$:= 2^2 + 2^3 + 2^5 + 2^5 + 4^2 + 5^2 + 5^3 = 22 + 23 + 25 + 25 + 42 + 52 + 53$$
$$:= 2^2 + 2^3 + 2^6 + 3^2 + 3^3 + 3^4 + 7^2 = 22 + 23 + 26 + 32 + 33 + 34 + 72$$
$$:= 2^2 + 2^4 + 2^5 + 3^2 + 3^4 + 4^3 + 6^2 = 22 + 24 + 25 + 32 + 34 + 43 + 62$$
$$:= 2^2 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 7^2 = 22 + 24 + 27 + 32 + 32 + 33 + 72$$
$$:= 2^3 + 2^3 + 2^6 + 3^2 + 4^3 + 4^3 + 5^2 = 23 + 23 + 26 + 32 + 43 + 43 + 52$$
$$:= 2^3 + 2^4 + 2^5 + 3^2 + 3^3 + 5^2 + 5^3 = 23 + 24 + 25 + 32 + 33 + 52 + 53$$
$$:= 2^4 + 2^4 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 24 + 24 + 34 + 34 + 42 + 42 + 42$$
$$:= 2^4 + 2^6 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 = 24 + 26 + 32 + 32 + 42 + 43 + 43$$
$$:= 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 5^2 = 26 + 32 + 32 + 33 + 33 + 34 + 52$$

$$244 := 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 4^3 + 8^2 = 22 + 23 + 23 + 25 + 26 + 43 + 82$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^7 + 6^2 + 6^2 = 22 + 23 + 24 + 24 + 27 + 62 + 62$$
$$:= 2^2 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 7^2 = 22 + 26 + 26 + 32 + 33 + 33 + 72$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 4^3 + 4^3 + 6^2 = 23 + 23 + 25 + 25 + 43 + 43 + 62$$
$$:= 2^3 + 2^3 + 2^5 + 2^7 + 4^2 + 4^2 + 6^2 = 23 + 23 + 25 + 27 + 42 + 42 + 62$$
$$:= 2^3 + 2^5 + 2^6 + 3^2 + 3^4 + 5^2 + 5^2 = 23 + 25 + 26 + 32 + 34 + 52 + 52$$
$$:= 2^4 + 2^4 + 2^5 + 3^3 + 4^3 + 4^3 + 5^2 = 24 + 24 + 25 + 33 + 43 + 43 + 52$$
$$:= 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 7^2 = 24 + 24 + 26 + 32 + 32 + 34 + 72$$
$$:= 2^4 + 2^4 + 2^7 + 3^3 + 4^2 + 4^2 + 5^2 = 24 + 24 + 27 + 33 + 42 + 42 + 52$$
$$:= 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 5^2 + 5^2 = 24 + 25 + 27 + 32 + 32 + 52 + 52$$
$$:= 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^4 + 6^2 = 25 + 25 + 32 + 33 + 33 + 34 + 62$$

$$246 := 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 5^2 + 7^2 = 22 + 23 + 25 + 26 + 26 + 52 + 72$$
$$:= 2^3 + 2^5 + 2^5 + 2^5 + 3^4 + 5^2 + 6^2 = 23 + 25 + 25 + 25 + 34 + 52 + 62$$
$$:= 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 5^2 + 5^2 = 25 + 26 + 26 + 32 + 33 + 52 + 52$$

$$247 := 2^2 + 3^2 + 3^2 + 3^2 + 3^3 + 4^3 + 5^3 = 22 + 32 + 32 + 32 + 33 + 43 + 53$$

$$248 := 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 4^2 + 8^2 = 23 + 25 + 25 + 25 + 26 + 42 + 82$$
$$:= 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 6^2 + 6^2 = 24 + 24 + 24 + 26 + 26 + 62 + 62$$
$$:= 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 5^2 + 6^2 = 25 + 25 + 25 + 26 + 33 + 52 + 62$$

$$249 := 2^2 + 2^2 + 3^3 + 3^4 + 3^4 + 4^2 + 6^2 = 22 + 22 + 33 + 34 + 34 + 42 + 62$$
$$:= 2^2 + 2^3 + 2^4 + 4^2 + 4^2 + 4^3 + 5^3 = 22 + 23 + 24 + 42 + 42 + 43 + 53$$

$$251 := 2^2 + 2^2 + 2^3 + 2^7 + 3^3 + 4^2 + 8^2 = 22 + 22 + 23 + 27 + 33 + 42 + 82$$

$$:= 2^2 + 2^2 + 2^7 + 3^3 + 3^3 + 5^2 + 6^2 = 22 + 22 + 27 + 33 + 33 + 52 + 62$$
$$:= 2^2 + 2^3 + 2^4 + 3^4 + 3^4 + 5^2 + 6^2 = 22 + 23 + 24 + 34 + 34 + 52 + 62$$
$$:= 2^2 + 2^4 + 2^4 + 3^3 + 3^3 + 5^3 + 6^2 = 22 + 24 + 24 + 33 + 33 + 53 + 62$$
$$:= 2^3 + 2^3 + 2^3 + 3^4 + 3^4 + 4^2 + 7^2 = 23 + 23 + 23 + 34 + 34 + 42 + 72$$
$$:= 2^3 + 2^3 + 3^3 + 3^3 + 3^4 + 4^3 + 6^2 = 23 + 23 + 33 + 33 + 34 + 43 + 62$$
$$:= 2^3 + 2^5 + 3^3 + 3^3 + 4^2 + 4^2 + 5^3 = 23 + 25 + 33 + 33 + 42 + 42 + 53$$
$$:= 2^5 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 25 + 32 + 34 + 34 + 42 + 42 + 42$$

$$253 := 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 6^2 + 7^2 = 22 + 22 + 24 + 24 + 27 + 62 + 72$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^7 + 5^2 + 8^2 = 22 + 23 + 23 + 24 + 27 + 52 + 82$$
$$:= 2^2 + 2^3 + 2^4 + 2^6 + 3^4 + 4^2 + 8^2 = 22 + 23 + 24 + 26 + 34 + 42 + 82$$
$$:= 2^2 + 2^3 + 2^5 + 2^5 + 4^3 + 4^3 + 7^2 = 22 + 23 + 25 + 25 + 43 + 43 + 72$$
$$:= 2^2 + 2^3 + 2^5 + 2^7 + 3^2 + 6^2 + 6^2 = 22 + 23 + 25 + 27 + 32 + 62 + 62$$
$$:= 2^2 + 2^3 + 2^5 + 2^7 + 4^2 + 4^2 + 7^2 = 22 + 23 + 25 + 27 + 42 + 42 + 72$$
$$:= 2^2 + 2^4 + 2^4 + 2^7 + 3^2 + 4^2 + 8^2 = 22 + 24 + 24 + 27 + 32 + 42 + 82$$
$$:= 2^2 + 2^4 + 2^6 + 3^3 + 3^4 + 5^2 + 6^2 = 22 + 24 + 26 + 33 + 34 + 52 + 62$$
$$:= 2^2 + 2^6 + 2^6 + 4^2 + 4^2 + 4^3 + 5^2 = 22 + 26 + 26 + 42 + 42 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^7 + 3^3 + 5^2 + 7^2 = 23 + 23 + 23 + 27 + 33 + 52 + 72$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 5^3 + 8^2 = 23 + 23 + 24 + 24 + 24 + 53 + 82$$
$$:= 2^3 + 2^3 + 2^6 + 3^3 + 3^4 + 4^2 + 7^2 = 23 + 23 + 26 + 33 + 34 + 42 + 72$$
$$:= 2^3 + 2^4 + 2^5 + 3^4 + 4^2 + 4^3 + 6^2 = 23 + 24 + 25 + 34 + 42 + 43 + 62$$
$$:= 2^3 + 2^4 + 2^7 + 3^2 + 3^3 + 4^2 + 7^2 = 23 + 24 + 27 + 32 + 33 + 42 + 72$$
$$:= 2^3 + 2^6 + 3^3 + 3^3 + 3^3 + 4^3 + 6^2 = 23 + 26 + 33 + 33 + 33 + 43 + 62$$
$$:= 2^4 + 2^5 + 2^5 + 4^2 + 4^2 + 4^2 + 5^3 = 24 + 25 + 25 + 42 + 42 + 42 + 53$$
$$:= 2^5 + 2^5 + 3^2 + 3^3 + 4^3 + 4^3 + 5^2 = 25 + 25 + 32 + 33 + 43 + 43 + 52$$
$$:= 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 7^2 = 25 + 26 + 32 + 32 + 32 + 34 + 72$$
$$:= 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 5^2 = 25 + 27 + 32 + 33 + 42 + 42 + 52$$

$$255 := 2^2 + 2^4 + 2^6 + 2^6 + 3^3 + 4^2 + 8^2 = 22 + 24 + 26 + 26 + 33 + 42 + 82$$
$$:= 2^2 + 2^5 + 2^5 + 2^5 + 3^3 + 4^3 + 8^2 = 22 + 25 + 25 + 25 + 33 + 43 + 82$$
$$:= 2^2 + 2^5 + 2^5 + 2^5 + 3^4 + 5^2 + 7^2 = 22 + 25 + 25 + 25 + 34 + 52 + 72$$
$$:= 2^3 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 + 7^2 = 23 + 26 + 26 + 33 + 33 + 42 + 72$$
$$:= 2^4 + 2^5 + 2^6 + 3^3 + 4^2 + 4^3 + 6^2 = 24 + 25 + 26 + 33 + 42 + 43 + 62$$

$$257 := 2^3 + 2^4 + 2^4 + 2^6 + 2^6 + 5^2 + 8^2 = 23 + 24 + 24 + 26 + 26 + 52 + 82$$
$$:= 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 6^2 + 6^2 = 24 + 25 + 26 + 26 + 32 + 62 + 62$$
$$:= 2^4 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 7^2 = 24 + 25 + 26 + 26 + 42 + 42 + 72$$

$$:= 2^5 + 2^5 + 2^5 + 2^5 + 4^2 + 4^3 + 7^2 = 25 + 25 + 25 + 25 + 42 + 43 + 72$$

$$\mathbf{258} := 2^2 + 2^2 + 2^4 + 3^2 + 4^3 + 5^3 + 6^2 = 22 + 22 + 24 + 32 + 43 + 53 + 62$$
$$:= 2^2 + 2^2 + 3^4 + 4^2 + 4^3 + 4^3 + 5^2 = 22 + 22 + 34 + 42 + 43 + 43 + 52$$
$$:= 2^3 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 + 5^3 = 23 + 32 + 32 + 33 + 42 + 43 + 53$$

$$\mathbf{260} := 2^2 + 2^2 + 2^4 + 3^3 + 3^4 + 4^3 + 8^2 = 22 + 22 + 24 + 33 + 34 + 43 + 82$$
$$:= 2^2 + 2^2 + 2^4 + 3^4 + 3^4 + 5^2 + 7^2 = 22 + 22 + 24 + 34 + 34 + 52 + 72$$
$$:= 2^2 + 2^3 + 2^6 + 3^2 + 5^2 + 5^2 + 5^3 = 22 + 23 + 26 + 32 + 52 + 52 + 53$$
$$:= 2^2 + 2^3 + 3^3 + 3^3 + 3^4 + 4^3 + 7^2 = 22 + 23 + 33 + 33 + 34 + 43 + 72$$
$$:= 2^2 + 2^5 + 3^2 + 3^3 + 3^3 + 5^3 + 6^2 = 22 + 25 + 32 + 33 + 33 + 53 + 62$$
$$:= 2^2 + 2^5 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 25 + 42 + 42 + 43 + 43 + 43$$
$$:= 2^2 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 27 + 42 + 42 + 42 + 42 + 43$$
$$:= 2^3 + 2^3 + 3^2 + 3^2 + 3^4 + 3^4 + 8^2 = 23 + 23 + 32 + 32 + 34 + 34 + 82$$
$$:= 2^3 + 2^3 + 3^3 + 4^3 + 4^3 + 4^3 + 5^2 = 23 + 23 + 33 + 43 + 43 + 43 + 52$$
$$:= 2^3 + 2^6 + 3^2 + 3^2 + 3^2 + 5^3 + 6^2 = 23 + 26 + 32 + 32 + 32 + 53 + 62$$
$$:= 2^4 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 24 + 32 + 33 + 42 + 43 + 43 + 43$$
$$:= 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 + 5^2 = 27 + 32 + 32 + 32 + 42 + 43 + 52$$
$$:= 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 + 5^2 = 32 + 33 + 33 + 33 + 34 + 43 + 52$$

$$\mathbf{262} := 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 6^2 + 7^2 = 22 + 22 + 25 + 27 + 32 + 62 + 72$$
$$:= 2^2 + 2^3 + 2^5 + 2^5 + 5^2 + 5^3 + 6^2 = 22 + 23 + 25 + 25 + 52 + 53 + 62$$
$$:= 2^2 + 2^4 + 2^5 + 3^4 + 4^2 + 4^3 + 7^2 = 22 + 24 + 25 + 34 + 42 + 43 + 72$$
$$:= 2^2 + 2^4 + 2^6 + 4^3 + 4^3 + 5^2 + 5^2 = 22 + 24 + 26 + 43 + 43 + 52 + 52$$
$$:= 2^2 + 2^5 + 2^7 + 3^2 + 3^2 + 4^2 + 8^2 = 22 + 25 + 27 + 32 + 32 + 42 + 82$$
$$:= 2^2 + 2^5 + 3^3 + 3^3 + 3^3 + 3^4 + 8^2 = 22 + 25 + 33 + 33 + 33 + 34 + 82$$
$$:= 2^2 + 2^6 + 3^3 + 3^3 + 3^3 + 4^3 + 7^2 = 22 + 26 + 33 + 33 + 33 + 43 + 72$$
$$:= 2^3 + 2^3 + 2^4 + 2^5 + 3^2 + 5^3 + 8^2 = 23 + 23 + 24 + 25 + 32 + 53 + 82$$
$$:= 2^3 + 2^5 + 3^3 + 3^4 + 4^3 + 5^2 + 5^2 = 23 + 25 + 33 + 34 + 43 + 52 + 52$$
$$:= 2^3 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 8^2 = 23 + 26 + 32 + 32 + 33 + 34 + 82$$
$$:= 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 4^3 + 7^2 = 24 + 24 + 32 + 33 + 34 + 43 + 72$$
$$:= 2^4 + 2^4 + 3^4 + 3^4 + 4^2 + 4^2 + 6^2 = 24 + 24 + 34 + 34 + 42 + 42 + 62$$
$$:= 2^4 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 + 6^2 = 24 + 26 + 32 + 32 + 43 + 43 + 62$$
$$:= 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 8^2 = 24 + 27 + 32 + 32 + 32 + 33 + 82$$

$$\mathbf{264} := 2^3 + 2^3 + 2^5 + 2^7 + 4^2 + 6^2 + 6^2 = 23 + 23 + 25 + 27 + 42 + 62 + 62$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 4^3 + 4^3 + 8^2 = 23 + 24 + 24 + 25 + 43 + 43 + 82$$

$$:= 2^3 + 2^4 + 2^4 + 2^7 + 4^2 + 4^2 + 8^2 = 23 + 24 + 24 + 27 + 42 + 42 + 82$$
$$:= 2^4 + 2^4 + 2^7 + 3^3 + 4^2 + 5^2 + 6^2 = 24 + 24 + 27 + 33 + 42 + 52 + 62$$
$$:= 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 4^2 + 7^2 = 25 + 25 + 33 + 33 + 34 + 42 + 72$$
$$:= 2^5 + 2^6 + 3^3 + 3^3 + 4^3 + 5^2 + 5^2 = 25 + 26 + 33 + 33 + 43 + 52 + 52$$
$$:= 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 8^2 = 26 + 26 + 32 + 32 + 33 + 33 + 82$$

$$266 := 2^3 + 2^5 + 2^6 + 2^6 + 3^2 + 5^2 + 8^2 = 23 + 25 + 26 + 26 + 32 + 52 + 82$$
$$:= 2^4 + 2^4 + 2^5 + 2^5 + 3^4 + 5^2 + 8^2 = 24 + 24 + 25 + 25 + 34 + 52 + 82$$
$$:= 2^4 + 2^4 + 2^5 + 2^6 + 4^3 + 5^2 + 7^2 = 24 + 24 + 25 + 26 + 43 + 52 + 72$$

$$267 := 2^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 = 22 + 32 + 34 + 42 + 42 + 42 + 53$$
$$:= 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 5^2 + 5^3 = 32 + 32 + 32 + 32 + 34 + 52 + 53$$

$$268 := 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 6^2 + 8^2 = 23 + 25 + 25 + 25 + 26 + 62 + 82$$

$$269 := 2^2 + 2^2 + 3^3 + 3^4 + 3^4 + 6^2 + 6^2 = 22 + 22 + 33 + 34 + 34 + 62 + 62$$
$$:= 2^2 + 2^3 + 2^4 + 4^2 + 4^3 + 5^3 + 6^2 = 22 + 23 + 24 + 42 + 43 + 53 + 62$$
$$:= 2^2 + 2^6 + 3^2 + 3^2 + 3^2 + 5^3 + 7^2 = 22 + 26 + 32 + 32 + 32 + 53 + 72$$

$$271 := 2^2 + 2^2 + 2^3 + 2^7 + 3^3 + 6^2 + 8^2 = 22 + 22 + 23 + 27 + 33 + 62 + 82$$
$$:= 2^2 + 2^2 + 2^5 + 2^5 + 5^2 + 5^3 + 7^2 = 22 + 22 + 25 + 25 + 52 + 53 + 72$$
$$:= 2^3 + 2^3 + 2^3 + 3^4 + 3^4 + 6^2 + 7^2 = 23 + 23 + 23 + 34 + 34 + 62 + 72$$
$$:= 2^3 + 2^3 + 2^6 + 4^2 + 5^2 + 5^2 + 5^3 = 23 + 23 + 26 + 42 + 52 + 52 + 53$$
$$:= 2^3 + 2^5 + 3^3 + 3^3 + 4^2 + 5^3 + 6^2 = 23 + 25 + 33 + 33 + 42 + 53 + 62$$
$$:= 2^4 + 2^6 + 3^2 + 4^2 + 4^2 + 5^2 + 5^3 = 24 + 26 + 32 + 42 + 42 + 52 + 53$$
$$:= 2^4 + 3^3 + 3^4 + 3^4 + 4^2 + 5^2 + 5^2 = 24 + 33 + 34 + 34 + 42 + 52 + 52$$
$$:= 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 + 7^2 = 25 + 32 + 32 + 33 + 34 + 43 + 72$$
$$:= 2^5 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 6^2 = 25 + 32 + 34 + 34 + 42 + 42 + 62$$

$$273 := 2^2 + 2^3 + 2^4 + 2^6 + 3^4 + 6^2 + 8^2 = 22 + 23 + 24 + 26 + 34 + 62 + 82$$
$$:= 2^2 + 2^3 + 2^5 + 2^7 + 4^2 + 6^2 + 7^2 = 22 + 23 + 25 + 27 + 42 + 62 + 72$$
$$:= 2^2 + 2^4 + 2^4 + 2^7 + 3^2 + 6^2 + 8^2 = 22 + 24 + 24 + 27 + 32 + 62 + 82$$
$$:= 2^2 + 2^6 + 2^6 + 4^2 + 4^3 + 5^2 + 6^2 = 22 + 26 + 26 + 42 + 43 + 52 + 62$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 7^2 + 8^2 = 23 + 23 + 23 + 23 + 27 + 72 + 82$$
$$:= 2^3 + 2^3 + 2^6 + 3^3 + 3^4 + 6^2 + 7^2 = 23 + 23 + 26 + 33 + 34 + 62 + 72$$
$$:= 2^3 + 2^4 + 2^5 + 3^4 + 4^3 + 6^2 + 6^2 = 23 + 24 + 25 + 34 + 43 + 62 + 62$$
$$:= 2^3 + 2^4 + 2^7 + 3^2 + 3^3 + 6^2 + 7^2 = 23 + 24 + 27 + 32 + 33 + 62 + 72$$

$$:= 2^3 + 2^5 + 2^5 + 3^2 + 4^3 + 4^3 + 8^2 = 23 + 25 + 25 + 32 + 43 + 43 + 82$$
$$:= 2^3 + 2^5 + 2^7 + 3^2 + 4^2 + 4^2 + 8^2 = 23 + 25 + 27 + 32 + 42 + 42 + 82$$
$$:= 2^4 + 2^4 + 2^4 + 3^4 + 4^2 + 4^3 + 8^2 = 24 + 24 + 24 + 34 + 42 + 43 + 82$$
$$:= 2^4 + 2^5 + 2^5 + 4^2 + 4^2 + 5^3 + 6^2 = 24 + 25 + 25 + 42 + 42 + 53 + 62$$
$$:= 2^4 + 2^7 + 3^3 + 3^3 + 5^2 + 5^2 + 5^2 = 24 + 27 + 33 + 33 + 52 + 52 + 52$$
$$:= 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 5^2 + 6^2 = 25 + 27 + 32 + 33 + 42 + 52 + 62$$

$$275 := 2^2 + 2^4 + 2^6 + 2^6 + 3^3 + 6^2 + 8^2 = 22 + 24 + 26 + 26 + 33 + 62 + 82$$
$$:= 2^3 + 2^6 + 2^6 + 3^3 + 3^3 + 6^2 + 7^2 = 23 + 26 + 26 + 33 + 33 + 62 + 72$$
$$:= 2^4 + 2^4 + 2^4 + 2^7 + 5^2 + 5^2 + 7^2 = 24 + 24 + 24 + 27 + 52 + 52 + 72$$
$$:= 2^4 + 2^5 + 2^6 + 3^3 + 4^3 + 6^2 + 6^2 = 24 + 25 + 26 + 33 + 43 + 62 + 62$$
$$:= 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 5^2 + 8^2 = 25 + 25 + 25 + 32 + 34 + 52 + 82$$
$$:= 2^5 + 2^5 + 2^6 + 3^2 + 4^3 + 5^2 + 7^2 = 25 + 25 + 26 + 32 + 43 + 52 + 72$$

$$277 := 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 7^2 + 8^2 = 22 + 25 + 25 + 25 + 26 + 72 + 82$$
$$:= 2^4 + 2^5 + 2^6 + 2^6 + 4^2 + 6^2 + 7^2 = 24 + 25 + 26 + 26 + 42 + 62 + 72$$
$$:= 2^5 + 2^5 + 2^5 + 2^5 + 4^3 + 6^2 + 7^2 = 25 + 25 + 25 + 25 + 43 + 62 + 72$$

$$278 := 2^2 + 2^2 + 2^4 + 4^2 + 4^3 + 5^3 + 7^2 = 22 + 22 + 24 + 42 + 43 + 53 + 72$$
$$:= 2^2 + 2^2 + 3^3 + 3^3 + 3^3 + 5^3 + 8^2 = 22 + 22 + 33 + 33 + 33 + 53 + 82$$
$$:= 2^2 + 2^2 + 3^4 + 4^3 + 4^3 + 5^2 + 6^2 = 22 + 22 + 34 + 43 + 43 + 52 + 62$$
$$:= 2^2 + 2^3 + 3^3 + 4^3 + 5^2 + 5^2 + 5^3 = 22 + 23 + 33 + 43 + 52 + 52 + 53$$
$$:= 2^3 + 3^2 + 3^2 + 3^3 + 4^3 + 5^3 + 6^2 = 23 + 32 + 32 + 33 + 43 + 53 + 62$$
$$:= 2^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 5^3 = 23 + 34 + 42 + 42 + 42 + 42 + 53$$

$$280 := 2^2 + 2^2 + 2^2 + 2^7 + 3^3 + 7^2 + 8^2 = 22 + 22 + 22 + 27 + 33 + 72 + 82$$
$$:= 2^2 + 2^2 + 2^6 + 4^2 + 4^3 + 4^3 + 8^2 = 22 + 22 + 26 + 42 + 43 + 43 + 82$$
$$:= 2^2 + 2^3 + 2^3 + 3^4 + 3^4 + 7^2 + 7^2 = 22 + 23 + 23 + 34 + 34 + 72 + 72$$
$$:= 2^2 + 2^4 + 3^2 + 3^4 + 3^4 + 5^2 + 8^2 = 22 + 24 + 32 + 34 + 34 + 52 + 82$$
$$:= 2^2 + 2^5 + 3^3 + 3^3 + 4^2 + 5^3 + 7^2 = 22 + 25 + 33 + 33 + 42 + 53 + 72$$
$$:= 2^2 + 2^5 + 4^2 + 4^3 + 4^3 + 4^3 + 6^2 = 22 + 25 + 42 + 43 + 43 + 43 + 62$$
$$:= 2^2 + 2^7 + 3^2 + 4^3 + 5^2 + 5^2 + 5^2 = 22 + 27 + 32 + 43 + 52 + 52 + 52$$
$$:= 2^2 + 2^7 + 4^2 + 4^2 + 4^2 + 4^3 + 6^2 = 22 + 27 + 42 + 42 + 42 + 43 + 62$$
$$:= 2^3 + 2^3 + 2^3 + 4^3 + 4^3 + 4^3 + 8^2 = 23 + 23 + 23 + 43 + 43 + 43 + 82$$
$$:= 2^3 + 2^6 + 3^2 + 3^2 + 4^2 + 5^3 + 7^2 = 23 + 26 + 32 + 32 + 42 + 53 + 72$$
$$:= 2^3 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 + 8^2 = 23 + 32 + 33 + 33 + 34 + 43 + 82$$
$$:= 2^3 + 3^2 + 3^3 + 3^4 + 3^4 + 5^2 + 7^2 = 23 + 32 + 33 + 34 + 34 + 52 + 72$$

$$:= 2^4 + 2^4 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 = 24 + 24 + 32 + 43 + 52 + 52 + 53$$
$$:= 2^4 + 3^2 + 3^3 + 3^3 + 3^3 + 5^3 + 7^2 = 24 + 32 + 33 + 33 + 33 + 53 + 72$$
$$:= 2^4 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 + 6^2 = 24 + 32 + 33 + 43 + 43 + 43 + 62$$
$$:= 2^6 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 + 5^3 = 26 + 33 + 42 + 42 + 42 + 42 + 53$$
$$:= 2^7 + 3^2 + 3^2 + 3^2 + 4^3 + 5^2 + 6^2 = 27 + 32 + 32 + 32 + 43 + 52 + 62$$

$$282 := 2^2 + 2^2 + 2^4 + 2^6 + 3^4 + 7^2 + 8^2 = 22 + 22 + 24 + 26 + 34 + 72 + 82$$
$$:= 2^2 + 2^2 + 2^5 + 2^7 + 4^2 + 7^2 + 7^2 = 22 + 22 + 25 + 27 + 42 + 72 + 72$$
$$:= 2^2 + 2^2 + 2^5 + 2^7 + 5^2 + 5^2 + 8^2 = 22 + 22 + 25 + 27 + 52 + 52 + 82$$
$$:= 2^2 + 2^3 + 2^6 + 3^3 + 3^4 + 7^2 + 7^2 = 22 + 23 + 26 + 33 + 34 + 72 + 72$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 5^2 + 5^3 + 8^2 = 22 + 24 + 24 + 25 + 52 + 53 + 82$$
$$:= 2^2 + 2^4 + 2^5 + 3^4 + 4^3 + 6^2 + 7^2 = 22 + 24 + 25 + 34 + 43 + 62 + 72$$
$$:= 2^2 + 2^4 + 2^7 + 3^2 + 3^3 + 7^2 + 7^2 = 22 + 24 + 27 + 32 + 33 + 72 + 72$$
$$:= 2^2 + 2^5 + 2^7 + 3^2 + 3^2 + 6^2 + 8^2 = 22 + 25 + 27 + 32 + 32 + 62 + 82$$
$$:= 2^3 + 2^3 + 2^5 + 3^4 + 4^3 + 5^2 + 8^2 = 23 + 23 + 25 + 34 + 43 + 52 + 82$$
$$:= 2^3 + 2^3 + 2^6 + 4^3 + 4^3 + 5^2 + 7^2 = 23 + 23 + 26 + 43 + 43 + 52 + 72$$
$$:= 2^3 + 2^4 + 2^5 + 3^3 + 5^2 + 5^3 + 7^2 = 23 + 24 + 25 + 33 + 52 + 53 + 72$$
$$:= 2^4 + 2^4 + 3^4 + 3^4 + 4^2 + 6^2 + 6^2 = 24 + 24 + 34 + 34 + 42 + 62 + 62$$
$$:= 2^4 + 2^5 + 3^2 + 3^4 + 4^2 + 4^3 + 8^2 = 24 + 25 + 32 + 34 + 42 + 43 + 82$$
$$:= 2^4 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 + 7^2 = 24 + 26 + 32 + 42 + 43 + 43 + 72$$
$$:= 2^5 + 2^5 + 3^3 + 4^2 + 5^2 + 5^2 + 5^3 = 25 + 25 + 33 + 42 + 52 + 52 + 53$$
$$:= 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 8^2 = 26 + 32 + 33 + 33 + 33 + 43 + 82$$
$$:= 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 5^2 + 7^2 = 26 + 32 + 33 + 33 + 34 + 52 + 72$$

$$284 := 2^2 + 2^6 + 2^6 + 3^3 + 3^3 + 7^2 + 7^2 = 22 + 26 + 26 + 33 + 33 + 72 + 72$$
$$:= 2^3 + 2^3 + 2^5 + 2^7 + 6^2 + 6^2 + 6^2 = 23 + 23 + 25 + 27 + 62 + 62 + 62$$
$$:= 2^3 + 2^4 + 2^4 + 2^7 + 4^2 + 6^2 + 8^2 = 23 + 24 + 24 + 27 + 42 + 62 + 82$$
$$:= 2^3 + 2^5 + 2^6 + 3^3 + 4^3 + 5^2 + 8^2 = 23 + 25 + 26 + 33 + 43 + 52 + 82$$
$$:= 2^3 + 2^5 + 2^6 + 3^4 + 5^2 + 5^2 + 7^2 = 23 + 25 + 26 + 34 + 52 + 52 + 72$$
$$:= 2^4 + 2^4 + 2^6 + 3^2 + 3^4 + 7^2 + 7^2 = 24 + 24 + 26 + 32 + 34 + 72 + 72$$
$$:= 2^4 + 2^4 + 2^7 + 3^3 + 5^2 + 6^2 + 6^2 = 24 + 24 + 27 + 33 + 52 + 62 + 62$$
$$:= 2^4 + 2^5 + 2^7 + 3^2 + 5^2 + 5^2 + 7^2 = 24 + 25 + 27 + 32 + 52 + 52 + 72$$
$$:= 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 6^2 + 7^2 = 25 + 25 + 33 + 33 + 34 + 62 + 72$$

$$286 := 2^5 + 2^6 + 2^6 + 3^3 + 5^2 + 5^2 + 7^2 = 25 + 26 + 26 + 33 + 52 + 52 + 72$$

$$287 := 2^2 + 3^2 + 3^2 + 3^3 + 4^3 + 5^3 + 7^2 = 22 + 32 + 32 + 33 + 43 + 53 + 72$$

$$:= 2^2 + 3^2 + 3^4 + 4^2 + 4^2 + 5^3 + 6^2 = 22 + 32 + 34 + 42 + 42 + 53 + 62$$

$$\mathbf{288} := 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 8^2 + 8^2 = 24 + 24 + 25 + 25 + 26 + 82 + 82$$

$$\mathbf{289} := 2^2 + 2^3 + 2^4 + 4^3 + 5^3 + 6^2 + 6^2 = 22 + 23 + 24 + 43 + 53 + 62 + 62$$
$$:= 2^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 8^2 = 22 + 33 + 34 + 34 + 42 + 42 + 82$$
$$:= 2^4 + 3^3 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 = 24 + 33 + 42 + 42 + 43 + 52 + 53$$
$$:= 2^5 + 3^2 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 = 25 + 32 + 32 + 43 + 52 + 52 + 53$$
$$:= 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 5^3 + 8^2 = 26 + 32 + 32 + 32 + 32 + 53 + 82$$

$$\mathbf{291} := 2^2 + 2^5 + 2^5 + 3^2 + 5^2 + 5^3 + 8^2 = 22 + 25 + 25 + 32 + 52 + 53 + 82$$
$$:= 2^2 + 2^7 + 3^3 + 3^3 + 4^2 + 5^2 + 8^2 = 22 + 27 + 33 + 33 + 42 + 52 + 82$$
$$:= 2^3 + 2^3 + 2^6 + 5^2 + 5^2 + 5^3 + 6^2 = 23 + 23 + 26 + 52 + 52 + 53 + 62$$
$$:= 2^3 + 2^4 + 3^4 + 3^4 + 4^2 + 5^2 + 8^2 = 23 + 24 + 34 + 34 + 42 + 52 + 82$$
$$:= 2^3 + 2^5 + 3^3 + 3^3 + 5^3 + 6^2 + 6^2 = 23 + 25 + 33 + 33 + 53 + 62 + 62$$
$$:= 2^3 + 2^7 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 = 23 + 27 + 42 + 43 + 52 + 52 + 52$$
$$:= 2^4 + 2^4 + 3^3 + 3^3 + 4^2 + 5^3 + 8^2 = 24 + 24 + 33 + 33 + 42 + 53 + 82$$
$$:= 2^4 + 2^6 + 3^2 + 4^2 + 5^2 + 5^3 + 6^2 = 24 + 26 + 32 + 42 + 52 + 53 + 62$$
$$:= 2^4 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 + 6^2 = 24 + 33 + 34 + 34 + 52 + 52 + 62$$
$$:= 2^5 + 3^2 + 3^4 + 3^4 + 4^2 + 6^2 + 6^2 = 25 + 32 + 34 + 34 + 42 + 62 + 62$$
$$:= 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 7^2 = 25 + 34 + 34 + 42 + 42 + 42 + 72$$
$$:= 2^6 + 3^4 + 4^2 + 4^2 + 4^3 + 5^2 + 5^2 = 26 + 34 + 42 + 42 + 43 + 52 + 52$$

$$\mathbf{293} := 2^2 + 2^3 + 2^5 + 2^7 + 6^2 + 6^2 + 7^2 = 22 + 23 + 25 + 27 + 62 + 62 + 72$$
$$:= 2^2 + 2^4 + 2^4 + 2^7 + 4^2 + 7^2 + 8^2 = 22 + 24 + 24 + 27 + 42 + 72 + 82$$
$$:= 2^2 + 2^6 + 2^6 + 4^3 + 5^2 + 6^2 + 6^2 = 22 + 26 + 26 + 43 + 52 + 62 + 62$$
$$:= 2^3 + 2^4 + 2^7 + 3^3 + 4^2 + 7^2 + 7^2 = 23 + 24 + 27 + 33 + 42 + 72 + 72$$
$$:= 2^3 + 2^4 + 2^7 + 3^3 + 5^2 + 5^2 + 8^2 = 23 + 24 + 27 + 33 + 52 + 52 + 82$$
$$:= 2^3 + 2^5 + 2^7 + 3^2 + 4^2 + 6^2 + 8^2 = 23 + 25 + 27 + 32 + 42 + 62 + 82$$
$$:= 2^4 + 2^4 + 2^4 + 3^4 + 4^3 + 6^2 + 8^2 = 24 + 24 + 24 + 34 + 43 + 62 + 82$$
$$:= 2^4 + 2^5 + 2^5 + 4^2 + 5^3 + 6^2 + 6^2 = 24 + 25 + 25 + 42 + 53 + 62 + 62$$
$$:= 2^4 + 2^6 + 3^3 + 3^4 + 4^2 + 5^2 + 8^2 = 24 + 26 + 33 + 34 + 42 + 52 + 82$$
$$:= 2^5 + 2^5 + 3^3 + 4^3 + 4^3 + 5^2 + 7^2 = 25 + 25 + 33 + 43 + 43 + 52 + 72$$
$$:= 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 7^2 + 7^2 = 25 + 26 + 32 + 32 + 34 + 72 + 72$$
$$:= 2^5 + 2^7 + 3^2 + 3^3 + 5^2 + 6^2 + 6^2 = 25 + 27 + 32 + 33 + 52 + 62 + 62$$
$$:= 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 5^2 + 7^2 = 25 + 27 + 33 + 42 + 42 + 52 + 72$$

$297 := 2^4 + 2^5 + 2^6 + 2^6 + 6^2 + 6^2 + 7^2 = 24 + 25 + 26 + 26 + 62 + 62 + 72$
$:= 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 8^2 + 8^2 = 25 + 25 + 25 + 26 + 32 + 82 + 82$

$298 := 2^2 + 2^2 + 2^4 + 4^3 + 5^3 + 6^2 + 7^2 = 22 + 22 + 24 + 43 + 53 + 62 + 72$
$:= 2^2 + 2^3 + 2^3 + 4^3 + 5^2 + 5^3 + 8^2 = 22 + 23 + 23 + 43 + 52 + 53 + 82$
$:= 2^2 + 2^4 + 3^2 + 4^2 + 4^3 + 5^3 + 8^2 = 22 + 24 + 32 + 42 + 43 + 53 + 82$
$:= 2^3 + 3^2 + 3^3 + 4^2 + 4^3 + 5^3 + 7^2 = 23 + 32 + 33 + 42 + 43 + 53 + 72$
$:= 2^3 + 3^2 + 3^4 + 5^2 + 5^2 + 5^2 + 5^3 = 23 + 32 + 34 + 52 + 52 + 52 + 53$
$:= 2^3 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 + 6^2 = 23 + 34 + 42 + 42 + 42 + 53 + 62$

$300 := 2^2 + 2^2 + 2^6 + 4^3 + 4^3 + 6^2 + 8^2 = 22 + 22 + 26 + 43 + 43 + 62 + 82$
$:= 2^2 + 2^2 + 2^7 + 3^2 + 3^3 + 8^2 + 8^2 = 22 + 22 + 27 + 32 + 33 + 82 + 82$
$:= 2^2 + 2^3 + 2^6 + 5^2 + 5^2 + 5^3 + 7^2 = 22 + 23 + 26 + 52 + 52 + 53 + 72$
$:= 2^2 + 2^5 + 3^3 + 3^3 + 5^3 + 6^2 + 7^2 = 22 + 25 + 33 + 33 + 53 + 62 + 72$
$:= 2^2 + 2^5 + 4^3 + 4^3 + 4^3 + 6^2 + 6^2 = 22 + 25 + 43 + 43 + 43 + 62 + 62$
$:= 2^2 + 2^7 + 4^2 + 4^2 + 4^3 + 6^2 + 6^2 = 22 + 27 + 42 + 42 + 43 + 62 + 62$
$:= 2^3 + 2^3 + 3^2 + 3^4 + 3^4 + 7^2 + 8^2 = 23 + 23 + 32 + 34 + 34 + 72 + 82$
$:= 2^3 + 2^6 + 3^2 + 3^2 + 5^3 + 6^2 + 7^2 = 23 + 26 + 32 + 32 + 53 + 62 + 72$
$:= 2^4 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 7^2 = 24 + 33 + 42 + 43 + 43 + 43 + 72$
$:= 2^4 + 3^4 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 = 24 + 34 + 43 + 43 + 52 + 52 + 52$
$:= 2^5 + 3^2 + 3^3 + 3^3 + 4^2 + 5^3 + 8^2 = 25 + 32 + 33 + 33 + 42 + 53 + 82$
$:= 2^6 + 3^2 + 3^3 + 5^2 + 5^2 + 5^2 + 5^3 = 26 + 32 + 33 + 52 + 52 + 52 + 53$
$:= 2^6 + 3^3 + 4^2 + 4^2 + 4^2 + 5^3 + 6^2 = 26 + 33 + 42 + 42 + 42 + 53 + 62$
$:= 2^7 + 3^2 + 3^2 + 4^2 + 4^3 + 5^2 + 7^2 = 27 + 32 + 32 + 42 + 43 + 52 + 72$
$:= 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 8^2 = 33 + 33 + 33 + 33 + 43 + 43 + 82$
$:= 3^3 + 3^3 + 3^3 + 3^4 + 4^3 + 5^2 + 7^2 = 33 + 33 + 33 + 34 + 43 + 52 + 72$

$302 := 2^2 + 2^2 + 2^5 + 2^7 + 6^2 + 7^2 + 7^2 = 22 + 22 + 25 + 27 + 62 + 72 + 72$
$:= 2^2 + 2^4 + 2^6 + 3^2 + 3^4 + 8^2 + 8^2 = 22 + 24 + 26 + 32 + 34 + 82 + 82$
$:= 2^2 + 2^5 + 2^7 + 3^2 + 4^2 + 7^2 + 8^2 = 22 + 25 + 27 + 32 + 42 + 72 + 82$
$:= 2^3 + 2^3 + 2^4 + 2^5 + 5^3 + 7^2 + 8^2 = 23 + 23 + 24 + 25 + 53 + 72 + 82$
$:= 2^3 + 2^5 + 2^5 + 4^2 + 5^2 + 5^3 + 8^2 = 23 + 25 + 25 + 42 + 52 + 53 + 82$
$:= 2^3 + 2^6 + 3^2 + 3^3 + 3^4 + 7^2 + 8^2 = 23 + 26 + 32 + 33 + 34 + 72 + 82$
$:= 2^4 + 2^4 + 3^3 + 3^4 + 4^3 + 7^2 + 7^2 = 24 + 24 + 33 + 34 + 43 + 72 + 72$
$:= 2^4 + 2^4 + 3^4 + 3^4 + 6^2 + 6^2 + 6^2 = 24 + 24 + 34 + 34 + 62 + 62 + 62$
$:= 2^4 + 2^5 + 3^2 + 3^4 + 4^3 + 6^2 + 8^2 = 24 + 25 + 32 + 34 + 43 + 62 + 82$
$:= 2^4 + 2^6 + 3^2 + 4^3 + 4^3 + 6^2 + 7^2 = 24 + 26 + 32 + 43 + 43 + 62 + 72$

$$:= 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 7^2 + 8^2 = 24 + 27 + 32 + 32 + 33 + 72 + 82$$
$$:= 2^5 + 2^5 + 3^3 + 5^2 + 5^2 + 5^3 + 6^2 = 25 + 25 + 33 + 52 + 52 + 53 + 62$$

$$304 := 2^3 + 2^3 + 2^5 + 2^6 + 4^3 + 8^2 + 8^2 = 23 + 23 + 25 + 26 + 43 + 82 + 82$$
$$:= 2^3 + 2^4 + 2^4 + 2^7 + 6^2 + 6^2 + 8^2 = 23 + 24 + 24 + 27 + 62 + 62 + 82$$
$$:= 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 7^2 + 8^2 = 26 + 26 + 32 + 33 + 33 + 72 + 82$$

$$305 := 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 6^3 = 32 + 42 + 42 + 42 + 42 + 42 + 63$$
$$306 := 2^3 + 2^5 + 2^6 + 2^6 + 5^2 + 7^2 + 8^2 = 23 + 25 + 26 + 26 + 52 + 72 + 82$$

$$307 := 2^2 + 3^2 + 3^4 + 4^2 + 5^3 + 6^2 + 6^2 = 22 + 32 + 34 + 42 + 53 + 62 + 62$$
$$:= 2^2 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 + 7^2 = 22 + 34 + 42 + 42 + 42 + 53 + 72$$
$$:= 3^2 + 3^2 + 3^2 + 3^3 + 4^3 + 5^3 + 8^2 = 32 + 32 + 32 + 33 + 43 + 53 + 82$$
$$:= 3^2 + 3^2 + 3^2 + 3^4 + 5^2 + 5^3 + 7^2 = 32 + 32 + 32 + 34 + 52 + 53 + 72$$

$$309 := 2^2 + 2^6 + 3^2 + 3^2 + 5^3 + 7^2 + 7^2 = 22 + 26 + 32 + 32 + 53 + 72 + 72$$
$$:= 2^2 + 3^3 + 3^4 + 3^4 + 4^2 + 6^2 + 8^2 = 22 + 33 + 34 + 34 + 42 + 62 + 82$$
$$:= 2^3 + 2^4 + 4^2 + 4^2 + 4^3 + 5^3 + 8^2 = 23 + 24 + 42 + 42 + 43 + 53 + 82$$
$$:= 2^4 + 3^3 + 4^2 + 4^3 + 5^2 + 5^3 + 6^2 = 24 + 33 + 42 + 43 + 52 + 53 + 62$$

$$311 := 2^2 + 2^3 + 2^7 + 3^3 + 4^2 + 8^2 + 8^2 = 22 + 23 + 27 + 33 + 42 + 82 + 82$$
$$:= 2^2 + 2^7 + 3^3 + 3^3 + 5^2 + 6^2 + 8^2 = 22 + 27 + 33 + 33 + 52 + 62 + 82$$
$$:= 2^3 + 2^4 + 3^4 + 3^4 + 5^2 + 6^2 + 8^2 = 23 + 24 + 34 + 34 + 52 + 62 + 82$$
$$:= 2^3 + 2^7 + 4^3 + 5^2 + 5^2 + 5^2 + 6^2 = 23 + 27 + 43 + 52 + 52 + 52 + 62$$
$$:= 2^4 + 2^4 + 3^3 + 3^3 + 5^3 + 6^2 + 8^2 = 24 + 24 + 33 + 33 + 53 + 62 + 82$$
$$:= 2^4 + 2^6 + 3^2 + 5^2 + 5^3 + 6^2 + 6^2 = 24 + 26 + 32 + 52 + 53 + 62 + 62$$
$$:= 2^4 + 2^6 + 4^2 + 4^2 + 5^2 + 5^3 + 7^2 = 24 + 26 + 42 + 42 + 52 + 53 + 72$$
$$:= 2^5 + 3^2 + 3^3 + 3^4 + 4^3 + 7^2 + 7^2 = 25 + 32 + 33 + 34 + 43 + 72 + 72$$
$$:= 2^5 + 3^2 + 3^4 + 3^4 + 6^2 + 6^2 + 6^2 = 25 + 32 + 34 + 34 + 62 + 62 + 62$$
$$:= 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 6^2 + 7^2 = 25 + 34 + 34 + 42 + 42 + 62 + 72$$
$$:= 2^6 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 + 6^2 = 26 + 34 + 42 + 43 + 52 + 52 + 62$$

$$313 := 2^2 + 2^4 + 2^4 + 2^7 + 6^2 + 7^2 + 8^2 = 22 + 24 + 24 + 27 + 62 + 72 + 82$$
$$:= 2^3 + 2^3 + 2^4 + 2^7 + 5^2 + 8^2 + 8^2 = 23 + 23 + 24 + 27 + 52 + 82 + 82$$
$$:= 2^3 + 2^4 + 2^6 + 3^4 + 4^2 + 8^2 + 8^2 = 23 + 24 + 26 + 34 + 42 + 82 + 82$$
$$:= 2^3 + 2^4 + 2^7 + 3^3 + 6^2 + 7^2 + 7^2 = 23 + 24 + 27 + 33 + 62 + 72 + 72$$
$$:= 2^3 + 2^5 + 2^5 + 4^3 + 4^3 + 7^2 + 8^2 = 23 + 25 + 25 + 43 + 43 + 72 + 82$$

$$:= 2^3 + 2^5 + 2^7 + 3^2 + 6^2 + 6^2 + 8^2 = 23 + 25 + 27 + 32 + 62 + 62 + 82$$
$$:= 2^3 + 2^5 + 2^7 + 4^2 + 4^2 + 7^2 + 8^2 = 23 + 25 + 27 + 42 + 42 + 72 + 82$$
$$:= 2^4 + 2^4 + 2^7 + 3^2 + 4^2 + 8^2 + 8^2 = 24 + 24 + 27 + 32 + 42 + 82 + 82$$
$$:= 2^4 + 2^5 + 2^5 + 5^3 + 6^2 + 6^2 + 6^2 = 24 + 25 + 25 + 53 + 62 + 62 + 62$$
$$:= 2^4 + 2^6 + 3^3 + 3^4 + 5^2 + 6^2 + 8^2 = 24 + 26 + 33 + 34 + 52 + 62 + 82$$
$$:= 2^5 + 2^7 + 3^3 + 4^2 + 5^2 + 6^2 + 7^2 = 25 + 27 + 33 + 42 + 52 + 62 + 72$$
$$:= 2^6 + 2^6 + 4^2 + 4^2 + 4^3 + 5^2 + 8^2 = 26 + 26 + 42 + 42 + 43 + 52 + 82$$

$$315 := 2^4 + 2^6 + 2^6 + 3^3 + 4^2 + 8^2 + 8^2 = 24 + 26 + 26 + 33 + 42 + 82 + 82$$
$$:= 2^5 + 2^5 + 2^5 + 3^3 + 4^3 + 8^2 + 8^2 = 25 + 25 + 25 + 33 + 43 + 82 + 82$$
$$:= 2^5 + 2^5 + 2^5 + 3^4 + 5^2 + 7^2 + 8^2 = 25 + 25 + 25 + 34 + 52 + 72 + 82$$
$$:= 2^5 + 2^5 + 2^6 + 4^3 + 5^2 + 7^2 + 7^2 = 25 + 25 + 26 + 43 + 52 + 72 + 72$$

$$318 := 2^2 + 2^4 + 3^2 + 4^3 + 5^3 + 6^2 + 8^2 = 22 + 24 + 32 + 43 + 53 + 62 + 82$$
$$:= 2^2 + 3^4 + 4^2 + 4^3 + 4^3 + 5^2 + 8^2 = 22 + 34 + 42 + 43 + 43 + 52 + 82$$
$$:= 2^3 + 3^2 + 3^3 + 4^3 + 5^3 + 6^2 + 7^2 = 23 + 32 + 33 + 43 + 53 + 62 + 72$$
$$:= 2^3 + 3^4 + 4^2 + 4^2 + 5^3 + 6^2 + 6^2 = 23 + 34 + 42 + 42 + 53 + 62 + 62$$
$$:= 3^3 + 3^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 = 33 + 33 + 43 + 52 + 52 + 52 + 53$$

$$320 := 2^2 + 2^4 + 3^3 + 3^4 + 4^3 + 8^2 + 8^2 = 22 + 24 + 33 + 34 + 43 + 82 + 82$$
$$:= 2^2 + 2^4 + 3^4 + 3^4 + 5^2 + 7^2 + 8^2 = 22 + 24 + 34 + 34 + 52 + 72 + 82$$
$$:= 2^2 + 2^7 + 4^2 + 4^3 + 6^2 + 6^2 + 6^2 = 22 + 27 + 42 + 43 + 62 + 62 + 62$$
$$:= 2^2 + 2^7 + 4^3 + 5^2 + 5^2 + 5^2 + 7^2 = 22 + 27 + 43 + 52 + 52 + 52 + 72$$
$$:= 2^3 + 2^6 + 3^2 + 4^2 + 5^3 + 7^2 + 7^2 = 23 + 26 + 32 + 42 + 53 + 72 + 72$$
$$:= 2^3 + 2^6 + 3^2 + 5^2 + 5^2 + 5^3 + 8^2 = 23 + 26 + 32 + 52 + 52 + 53 + 82$$
$$:= 2^3 + 3^3 + 3^3 + 3^4 + 4^3 + 7^2 + 8^2 = 23 + 33 + 33 + 34 + 43 + 72 + 82$$
$$:= 2^3 + 3^3 + 3^4 + 3^4 + 5^2 + 7^2 + 7^2 = 23 + 33 + 34 + 34 + 52 + 72 + 72$$
$$:= 2^4 + 2^4 + 4^3 + 5^2 + 5^2 + 5^3 + 7^2 = 24 + 24 + 43 + 52 + 52 + 53 + 72$$
$$:= 2^4 + 3^3 + 3^3 + 3^3 + 5^3 + 7^2 + 7^2 = 24 + 33 + 33 + 33 + 53 + 72 + 72$$
$$:= 2^4 + 3^3 + 4^3 + 4^3 + 4^3 + 6^2 + 7^2 = 24 + 33 + 43 + 43 + 43 + 62 + 72$$
$$:= 2^5 + 3^2 + 3^3 + 3^3 + 5^3 + 6^2 + 8^2 = 25 + 32 + 33 + 33 + 53 + 62 + 82$$
$$:= 2^5 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 8^2 = 25 + 42 + 42 + 43 + 43 + 43 + 82$$
$$:= 2^6 + 3^3 + 4^2 + 4^2 + 5^3 + 6^2 + 6^2 = 26 + 33 + 42 + 42 + 53 + 62 + 62$$
$$:= 2^7 + 3^2 + 3^2 + 4^3 + 5^2 + 6^2 + 7^2 = 27 + 32 + 32 + 43 + 52 + 62 + 72$$
$$:= 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 8^2 = 27 + 42 + 42 + 42 + 42 + 43 + 82$$

$$322 := 2^2 + 2^4 + 2^7 + 3^3 + 7^2 + 7^2 + 7^2 = 22 + 24 + 27 + 33 + 72 + 72 + 72$$

$$:= 2^2 + 2^5 + 2^7 + 3^2 + 6^2 + 7^2 + 8^2 = 22 + 25 + 27 + 32 + 62 + 72 + 82$$
$$:= 2^3 + 2^5 + 2^5 + 5^2 + 5^3 + 6^2 + 8^2 = 23 + 25 + 25 + 52 + 53 + 62 + 82$$
$$:= 2^4 + 2^5 + 3^4 + 4^2 + 4^3 + 7^2 + 8^2 = 24 + 25 + 34 + 42 + 43 + 72 + 82$$
$$:= 2^4 + 2^6 + 4^2 + 4^3 + 4^3 + 7^2 + 7^2 = 24 + 26 + 42 + 43 + 43 + 72 + 72$$
$$:= 2^4 + 2^6 + 4^3 + 4^3 + 5^2 + 5^2 + 8^2 = 24 + 26 + 43 + 43 + 52 + 52 + 82$$
$$:= 2^5 + 2^7 + 3^2 + 3^2 + 4^2 + 8^2 + 8^2 = 25 + 27 + 32 + 32 + 42 + 82 + 82$$
$$:= 2^5 + 3^3 + 3^3 + 3^3 + 3^4 + 8^2 + 8^2 = 25 + 33 + 33 + 33 + 34 + 82 + 82$$
$$:= 2^6 + 3^3 + 3^3 + 3^3 + 4^3 + 7^2 + 8^2 = 26 + 33 + 33 + 33 + 43 + 72 + 82$$
$$:= 2^6 + 3^3 + 3^3 + 3^4 + 5^2 + 7^2 + 7^2 = 26 + 33 + 33 + 34 + 52 + 72 + 72$$

$$\mathbf{324} := 2^4 + 2^4 + 2^6 + 3^4 + 7^2 + 7^2 + 7^2 = 24 + 24 + 26 + 34 + 72 + 72 + 72$$
$$:= 2^4 + 2^5 + 2^7 + 5^2 + 5^2 + 7^2 + 7^2 = 24 + 25 + 27 + 52 + 52 + 72 + 72$$

$$\mathbf{325} := 3^2 + 3^2 + 4^2 + 5^2 + 5^2 + 5^2 + 6^3 = 32 + 32 + 42 + 52 + 52 + 52 + 63$$
$$:= 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 6^2 + 6^3 = 32 + 42 + 42 + 42 + 42 + 62 + 63$$

$$\mathbf{327} := 2^2 + 3^2 + 3^3 + 4^3 + 5^3 + 7^2 + 7^2 = 22 + 32 + 33 + 43 + 53 + 72 + 72$$
$$:= 2^2 + 3^2 + 3^4 + 5^3 + 6^2 + 6^2 + 6^2 = 22 + 32 + 34 + 53 + 62 + 62 + 62$$
$$:= 2^2 + 3^4 + 4^2 + 4^2 + 5^3 + 6^2 + 7^2 = 22 + 34 + 42 + 42 + 53 + 62 + 72$$
$$:= 3^2 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 + 8^2 = 32 + 34 + 42 + 42 + 42 + 53 + 82$$

$$\mathbf{329} := 2^2 + 3^3 + 3^4 + 3^4 + 6^2 + 6^2 + 8^2 = 22 + 33 + 34 + 34 + 62 + 62 + 82$$
$$:= 2^3 + 2^4 + 4^2 + 4^3 + 5^3 + 6^2 + 8^2 = 23 + 24 + 42 + 43 + 53 + 62 + 82$$
$$:= 2^4 + 3^3 + 4^3 + 5^2 + 5^3 + 6^2 + 6^2 = 24 + 33 + 43 + 52 + 53 + 62 + 62$$
$$:= 2^5 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 + 7^2 = 25 + 32 + 43 + 52 + 52 + 53 + 72$$
$$:= 2^6 + 3^2 + 3^2 + 3^2 + 5^3 + 7^2 + 8^2 = 26 + 32 + 32 + 32 + 53 + 72 + 82$$

$$\mathbf{331} := 2^2 + 2^3 + 2^7 + 3^3 + 6^2 + 8^2 + 8^2 = 22 + 23 + 27 + 33 + 62 + 82 + 82$$
$$:= 2^2 + 2^5 + 2^5 + 5^2 + 5^3 + 7^2 + 8^2 = 22 + 25 + 25 + 52 + 53 + 72 + 82$$
$$:= 2^4 + 2^6 + 4^2 + 5^2 + 5^3 + 6^2 + 7^2 = 24 + 26 + 42 + 52 + 53 + 62 + 72$$
$$:= 2^5 + 3^4 + 3^4 + 4^2 + 6^2 + 6^2 + 7^2 = 25 + 34 + 34 + 42 + 62 + 62 + 72$$
$$:= 2^6 + 3^4 + 4^3 + 5^2 + 5^2 + 6^2 + 6^2 = 26 + 34 + 43 + 52 + 52 + 62 + 62$$

$$\mathbf{333} := 2^3 + 2^4 + 2^6 + 3^4 + 6^2 + 8^2 + 8^2 = 23 + 24 + 26 + 34 + 62 + 82 + 82$$
$$:= 2^3 + 2^5 + 2^7 + 4^2 + 6^2 + 7^2 + 8^2 = 23 + 25 + 27 + 42 + 62 + 72 + 82$$
$$:= 2^4 + 2^4 + 2^7 + 3^2 + 6^2 + 8^2 + 8^2 = 24 + 24 + 27 + 32 + 62 + 82 + 82$$
$$:= 2^5 + 2^6 + 3^2 + 3^4 + 7^2 + 7^2 + 7^2 = 25 + 26 + 32 + 34 + 72 + 72 + 72$$

$$:= 2^5 + 2^7 + 3^3 + 5^2 + 6^2 + 6^2 + 7^2 = 25 + 27 + 33 + 52 + 62 + 62 + 72$$
$$:= 2^6 + 2^6 + 4^2 + 4^3 + 5^2 + 6^2 + 8^2 = 26 + 26 + 42 + 43 + 52 + 62 + 82$$

$$335 := 2^4 + 2^6 + 2^6 + 3^3 + 6^2 + 8^2 + 8^2 = 24 + 26 + 26 + 33 + 62 + 82 + 82$$
$$337 := 2^5 + 2^5 + 2^5 + 2^6 + 7^2 + 8^2 + 8^2 = 25 + 25 + 25 + 26 + 72 + 82 + 82$$

$$338 := 2^2 + 2^4 + 4^2 + 4^3 + 5^3 + 7^2 + 8^2 = 22 + 24 + 42 + 43 + 53 + 72 + 82$$
$$:= 2^2 + 3^3 + 3^3 + 3^3 + 5^3 + 8^2 + 8^2 = 22 + 33 + 33 + 33 + 53 + 82 + 82$$
$$:= 2^2 + 3^4 + 4^3 + 4^3 + 5^2 + 6^2 + 8^2 = 22 + 34 + 43 + 43 + 52 + 62 + 82$$
$$:= 2^3 + 3^3 + 4^2 + 4^3 + 5^3 + 7^2 + 7^2 = 23 + 33 + 42 + 43 + 53 + 72 + 72$$
$$:= 2^3 + 3^3 + 4^3 + 5^2 + 5^2 + 5^3 + 8^2 = 23 + 33 + 43 + 52 + 52 + 53 + 82$$
$$:= 2^3 + 3^4 + 4^2 + 5^3 + 6^2 + 6^2 + 6^2 = 23 + 34 + 42 + 53 + 62 + 62 + 62$$

$$338 := 2^3 + 3^4 + 5^2 + 5^2 + 5^2 + 5^3 + 7^2 = 23 + 34 + 52 + 52 + 52 + 53 + 72$$

$$340 := 2^2 + 2^2 + 2^7 + 3^3 + 7^2 + 8^2 + 8^2 = 22 + 22 + 27 + 33 + 72 + 82 + 82$$
$$:= 2^2 + 2^6 + 4^2 + 4^3 + 4^3 + 8^2 + 8^2 = 22 + 26 + 42 + 43 + 43 + 82 + 82$$
$$:= 2^2 + 2^7 + 4^3 + 6^2 + 6^2 + 6^2 + 6^2 = 22 + 27 + 43 + 62 + 62 + 62 + 62$$
$$:= 2^3 + 2^3 + 3^4 + 3^4 + 7^2 + 7^2 + 8^2 = 23 + 23 + 34 + 34 + 72 + 72 + 82$$
$$:= 2^3 + 2^6 + 3^2 + 5^3 + 6^2 + 7^2 + 7^2 = 23 + 26 + 32 + 53 + 62 + 72 + 72$$
$$:= 2^4 + 3^2 + 3^4 + 3^4 + 5^2 + 8^2 + 8^2 = 24 + 32 + 34 + 34 + 52 + 82 + 82$$
$$:= 2^5 + 3^3 + 3^3 + 4^2 + 5^3 + 7^2 + 8^2 = 25 + 33 + 33 + 42 + 53 + 72 + 82$$
$$:= 2^5 + 4^2 + 4^3 + 4^3 + 4^3 + 6^2 + 8^2 = 25 + 42 + 43 + 43 + 43 + 62 + 82$$
$$:= 2^6 + 3^3 + 4^2 + 5^3 + 6^2 + 6^2 + 6^2 = 26 + 33 + 42 + 53 + 62 + 62 + 62$$
$$:= 2^6 + 3^3 + 5^2 + 5^2 + 5^2 + 5^3 + 7^2 = 26 + 33 + 52 + 52 + 52 + 53 + 72$$
$$:= 2^7 + 3^2 + 4^2 + 4^3 + 5^2 + 7^2 + 7^2 = 27 + 32 + 42 + 43 + 52 + 72 + 72$$
$$:= 2^7 + 3^2 + 4^3 + 5^2 + 5^2 + 5^2 + 8^2 = 27 + 32 + 43 + 52 + 52 + 52 + 82$$
$$:= 2^7 + 4^2 + 4^2 + 4^2 + 4^3 + 6^2 + 8^2 = 27 + 42 + 42 + 42 + 43 + 62 + 82$$

$$342 := 2^2 + 2^4 + 2^6 + 3^4 + 7^2 + 8^2 + 8^2 = 22 + 24 + 26 + 34 + 72 + 82 + 82$$
$$:= 2^2 + 2^5 + 2^7 + 4^2 + 7^2 + 7^2 + 8^2 = 22 + 25 + 27 + 42 + 72 + 72 + 82$$
$$:= 2^2 + 2^5 + 2^7 + 5^2 + 5^2 + 8^2 + 8^2 = 22 + 25 + 27 + 52 + 52 + 82 + 82$$
$$:= 2^3 + 2^6 + 3^3 + 3^4 + 7^2 + 7^2 + 8^2 = 23 + 26 + 33 + 34 + 72 + 72 + 82$$
$$:= 2^4 + 2^4 + 2^5 + 5^2 + 5^3 + 8^2 + 8^2 = 24 + 24 + 25 + 52 + 53 + 82 + 82$$
$$:= 2^4 + 2^5 + 3^4 + 4^3 + 6^2 + 7^2 + 8^2 = 24 + 25 + 34 + 43 + 62 + 72 + 82$$
$$:= 2^4 + 2^6 + 4^3 + 4^3 + 6^2 + 7^2 + 7^2 = 24 + 26 + 43 + 43 + 62 + 72 + 72$$
$$:= 2^4 + 2^7 + 3^2 + 3^3 + 7^2 + 7^2 + 8^2 = 24 + 27 + 32 + 33 + 72 + 72 + 82$$

$$:= 2^5 + 2^7 + 3^2 + 3^2 + 6^2 + 8^2 + 8^2 = 25 + 27 + 32 + 32 + 62 + 82 + 82$$

$$\mathbf{344} := 2^6 + 2^6 + 3^3 + 3^3 + 7^2 + 7^2 + 8^2 = 26 + 26 + 33 + 33 + 72 + 72 + 82$$

$$\mathbf{345} := 2^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 6^3 = 22 + 52 + 52 + 52 + 52 + 52 + 63$$
$$:= 3^2 + 3^2 + 5^2 + 5^2 + 5^2 + 6^2 + 6^3 = 32 + 32 + 52 + 52 + 52 + 62 + 63$$
$$:= 3^2 + 4^2 + 4^2 + 4^2 + 6^2 + 6^2 + 6^3 = 32 + 42 + 42 + 42 + 62 + 62 + 63$$
$$:= 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 6^3 + 7^2 = 42 + 42 + 42 + 42 + 42 + 63 + 72$$

$$\mathbf{347} := 2^2 + 3^4 + 4^2 + 5^3 + 6^2 + 6^2 + 7^2 = 22 + 34 + 42 + 53 + 62 + 62 + 72$$
$$:= 3^2 + 3^2 + 3^3 + 4^3 + 5^3 + 7^2 + 8^2 = 32 + 32 + 33 + 43 + 53 + 72 + 82$$
$$:= 3^2 + 3^2 + 3^4 + 5^2 + 5^3 + 7^2 + 7^2 = 32 + 32 + 34 + 52 + 53 + 72 + 72$$
$$:= 3^2 + 3^4 + 4^2 + 4^2 + 5^3 + 6^2 + 8^2 = 32 + 34 + 42 + 42 + 53 + 62 + 82$$

$$\mathbf{349} := 2^2 + 2^6 + 3^2 + 5^3 + 7^2 + 7^2 + 7^2 = 22 + 26 + 32 + 53 + 72 + 72 + 72$$
$$:= 2^3 + 2^4 + 4^3 + 5^3 + 6^2 + 6^2 + 8^2 = 23 + 24 + 43 + 53 + 62 + 62 + 82$$
$$:= 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 8^2 + 8^2 = 33 + 34 + 34 + 42 + 42 + 82 + 82$$

$$\mathbf{351} := 2^4 + 2^6 + 5^2 + 5^3 + 6^2 + 6^2 + 7^2 = 24 + 26 + 52 + 53 + 62 + 62 + 72$$
$$:= 2^5 + 2^5 + 3^2 + 5^2 + 5^3 + 8^2 + 8^2 = 25 + 25 + 32 + 52 + 53 + 82 + 82$$
$$:= 2^5 + 3^3 + 3^4 + 4^3 + 7^2 + 7^2 + 7^2 = 25 + 33 + 34 + 43 + 72 + 72 + 72$$
$$:= 2^5 + 3^4 + 3^4 + 6^2 + 6^2 + 6^2 + 7^2 = 25 + 34 + 34 + 62 + 62 + 62 + 72$$
$$:= 2^7 + 3^3 + 3^3 + 4^2 + 5^2 + 8^2 + 8^2 = 27 + 33 + 33 + 42 + 52 + 82 + 82$$

$$\mathbf{353} := 2^3 + 2^5 + 2^7 + 6^2 + 6^2 + 7^2 + 8^2 = 23 + 25 + 27 + 62 + 62 + 72 + 82$$
$$:= 2^4 + 2^4 + 2^7 + 4^2 + 7^2 + 8^2 + 8^2 = 24 + 24 + 27 + 42 + 72 + 82 + 82$$
$$:= 2^6 + 2^6 + 4^3 + 5^2 + 6^2 + 6^2 + 8^2 = 26 + 26 + 43 + 52 + 62 + 62 + 82$$

$$\mathbf{358} := 2^2 + 2^4 + 4^3 + 5^3 + 6^2 + 7^2 + 8^2 = 22 + 24 + 43 + 53 + 62 + 72 + 82$$
$$:= 2^3 + 2^3 + 4^3 + 5^2 + 5^3 + 8^2 + 8^2 = 23 + 23 + 43 + 52 + 53 + 82 + 82$$
$$:= 2^3 + 3^3 + 4^3 + 5^3 + 6^2 + 7^2 + 7^2 = 23 + 33 + 43 + 53 + 62 + 72 + 72$$
$$:= 2^3 + 3^4 + 5^3 + 6^2 + 6^2 + 6^2 + 6^2 = 23 + 34 + 53 + 62 + 62 + 62 + 62$$
$$:= 2^4 + 3^2 + 4^2 + 4^3 + 5^3 + 8^2 + 8^2 = 24 + 32 + 42 + 43 + 53 + 82 + 82$$

$$\mathbf{360} := 2^2 + 2^6 + 4^3 + 4^3 + 6^2 + 8^2 + 8^2 = 22 + 26 + 43 + 43 + 62 + 82 + 82$$
$$:= 2^2 + 2^7 + 3^2 + 3^3 + 8^2 + 8^2 + 8^2 = 22 + 27 + 32 + 33 + 82 + 82 + 82$$
$$:= 2^3 + 2^6 + 4^2 + 5^3 + 7^2 + 7^2 + 7^2 = 23 + 26 + 42 + 53 + 72 + 72 + 72$$

$$:= 2^3 + 2^6 + 5^2 + 5^2 + 5^3 + 7^2 + 8^2 = 23 + 26 + 52 + 52 + 53 + 72 + 82$$
$$:= 2^5 + 3^3 + 3^3 + 5^3 + 6^2 + 7^2 + 8^2 = 25 + 33 + 33 + 53 + 62 + 72 + 82$$
$$:= 2^5 + 4^3 + 4^3 + 4^3 + 6^2 + 6^2 + 8^2 = 25 + 43 + 43 + 43 + 62 + 62 + 82$$
$$:= 2^6 + 3^3 + 5^3 + 6^2 + 6^2 + 6^2 + 6^2 = 26 + 33 + 53 + 62 + 62 + 62 + 62$$
$$:= 2^7 + 3^2 + 4^3 + 5^2 + 6^2 + 7^2 + 7^2 = 27 + 32 + 43 + 52 + 62 + 72 + 72$$
$$:= 2^7 + 4^2 + 4^2 + 4^3 + 6^2 + 6^2 + 8^2 = 27 + 42 + 42 + 43 + 62 + 62 + 82$$

$$362 := 2^2 + 2^5 + 2^7 + 6^2 + 7^2 + 7^2 + 8^2 = 22 + 25 + 27 + 62 + 72 + 72 + 82$$
$$:= 2^4 + 2^6 + 3^2 + 3^4 + 8^2 + 8^2 + 8^2 = 24 + 26 + 32 + 34 + 82 + 82 + 82$$
$$:= 2^5 + 2^7 + 3^2 + 4^2 + 7^2 + 8^2 + 8^2 = 25 + 27 + 32 + 42 + 72 + 82 + 82$$

$$365 := 3^2 + 4^2 + 4^2 + 6^2 + 6^2 + 6^2 + 6^3 = 32 + 42 + 42 + 62 + 62 + 62 + 63$$
$$:= 3^2 + 4^2 + 5^2 + 5^2 + 5^2 + 6^3 + 7^2 = 32 + 42 + 52 + 52 + 52 + 63 + 72$$
$$:= 4^2 + 4^2 + 4^2 + 4^2 + 6^2 + 6^3 + 7^2 = 42 + 42 + 42 + 42 + 62 + 63 + 72$$

$$367 := 2^2 + 3^3 + 4^3 + 5^3 + 7^2 + 7^2 + 7^2 = 22 + 33 + 43 + 53 + 72 + 72 + 72$$
$$:= 2^2 + 3^4 + 5^3 + 6^2 + 6^2 + 6^2 + 7^2 = 22 + 34 + 53 + 62 + 62 + 62 + 72$$
$$:= 3^2 + 3^4 + 4^2 + 5^3 + 6^2 + 6^2 + 8^2 = 32 + 34 + 42 + 53 + 62 + 62 + 82$$
$$:= 3^4 + 4^2 + 4^2 + 4^2 + 5^3 + 7^2 + 8^2 = 34 + 42 + 42 + 42 + 53 + 72 + 82$$

$$369 := 2^5 + 4^3 + 5^2 + 5^2 + 5^3 + 7^2 + 7^2 = 25 + 43 + 52 + 52 + 53 + 72 + 72$$
$$:= 2^6 + 3^2 + 3^2 + 5^3 + 7^2 + 7^2 + 8^2 = 26 + 32 + 32 + 53 + 72 + 72 + 82$$
$$:= 3^3 + 3^4 + 3^4 + 4^2 + 6^2 + 8^2 + 8^2 = 33 + 34 + 34 + 42 + 62 + 82 + 82$$

$$371 := 2^3 + 2^7 + 3^3 + 4^2 + 8^2 + 8^2 + 8^2 = 23 + 27 + 33 + 42 + 82 + 82 + 82$$
$$:= 2^7 + 3^3 + 3^3 + 5^2 + 6^2 + 8^2 + 8^2 = 27 + 33 + 33 + 52 + 62 + 82 + 82$$

$$373 := 2^4 + 2^4 + 2^7 + 6^2 + 7^2 + 8^2 + 8^2 = 24 + 24 + 27 + 62 + 72 + 82 + 82$$
$$:= 2^5 + 2^6 + 3^4 + 7^2 + 7^2 + 7^2 + 7^2 = 25 + 26 + 34 + 72 + 72 + 72 + 72$$

$$378 := 2^4 + 3^2 + 4^3 + 5^3 + 6^2 + 8^2 + 8^2 = 24 + 32 + 43 + 53 + 62 + 82 + 82$$
$$:= 3^4 + 4^2 + 4^3 + 4^3 + 5^2 + 8^2 + 8^2 = 34 + 42 + 43 + 43 + 52 + 82 + 82$$

$$380 := 2^3 + 2^6 + 5^3 + 6^2 + 7^2 + 7^2 + 7^2 = 23 + 26 + 53 + 62 + 72 + 72 + 72$$
$$:= 2^4 + 3^3 + 3^4 + 4^3 + 8^2 + 8^2 + 8^2 = 24 + 33 + 34 + 43 + 82 + 82 + 82$$
$$:= 2^4 + 3^4 + 3^4 + 5^2 + 7^2 + 8^2 + 8^2 = 24 + 34 + 34 + 52 + 72 + 82 + 82$$
$$:= 2^7 + 4^2 + 4^3 + 5^2 + 7^2 + 7^2 + 7^2 = 27 + 42 + 43 + 52 + 72 + 72 + 72$$

$$:= 2^7 + 4^2 + 4^3 + 6^2 + 6^2 + 6^2 + 8^2 = 27 + 42 + 43 + 62 + 62 + 62 + 82$$
$$:= 2^7 + 4^3 + 5^2 + 5^2 + 5^2 + 7^2 + 8^2 = 27 + 43 + 52 + 52 + 52 + 72 + 82$$

$$382 := 2^4 + 2^7 + 3^3 + 7^2 + 7^2 + 7^2 + 8^2 = 24 + 27 + 33 + 72 + 72 + 72 + 82$$
$$:= 2^5 + 2^7 + 3^2 + 6^2 + 7^2 + 8^2 + 8^2 = 25 + 27 + 32 + 62 + 72 + 82 + 82$$

$$385 := 3^2 + 4^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 = 32 + 42 + 62 + 62 + 62 + 62 + 63$$
$$:= 3^2 + 5^2 + 5^2 + 5^2 + 6^2 + 6^3 + 7^2 = 32 + 52 + 52 + 52 + 62 + 63 + 72$$
$$:= 4^2 + 4^2 + 4^2 + 6^2 + 6^2 + 6^3 + 7^2 = 42 + 42 + 42 + 62 + 62 + 63 + 72$$

$$387 := 3^2 + 3^3 + 4^3 + 5^3 + 7^2 + 7^2 + 8^2 = 32 + 33 + 43 + 53 + 72 + 72 + 82$$
$$:= 3^2 + 3^4 + 5^2 + 5^3 + 7^2 + 7^2 + 7^2 = 32 + 34 + 52 + 53 + 72 + 72 + 72$$
$$:= 3^2 + 3^4 + 5^3 + 6^2 + 6^2 + 6^2 + 8^2 = 32 + 34 + 53 + 62 + 62 + 62 + 82$$
$$:= 3^4 + 4^2 + 4^2 + 5^3 + 6^2 + 7^2 + 8^2 = 34 + 42 + 42 + 53 + 62 + 72 + 82$$

$$389 := 2^2 + 2^6 + 5^3 + 7^2 + 7^2 + 7^2 + 7^2 = 22 + 26 + 53 + 72 + 72 + 72 + 72$$
$$:= 3^3 + 3^4 + 3^4 + 6^2 + 6^2 + 8^2 + 8^2 = 33 + 34 + 34 + 62 + 62 + 82 + 82$$

$$391 := 2^3 + 2^7 + 3^3 + 6^2 + 8^2 + 8^2 + 8^2 = 23 + 27 + 33 + 62 + 82 + 82 + 82$$
$$:= 2^5 + 2^5 + 5^2 + 5^3 + 7^2 + 8^2 + 8^2 = 25 + 25 + 52 + 53 + 72 + 82 + 82$$

$$398 := 2^4 + 4^2 + 4^3 + 5^3 + 7^2 + 8^2 + 8^2 = 24 + 42 + 43 + 53 + 72 + 82 + 82$$
$$:= 3^3 + 3^3 + 3^3 + 5^3 + 8^2 + 8^2 + 8^2 = 33 + 33 + 33 + 53 + 82 + 82 + 82$$
$$:= 3^4 + 4^3 + 4^3 + 5^2 + 6^2 + 8^2 + 8^2 = 34 + 43 + 43 + 52 + 62 + 82 + 82$$

$$400 := 2^2 + 2^7 + 3^3 + 7^2 + 8^2 + 8^2 + 8^2 = 22 + 27 + 33 + 72 + 82 + 82 + 82$$
$$:= 2^6 + 4^2 + 4^3 + 4^3 + 8^2 + 8^2 + 8^2 = 26 + 42 + 43 + 43 + 82 + 82 + 82$$
$$:= 2^7 + 4^3 + 5^2 + 6^2 + 7^2 + 7^2 + 7^2 = 27 + 43 + 52 + 62 + 72 + 72 + 72$$
$$:= 2^7 + 4^3 + 6^2 + 6^2 + 6^2 + 6^2 + 8^2 = 27 + 43 + 62 + 62 + 62 + 62 + 82$$

$$402 := 2^4 + 2^6 + 3^4 + 7^2 + 8^2 + 8^2 + 8^2 = 24 + 26 + 34 + 72 + 82 + 82 + 82$$
$$:= 2^5 + 2^7 + 4^2 + 7^2 + 7^2 + 8^2 + 8^2 = 25 + 27 + 42 + 72 + 72 + 82 + 82$$
$$:= 2^5 + 2^7 + 5^2 + 5^2 + 8^2 + 8^2 + 8^2 = 25 + 27 + 52 + 52 + 82 + 82 + 82$$

$$405 := 3^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 = 32 + 62 + 62 + 62 + 62 + 62 + 63$$
$$:= 4^2 + 4^2 + 6^2 + 6^2 + 6^2 + 6^3 + 7^2 = 42 + 42 + 62 + 62 + 62 + 63 + 72$$
$$:= 4^2 + 5^2 + 5^2 + 5^2 + 6^3 + 7^2 + 7^2 = 42 + 52 + 52 + 52 + 63 + 72 + 72$$

$$:= 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 6^3 + 8^2 = 52 + 52 + 52 + 52 + 52 + 63 + 82$$

$$\mathbf{407} := 3^4 + 4^2 + 5^3 + 6^2 + 6^2 + 7^2 + 8^2 = 34 + 42 + 53 + 62 + 62 + 72 + 82$$

$$\mathbf{409} := 2^6 + 3^2 + 5^3 + 7^2 + 7^2 + 7^2 + 8^2 = 26 + 32 + 53 + 72 + 72 + 72 + 82$$

$$\mathbf{418} := 2^4 + 4^3 + 5^3 + 6^2 + 7^2 + 8^2 + 8^2 = 24 + 43 + 53 + 62 + 72 + 82 + 82$$

$$\mathbf{420} := 2^6 + 4^3 + 4^3 + 6^2 + 8^2 + 8^2 + 8^2 = 26 + 43 + 43 + 62 + 82 + 82 + 82$$

$$:= 2^7 + 3^2 + 3^3 + 8^2 + 8^2 + 8^2 + 8^2 = 27 + 32 + 33 + 82 + 82 + 82 + 82$$

$$\mathbf{422} := 2^5 + 2^7 + 6^2 + 7^2 + 7^2 + 8^2 + 8^2 = 25 + 27 + 62 + 72 + 72 + 82 + 82$$

$$\mathbf{425} := 4^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 + 7^2 = 42 + 62 + 62 + 62 + 62 + 63 + 72$$

$$:= 5^2 + 5^2 + 5^2 + 6^2 + 6^3 + 7^2 + 7^2 = 52 + 52 + 52 + 62 + 63 + 72 + 72$$

$$\mathbf{427} := 3^3 + 4^3 + 5^3 + 7^2 + 7^2 + 7^2 + 8^2 = 33 + 43 + 53 + 72 + 72 + 72 + 82$$

$$:= 3^4 + 5^2 + 5^3 + 7^2 + 7^2 + 7^2 + 7^2 = 34 + 52 + 53 + 72 + 72 + 72 + 72$$

$$:= 3^4 + 5^3 + 6^2 + 6^2 + 6^2 + 7^2 + 8^2 = 34 + 53 + 62 + 62 + 62 + 72 + 82$$

$$\mathbf{445} := 6^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 + 7^2 = 62 + 62 + 62 + 62 + 62 + 63 + 72$$

$$\mathbf{449} := 2^6 + 5^3 + 7^2 + 7^2 + 7^2 + 7^2 + 8^2 = 26 + 53 + 72 + 72 + 72 + 72 + 82$$

$$\mathbf{460} := 2^7 + 3^3 + 7^2 + 8^2 + 8^2 + 8^2 + 8^2 = 27 + 33 + 72 + 82 + 82 + 82 + 82$$

7.4 Eight Terms Expressions

This section deals with eight terms equality expressions, where we have considered only positive expressions with both powers and bases bigger than one.

$$\mathbf{184} := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^7 = 22 + 22 + 22 + 22 + 22 + 22 + 25 + 27$$

$$\mathbf{188} := 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^7 = 22 + 23 + 23 + 23 + 23 + 23 + 24 + 27$$

$$\mathbf{192} := 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 = 22 + 22 + 23 + 24 + 25 + 25 + 25 + 26$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 2^6 = 23 + 23 + 23 + 23 + 24 + 24 + 26 + 26$$

$$\mathbf{195} := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^7 + 3^3 = 22 + 22 + 22 + 22 + 23 + 24 + 27 + 33$$

$$\mathbf{197} := 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^6 + 3^4 = 22 + 22 + 22 + 23 + 24 + 24 + 26 + 34$$

$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 = 22 + 22 + 22 + 24 + 24 + 24 + 27 + 32$$

$$\mathbf{199} := 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 = 22 + 22 + 22 + 24 + 24 + 26 + 26 + 33$$

$201 := 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 3^2 = 23 + 23 + 23 + 23 + 25 + 26 + 26 + 32$
$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 3^4 = 23 + 23 + 23 + 24 + 24 + 25 + 25 + 34$

$203 := 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 = 23 + 23 + 24 + 24 + 25 + 25 + 26 + 33$

$206 := 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 3^2 + 3^4 = 22 + 22 + 22 + 23 + 25 + 26 + 32 + 34$
$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 = 22 + 22 + 22 + 24 + 25 + 27 + 32 + 32$

$208 := 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 = 22 + 22 + 22 + 25 + 26 + 26 + 32 + 33$
$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^7 + 4^2 = 22 + 22 + 23 + 24 + 24 + 24 + 27 + 42$

$210 := 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 = 23 + 23 + 23 + 25 + 25 + 25 + 32 + 34$

$212 := 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 4^2 = 22 + 24 + 24 + 24 + 24 + 26 + 26 + 42$
$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 4^3 = 22 + 24 + 24 + 24 + 25 + 25 + 25 + 43$
$:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 = 23 + 23 + 25 + 25 + 25 + 26 + 32 + 33$

$214 := 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 = 24 + 24 + 25 + 25 + 25 + 25 + 33 + 33$

$215 := 2^2 + 2^2 + 2^3 + 2^3 + 2^7 + 3^2 + 3^3 + 3^3 = 22 + 22 + 23 + 23 + 27 + 32 + 33 + 33$
$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 3^2 + 3^4 + 3^4 = 22 + 23 + 23 + 23 + 24 + 32 + 34 + 34$

$217 := 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^7 + 5^2 = 22 + 22 + 23 + 23 + 23 + 25 + 27 + 52$
$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 3^4 + 4^2 = 22 + 22 + 23 + 23 + 25 + 26 + 34 + 42$
$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^7 + 3^2 + 4^2 = 22 + 22 + 23 + 24 + 25 + 27 + 32 + 42$
$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 3^4 + 4^3 = 22 + 22 + 24 + 24 + 24 + 24 + 34 + 43$
$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 5^3 = 22 + 23 + 23 + 23 + 24 + 24 + 25 + 53$
$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 3^2 + 3^3 + 3^4 = 22 + 23 + 23 + 24 + 26 + 32 + 33 + 34$
$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 = 22 + 23 + 24 + 24 + 27 + 32 + 32 + 33$
$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 3^4 + 4^3 = 23 + 23 + 23 + 23 + 23 + 25 + 34 + 43$

$219 := 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 3^3 + 4^2 = 22 + 22 + 23 + 25 + 26 + 26 + 33 + 42$
$:= 2^2 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 = 22 + 23 + 24 + 26 + 26 + 32 + 33 + 33$
$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^4 = 22 + 24 + 24 + 24 + 25 + 33 + 33 + 34$
$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 3^3 + 4^3 = 23 + 23 + 23 + 23 + 25 + 26 + 33 + 43$
$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^4 = 23 + 24 + 24 + 24 + 26 + 32 + 32 + 34$

$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 = 24 + 24 + 24 + 24 + 27 + 32 + 32 + 32$$

$$\mathbf{221} := 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 5^2 = 22 + 23 + 23 + 24 + 25 + 26 + 26 + 52$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 = 22 + 24 + 24 + 25 + 26 + 26 + 32 + 42$$
$$:= 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 4^3 = 22 + 24 + 25 + 25 + 25 + 25 + 32 + 43$$
$$:= 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 = 24 + 24 + 24 + 26 + 26 + 32 + 32 + 33$$

$$\mathbf{222} := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 3^2 + 5^3 = 22 + 22 + 22 + 22 + 23 + 26 + 32 + 53$$
$$\mathbf{223} := 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 = 25 + 25 + 25 + 25 + 25 + 32 + 33 + 33$$

$$\mathbf{224} := 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 24 + 26 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 3^3 + 3^4 + 4^3 = 22 + 22 + 22 + 23 + 25 + 33 + 34 + 43$$

$$\mathbf{225} := 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 5^2 = 23 + 25 + 25 + 25 + 25 + 25 + 25 + 52$$

$$\mathbf{226} := 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 3^3 + 3^3 + 4^3 = 22 + 22 + 22 + 25 + 26 + 33 + 33 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 + 4^3 = 22 + 22 + 23 + 26 + 26 + 32 + 32 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 3^2 + 3^4 + 4^3 = 22 + 22 + 24 + 24 + 25 + 32 + 34 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 3^2 + 5^3 = 22 + 23 + 23 + 23 + 25 + 25 + 32 + 53$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 4^2 = 22 + 23 + 23 + 23 + 27 + 33 + 33 + 42$$
$$:= 2^2 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 = 22 + 23 + 25 + 27 + 32 + 32 + 32 + 33$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 3^4 + 3^4 + 4^2 = 23 + 23 + 23 + 23 + 24 + 34 + 34 + 42$$

$$\mathbf{228} := 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^7 + 6^2 = 22 + 22 + 23 + 24 + 24 + 24 + 27 + 62$$
$$:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 3^3 + 3^4 + 4^2 = 22 + 22 + 25 + 25 + 25 + 33 + 34 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 4^3 + 4^3 = 22 + 23 + 23 + 24 + 25 + 25 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^7 + 4^2 + 4^2 = 22 + 23 + 23 + 24 + 25 + 27 + 42 + 42$$
$$:= 2^2 + 2^4 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^4 = 22 + 24 + 25 + 25 + 32 + 33 + 33 + 34$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 3^3 + 5^2 = 23 + 23 + 23 + 23 + 24 + 27 + 33 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 3^3 + 3^4 + 4^2 = 23 + 23 + 23 + 24 + 26 + 33 + 34 + 42$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 4^2 = 23 + 23 + 24 + 24 + 27 + 32 + 33 + 42$$
$$:= 2^3 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 = 23 + 24 + 25 + 26 + 32 + 32 + 32 + 34$$
$$:= 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 = 24 + 24 + 25 + 27 + 32 + 32 + 32 + 32$$

$$\mathbf{230} := 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 + 5^2 = 22 + 23 + 24 + 25 + 25 + 25 + 34 + 52$$
$$:= 2^2 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 4^2 = 22 + 25 + 25 + 26 + 26 + 32 + 32 + 42$$
$$:= 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 = 23 + 23 + 24 + 26 + 26 + 33 + 33 + 42$$

$$:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 4^3 = 23 + 23 + 25 + 25 + 25 + 33 + 33 + 43$$
$$:= 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 = 24 + 25 + 26 + 26 + 32 + 32 + 32 + 33$$

$$232 := 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 6^2 = 22 + 24 + 24 + 24 + 24 + 26 + 26 + 62$$
$$:= 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 5^2 = 22 + 24 + 25 + 25 + 25 + 26 + 33 + 52$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 = 23 + 24 + 24 + 25 + 26 + 26 + 42 + 42$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 4^2 + 4^3 = 23 + 24 + 25 + 25 + 25 + 25 + 42 + 43$$

$$233 := 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^6 + 4^2 + 5^3 = 22 + 22 + 22 + 23 + 23 + 26 + 42 + 53$$
$$:= 2^2 + 2^2 + 2^2 + 2^4 + 3^3 + 3^4 + 3^4 + 4^2 = 22 + 22 + 22 + 24 + 33 + 34 + 34 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 4^3 + 5^3 = 22 + 23 + 23 + 23 + 23 + 23 + 43 + 53$$

$$235 := 2^2 + 2^2 + 2^2 + 2^4 + 2^7 + 3^3 + 3^3 + 5^2 = 22 + 22 + 22 + 24 + 27 + 33 + 33 + 52$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 3^4 + 3^4 + 5^2 = 22 + 22 + 23 + 24 + 24 + 34 + 34 + 52$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 5^3 = 22 + 22 + 24 + 24 + 24 + 33 + 33 + 53$$
$$:= 2^2 + 2^2 + 2^5 + 2^5 + 3^2 + 3^2 + 3^4 + 4^3 = 22 + 22 + 25 + 25 + 32 + 32 + 34 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 23 + 23 + 24 + 33 + 33 + 34 + 43$$

$$237 := 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 3^4 + 6^2 = 22 + 22 + 23 + 23 + 25 + 26 + 34 + 62$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^7 + 3^2 + 6^2 = 22 + 22 + 23 + 24 + 25 + 27 + 32 + 62$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 3^3 + 3^4 + 5^2 = 22 + 22 + 24 + 24 + 26 + 33 + 34 + 52$$
$$:= 2^2 + 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 4^2 + 4^3 = 22 + 23 + 23 + 26 + 26 + 32 + 42 + 43$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 3^4 + 4^2 + 4^3 = 22 + 23 + 24 + 24 + 25 + 34 + 42 + 43$$
$$:= 2^2 + 2^3 + 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 4^3 = 22 + 23 + 24 + 26 + 33 + 33 + 33 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 4^2 + 5^3 = 23 + 23 + 23 + 23 + 25 + 25 + 42 + 53$$
$$:= 2^3 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 = 23 + 23 + 25 + 27 + 32 + 32 + 33 + 42$$
$$:= 2^3 + 2^3 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 23 + 23 + 25 + 33 + 33 + 33 + 33 + 34$$
$$:= 2^3 + 2^4 + 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 4^3 = 23 + 24 + 24 + 24 + 32 + 33 + 34 + 43$$
$$:= 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 = 25 + 25 + 27 + 32 + 32 + 32 + 32 + 32$$

$$239 := 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 3^3 + 6^2 = 22 + 22 + 23 + 25 + 26 + 26 + 33 + 62$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 4^2 + 4^3 = 22 + 24 + 24 + 25 + 26 + 33 + 42 + 43$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 4^2 = 23 + 24 + 25 + 25 + 33 + 33 + 34 + 42$$
$$:= 2^3 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 = 23 + 25 + 26 + 33 + 33 + 33 + 33 + 33$$
$$:= 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 = 24 + 24 + 24 + 26 + 32 + 33 + 33 + 43$$

$$240 := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 3^3 + 4^3 + 5^3 = 22 + 22 + 22 + 22 + 23 + 33 + 43 + 53$$

$241 := 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 6^2 = 22 + 24 + 24 + 25 + 26 + 26 + 32 + 62$
$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 4^3 + 5^2 = 23 + 24 + 24 + 24 + 25 + 26 + 43 + 52$
$:= 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 + 4^2 = 23 + 25 + 25 + 26 + 26 + 32 + 42 + 42$
$:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 4^2 = 24 + 24 + 25 + 25 + 25 + 34 + 42 + 42$
$:= 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 = 24 + 25 + 25 + 26 + 33 + 33 + 33 + 42$

$242 := 2^2 + 2^2 + 2^2 + 2^2 + 2^7 + 3^2 + 4^3 + 5^2 = 22 + 22 + 22 + 22 + 27 + 32 + 43 + 52$
$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 3^2 + 4^3 + 5^3 = 22 + 22 + 22 + 24 + 24 + 32 + 43 + 53$
$:= 2^2 + 2^2 + 2^3 + 2^3 + 3^2 + 3^4 + 4^3 + 4^3 = 22 + 22 + 23 + 23 + 32 + 34 + 43 + 43$
$:= 2^2 + 2^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 = 22 + 22 + 32 + 32 + 33 + 33 + 34 + 34$

$244 := 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 3^3 + 4^2 + 5^3 = 22 + 22 + 22 + 25 + 25 + 33 + 42 + 53$
$:= 2^2 + 2^2 + 2^3 + 2^5 + 3^2 + 3^4 + 3^4 + 5^2 = 22 + 22 + 23 + 25 + 32 + 34 + 34 + 52$
$:= 2^2 + 2^2 + 2^3 + 2^6 + 3^2 + 3^3 + 4^3 + 4^3 = 22 + 22 + 23 + 26 + 32 + 33 + 43 + 43$
$:= 2^2 + 2^2 + 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 5^3 = 22 + 22 + 24 + 25 + 32 + 33 + 33 + 53$
$:= 2^2 + 2^3 + 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 5^3 = 22 + 23 + 24 + 26 + 32 + 32 + 32 + 53$
$:= 2^3 + 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 4^3 = 23 + 23 + 27 + 32 + 32 + 32 + 32 + 43$

$246 := 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 5^2 + 5^3 = 22 + 22 + 23 + 24 + 25 + 25 + 52 + 53$
$:= 2^2 + 2^2 + 2^5 + 2^6 + 3^2 + 3^3 + 3^4 + 5^2 = 22 + 22 + 25 + 26 + 32 + 33 + 34 + 52$
$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 6^2 = 22 + 23 + 23 + 23 + 27 + 33 + 33 + 62$
$:= 2^2 + 2^3 + 2^5 + 2^5 + 3^2 + 3^4 + 4^2 + 4^3 = 22 + 23 + 25 + 25 + 32 + 34 + 42 + 43$
$:= 2^2 + 2^4 + 2^4 + 2^4 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 24 + 24 + 24 + 34 + 34 + 42 + 42$
$:= 2^2 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 24 + 24 + 26 + 32 + 32 + 43 + 43$
$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 3^4 + 3^4 + 6^2 = 23 + 23 + 23 + 23 + 24 + 34 + 34 + 62$
$:= 2^3 + 2^4 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 23 + 24 + 25 + 32 + 32 + 33 + 34 + 43$

$248 := 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 3^3 + 3^4 + 6^2 = 22 + 22 + 25 + 25 + 25 + 33 + 34 + 62$
$:= 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 = 22 + 22 + 26 + 26 + 26 + 42 + 42 + 42$
$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^7 + 4^2 + 6^2 = 22 + 23 + 23 + 24 + 25 + 27 + 42 + 62$
$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^7 + 3^3 + 4^2 + 5^2 = 22 + 24 + 24 + 24 + 27 + 33 + 42 + 52$
$:= 2^2 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 4^2 + 4^3 = 22 + 25 + 25 + 26 + 32 + 33 + 42 + 43$
$:= 2^2 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 5^2 = 22 + 26 + 26 + 26 + 32 + 32 + 32 + 52$
$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 3^3 + 3^4 + 6^2 = 23 + 23 + 23 + 24 + 26 + 33 + 34 + 62$
$:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 4^2 + 4^2 + 4^3 = 23 + 23 + 23 + 26 + 26 + 42 + 42 + 43$
$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 6^2 = 23 + 23 + 24 + 24 + 27 + 32 + 33 + 62$

$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^3 + 4^2 + 5^3 = 24 + 24 + 24 + 24 + 24 + 33 + 42 + 53$$
$$:= 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 = 24 + 25 + 26 + 32 + 32 + 33 + 33 + 43$$

$$250 := 2^2 + 2^2 + 2^5 + 2^5 + 2^6 + 2^6 + 5^2 + 5^2 = 22 + 22 + 25 + 25 + 26 + 26 + 52 + 52$$
$$:= 2^2 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 6^2 = 22 + 25 + 25 + 26 + 26 + 32 + 32 + 62$$
$$:= 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 6^2 = 23 + 23 + 24 + 26 + 26 + 33 + 33 + 62$$
$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 5^2 + 5^2 = 23 + 24 + 24 + 24 + 24 + 27 + 52 + 52$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 4^3 + 5^2 = 23 + 24 + 25 + 25 + 26 + 32 + 43 + 52$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^4 + 4^2 + 5^2 = 24 + 24 + 24 + 24 + 26 + 34 + 42 + 52$$
$$:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 4^2 + 4^2 = 25 + 25 + 25 + 25 + 32 + 34 + 42 + 42$$

$$251 := 2^2 + 2^2 + 2^2 + 2^5 + 3^2 + 3^2 + 4^3 + 5^3 = 22 + 22 + 22 + 25 + 32 + 32 + 43 + 53$$

$$252 := 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 4^2 + 6^2 = 23 + 24 + 24 + 25 + 26 + 26 + 42 + 62$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 4^3 + 6^2 = 23 + 24 + 25 + 25 + 25 + 25 + 43 + 62$$

$$253 := 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^6 + 5^3 + 6^2 = 22 + 22 + 22 + 23 + 23 + 26 + 53 + 62$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^7 + 4^2 + 4^3 + 5^2 = 22 + 22 + 22 + 23 + 27 + 42 + 43 + 52$$
$$:= 2^2 + 2^2 + 2^2 + 2^4 + 3^3 + 3^4 + 3^4 + 6^2 = 22 + 22 + 22 + 24 + 33 + 34 + 34 + 62$$
$$:= 2^2 + 2^2 + 2^2 + 2^6 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 22 + 22 + 26 + 34 + 42 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 4^2 + 4^3 + 5^3 = 22 + 22 + 23 + 24 + 24 + 42 + 43 + 53$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 23 + 23 + 23 + 34 + 42 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 3^3 + 3^3 + 3^3 + 3^3 + 5^3 = 22 + 23 + 23 + 33 + 33 + 33 + 33 + 53$$
$$:= 2^2 + 2^3 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 = 22 + 23 + 32 + 33 + 33 + 34 + 34 + 42$$

$$255 := 2^2 + 2^3 + 2^3 + 2^5 + 3^4 + 3^4 + 4^2 + 5^2 = 22 + 23 + 23 + 25 + 34 + 34 + 42 + 52$$
$$:= 2^2 + 2^3 + 2^3 + 2^6 + 3^3 + 4^2 + 4^3 + 4^3 = 22 + 23 + 23 + 26 + 33 + 42 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^4 + 2^5 + 3^3 + 3^3 + 4^2 + 5^3 = 22 + 23 + 24 + 25 + 33 + 33 + 42 + 53$$
$$:= 2^2 + 2^3 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 5^2 = 22 + 23 + 27 + 32 + 33 + 33 + 33 + 52$$
$$:= 2^2 + 2^4 + 2^5 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 24 + 25 + 32 + 34 + 34 + 42 + 42$$
$$:= 2^2 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 25 + 26 + 32 + 32 + 32 + 43 + 43$$
$$:= 2^2 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 = 22 + 26 + 27 + 32 + 32 + 32 + 42 + 42$$
$$:= 2^2 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 = 22 + 26 + 32 + 33 + 33 + 33 + 34 + 42$$

$$255 := 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 5^2 + 5^3 = 23 + 23 + 23 + 23 + 26 + 32 + 52 + 53$$
$$:= 2^3 + 2^3 + 2^4 + 2^6 + 3^2 + 3^2 + 4^2 + 5^3 = 23 + 23 + 24 + 26 + 32 + 32 + 42 + 53$$
$$:= 2^3 + 2^3 + 2^4 + 3^2 + 3^3 + 3^4 + 3^4 + 5^2 = 23 + 23 + 24 + 32 + 33 + 34 + 34 + 52$$

$$:= 2^3 + 2^4 + 2^4 + 3^2 + 3^3 + 3^3 + 3^3 + 5^3 = 23 + 24 + 24 + 32 + 33 + 33 + 33 + 53$$
$$:= 2^4 + 2^4 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 24 + 24 + 32 + 32 + 33 + 34 + 34 + 42$$

$$257 := 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 4^2 + 4^3 + 5^2 = 22 + 22 + 24 + 26 + 26 + 42 + 43 + 52$$
$$:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 4^3 + 4^3 + 5^2 = 22 + 22 + 25 + 25 + 25 + 43 + 43 + 52$$
$$:= 2^2 + 2^2 + 2^5 + 2^5 + 2^7 + 4^2 + 4^2 + 5^2 = 22 + 22 + 25 + 25 + 27 + 42 + 42 + 52$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^7 + 3^3 + 5^2 + 5^2 = 22 + 23 + 23 + 25 + 27 + 33 + 52 + 52$$
$$:= 2^2 + 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 4^3 + 6^2 = 22 + 23 + 23 + 26 + 26 + 32 + 43 + 62$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 3^4 + 4^3 + 6^2 = 22 + 23 + 24 + 24 + 25 + 34 + 43 + 62$$
$$:= 2^2 + 2^3 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 5^2 = 22 + 23 + 25 + 26 + 33 + 34 + 42 + 52$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 4^2 + 4^2 + 5^3 = 22 + 24 + 24 + 25 + 25 + 42 + 42 + 53$$
$$:= 2^2 + 2^4 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 5^2 = 22 + 24 + 25 + 27 + 32 + 33 + 42 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 5^3 + 6^2 = 23 + 23 + 23 + 23 + 25 + 25 + 53 + 62$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 4^3 + 4^3 + 5^2 = 23 + 23 + 23 + 24 + 26 + 43 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 3^3 + 5^2 + 5^3 = 23 + 23 + 24 + 24 + 25 + 33 + 52 + 53$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 3^4 + 4^2 + 4^2 + 4^3 = 23 + 23 + 25 + 25 + 34 + 42 + 42 + 43$$
$$:= 2^3 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 6^2 = 23 + 23 + 25 + 27 + 32 + 32 + 33 + 62$$
$$:= 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 = 23 + 24 + 24 + 26 + 32 + 42 + 43 + 43$$
$$:= 2^3 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 5^2 = 23 + 24 + 26 + 32 + 33 + 33 + 34 + 52$$
$$:= 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^3 + 4^2 + 5^3 = 24 + 24 + 24 + 25 + 32 + 33 + 42 + 53$$
$$:= 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 24 + 24 + 24 + 33 + 33 + 33 + 43 + 43$$
$$:= 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 5^2 = 24 + 24 + 27 + 32 + 32 + 33 + 33 + 52$$

$$259 := 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 4^3 + 6^2 = 22 + 24 + 24 + 25 + 26 + 33 + 43 + 62$$
$$:= 2^2 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 + 5^2 = 22 + 25 + 26 + 26 + 33 + 33 + 42 + 52$$
$$:= 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 3^4 + 5^2 + 5^2 = 23 + 23 + 24 + 25 + 26 + 34 + 52 + 52$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 5^2 + 5^2 = 23 + 24 + 24 + 25 + 27 + 32 + 52 + 52$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 6^2 = 23 + 24 + 25 + 25 + 33 + 33 + 34 + 62$$
$$:= 2^3 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^2 + 4^3 = 23 + 25 + 25 + 26 + 33 + 42 + 42 + 43$$
$$:= 2^3 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 4^2 + 5^2 = 23 + 26 + 26 + 26 + 32 + 32 + 42 + 52$$
$$:= 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^4 + 4^2 + 5^2 = 24 + 24 + 25 + 26 + 32 + 34 + 42 + 52$$
$$:= 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 5^2 = 24 + 26 + 26 + 32 + 33 + 33 + 33 + 52$$

$$260 := 2^2 + 2^2 + 2^2 + 2^3 + 3^2 + 3^4 + 5^2 + 5^3 = 22 + 22 + 22 + 23 + 32 + 34 + 52 + 53$$

$$261 := 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 3^3 + 5^2 + 5^2 = 23 + 24 + 25 + 26 + 26 + 33 + 52 + 52$$
$$:= 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 + 6^2 = 23 + 25 + 25 + 26 + 26 + 32 + 42 + 62$$

$$:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 6^2 = 24 + 24 + 25 + 25 + 25 + 34 + 42 + 62$$
$$:= 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 6^2 = 24 + 25 + 25 + 26 + 33 + 33 + 33 + 62$$

$$262 := 2^2 + 2^2 + 2^2 + 2^4 + 3^4 + 4^3 + 4^3 + 5^2 = 22 + 22 + 22 + 24 + 34 + 43 + 43 + 52$$
$$:= 2^2 + 2^2 + 2^2 + 2^6 + 3^2 + 3^3 + 5^2 + 5^3 = 22 + 22 + 22 + 26 + 32 + 33 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^3 + 2^5 + 3^2 + 4^2 + 4^3 + 5^3 = 22 + 22 + 23 + 25 + 32 + 42 + 43 + 53$$
$$:= 2^2 + 2^2 + 2^3 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 23 + 33 + 33 + 43 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^4 + 3^2 + 3^2 + 3^3 + 4^3 + 5^3 = 22 + 23 + 24 + 32 + 32 + 33 + 43 + 53$$

$$264 := 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 3^3 + 5^3 + 6^2 = 22 + 22 + 22 + 25 + 25 + 33 + 53 + 62$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 22 + 24 + 25 + 42 + 43 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^7 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 22 + 24 + 27 + 42 + 42 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^5 + 3^3 + 3^3 + 3^4 + 4^3 + 5^2 = 22 + 22 + 25 + 33 + 33 + 34 + 43 + 52$$
$$:= 2^2 + 2^3 + 2^6 + 3^2 + 3^2 + 3^4 + 4^3 + 5^2 = 22 + 23 + 26 + 32 + 32 + 34 + 43 + 52$$
$$:= 2^2 + 2^4 + 2^4 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 24 + 24 + 32 + 33 + 43 + 43 + 43$$
$$:= 2^2 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 4^3 + 5^2 = 22 + 24 + 27 + 32 + 32 + 32 + 43 + 52$$
$$:= 2^3 + 2^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 = 23 + 23 + 33 + 33 + 34 + 34 + 42 + 42$$
$$:= 2^3 + 2^5 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 5^3 = 23 + 25 + 32 + 32 + 33 + 33 + 33 + 53$$
$$:= 2^4 + 2^4 + 2^4 + 3^2 + 3^2 + 3^2 + 4^3 + 5^3 = 24 + 24 + 24 + 32 + 32 + 32 + 43 + 53$$
$$:= 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 25 + 32 + 32 + 32 + 33 + 34 + 34 + 42$$

$$266 := 2^2 + 2^3 + 2^5 + 2^5 + 3^2 + 3^4 + 4^3 + 6^2 = 22 + 23 + 25 + 25 + 32 + 34 + 43 + 62$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 3^4 + 3^4 + 4^2 + 6^2 = 22 + 24 + 24 + 24 + 34 + 34 + 42 + 62$$
$$:= 2^2 + 2^5 + 2^5 + 2^5 + 3^2 + 4^2 + 4^2 + 5^3 = 22 + 25 + 25 + 25 + 32 + 42 + 42 + 53$$
$$:= 2^2 + 2^5 + 2^5 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 = 22 + 25 + 25 + 33 + 33 + 42 + 43 + 43$$
$$:= 2^2 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 = 22 + 25 + 27 + 33 + 33 + 42 + 42 + 42$$
$$:= 2^2 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 4^3 + 5^2 = 22 + 26 + 26 + 32 + 32 + 33 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 3^2 + 3^3 + 5^2 + 5^3 = 23 + 23 + 25 + 25 + 32 + 33 + 52 + 53$$
$$:= 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 3^3 + 4^2 + 5^2 = 23 + 23 + 27 + 33 + 33 + 33 + 42 + 52$$
$$:= 2^3 + 2^4 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 23 + 24 + 25 + 34 + 34 + 42 + 42 + 42$$
$$:= 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 = 23 + 25 + 26 + 32 + 32 + 42 + 43 + 43$$
$$:= 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 = 23 + 26 + 27 + 32 + 32 + 42 + 42 + 42$$
$$:= 2^3 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 = 23 + 26 + 33 + 33 + 33 + 34 + 42 + 42$$
$$:= 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 4^2 + 5^3 = 24 + 25 + 25 + 32 + 32 + 33 + 42 + 53$$
$$:= 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 24 + 25 + 32 + 33 + 33 + 33 + 43 + 43$$
$$:= 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 = 24 + 27 + 32 + 33 + 33 + 33 + 42 + 42$$
$$:= 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 5^2 = 25 + 27 + 32 + 32 + 32 + 33 + 33 + 52$$

$$268 := 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 4^2 + 4^2 + 6^2 = 22 + 22 + 26 + 26 + 26 + 42 + 42 + 62$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^7 + 6^2 + 6^2 = 22 + 23 + 23 + 24 + 25 + 27 + 62 + 62$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^7 + 3^3 + 5^2 + 6^2 = 22 + 24 + 24 + 24 + 27 + 33 + 52 + 62$$
$$:= 2^2 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 4^3 + 6^2 = 22 + 25 + 25 + 26 + 32 + 33 + 43 + 62$$
$$:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 4^2 + 4^3 + 6^2 = 23 + 23 + 23 + 26 + 26 + 42 + 43 + 62$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 4^3 + 4^3 + 5^2 = 23 + 24 + 25 + 25 + 33 + 43 + 43 + 52$$
$$:= 2^3 + 2^4 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 5^2 = 23 + 24 + 25 + 27 + 33 + 42 + 42 + 52$$

$$268 := 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 5^2 + 5^2 = 23 + 25 + 25 + 27 + 32 + 32 + 52 + 52$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^3 + 5^3 + 6^2 = 24 + 24 + 24 + 24 + 24 + 33 + 53 + 62$$
$$:= 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 = 24 + 25 + 26 + 33 + 34 + 42 + 42 + 42$$
$$:= 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 5^2 = 25 + 25 + 26 + 32 + 32 + 34 + 42 + 52$$
$$:= 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 = 26 + 26 + 33 + 33 + 33 + 33 + 42 + 42$$

$$270 := 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^4 + 5^2 + 6^2 = 24 + 24 + 24 + 24 + 26 + 34 + 52 + 62$$
$$:= 2^4 + 2^5 + 2^5 + 2^5 + 3^3 + 3^4 + 5^2 + 5^2 = 24 + 25 + 25 + 25 + 33 + 34 + 52 + 52$$
$$:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 4^2 + 6^2 = 25 + 25 + 25 + 25 + 32 + 34 + 42 + 62$$

$$271 := 2^2 + 2^2 + 2^3 + 2^3 + 3^4 + 4^2 + 5^2 + 5^3 = 22 + 22 + 23 + 23 + 34 + 42 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^4 + 3^2 + 3^4 + 4^2 + 4^2 + 5^3 = 22 + 22 + 24 + 32 + 34 + 42 + 42 + 53$$
$$:= 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^3 = 32 + 32 + 32 + 32 + 32 + 34 + 34 + 43$$

$$272 := 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 6^2 + 6^2 = 23 + 24 + 24 + 25 + 26 + 26 + 62 + 62$$

$$273 := 2^2 + 2^2 + 2^2 + 2^3 + 2^7 + 4^3 + 5^2 + 6^2 = 22 + 22 + 22 + 23 + 27 + 43 + 52 + 62$$
$$:= 2^2 + 2^2 + 2^2 + 2^6 + 3^4 + 4^2 + 4^3 + 6^2 = 22 + 22 + 22 + 26 + 34 + 42 + 43 + 62$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 4^3 + 5^3 + 6^2 = 22 + 22 + 23 + 24 + 24 + 43 + 53 + 62$$
$$:= 2^2 + 2^2 + 2^3 + 2^6 + 3^3 + 4^2 + 5^2 + 5^3 = 22 + 22 + 23 + 26 + 33 + 42 + 52 + 53$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 3^4 + 4^3 + 4^3 + 6^2 = 22 + 23 + 23 + 23 + 34 + 43 + 43 + 62$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 4^2 + 4^2 + 4^3 + 5^3 = 22 + 23 + 23 + 25 + 42 + 42 + 43 + 53$$
$$:= 2^2 + 2^3 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 + 6^2 = 22 + 23 + 32 + 33 + 33 + 34 + 34 + 62$$
$$:= 2^2 + 2^5 + 3^2 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 25 + 32 + 32 + 33 + 43 + 43 + 43$$
$$:= 2^2 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 = 22 + 27 + 32 + 32 + 33 + 42 + 42 + 43$$
$$:= 2^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 22 + 33 + 33 + 33 + 33 + 34 + 42 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 3^3 + 4^3 + 5^2 + 5^3 = 23 + 23 + 23 + 23 + 33 + 43 + 52 + 53$$
$$:= 2^3 + 2^3 + 2^4 + 3^2 + 3^3 + 4^2 + 4^3 + 5^3 = 23 + 23 + 24 + 32 + 33 + 42 + 43 + 53$$

$$:= 2^4 + 2^5 + 3^2 + 3^2 + 3^2 + 3^2 + 4^3 + 5^3 = 24 + 25 + 32 + 32 + 32 + 32 + 43 + 53$$

$$275 := 2^2 + 2^2 + 2^6 + 2^7 + 3^2 + 4^2 + 5^2 + 5^2 = 22 + 22 + 26 + 27 + 32 + 42 + 52 + 52$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 5^2 + 5^2 + 5^3 = 22 + 23 + 23 + 24 + 26 + 52 + 52 + 53$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 3^4 + 3^4 + 5^2 + 6^2 = 22 + 23 + 23 + 25 + 34 + 34 + 52 + 62$$
$$:= 2^2 + 2^3 + 2^3 + 2^6 + 3^3 + 4^3 + 4^3 + 6^2 = 22 + 23 + 23 + 26 + 33 + 43 + 43 + 62$$
$$:= 2^2 + 2^3 + 2^4 + 2^5 + 3^3 + 3^3 + 5^3 + 6^2 = 22 + 23 + 24 + 25 + 33 + 33 + 53 + 62$$
$$:= 2^2 + 2^4 + 2^4 + 2^6 + 3^2 + 4^2 + 5^2 + 5^3 = 22 + 24 + 24 + 26 + 32 + 42 + 52 + 53$$
$$:= 2^2 + 2^4 + 2^4 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 = 22 + 24 + 24 + 33 + 34 + 34 + 52 + 52$$
$$:= 2^2 + 2^4 + 2^5 + 3^2 + 3^4 + 3^4 + 4^2 + 6^2 = 22 + 24 + 25 + 32 + 34 + 34 + 42 + 62$$
$$:= 2^2 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 6^2 = 22 + 26 + 27 + 32 + 32 + 32 + 42 + 62$$
$$:= 2^2 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 6^2 = 22 + 26 + 32 + 33 + 33 + 33 + 34 + 62$$
$$:= 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 4^3 + 5^2 + 5^2 = 23 + 23 + 23 + 27 + 32 + 43 + 52 + 52$$
$$:= 2^3 + 2^3 + 2^4 + 2^6 + 3^2 + 3^2 + 5^3 + 6^2 = 23 + 23 + 24 + 26 + 32 + 32 + 53 + 62$$
$$:= 2^3 + 2^3 + 2^6 + 3^2 + 3^4 + 4^2 + 4^3 + 5^2 = 23 + 23 + 26 + 32 + 34 + 42 + 43 + 52$$

$$275 := 2^3 + 2^4 + 2^4 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 24 + 24 + 33 + 42 + 43 + 43 + 43$$
$$:= 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 4^2 + 4^3 + 5^2 = 23 + 24 + 27 + 32 + 32 + 42 + 43 + 52$$
$$:= 2^3 + 2^4 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 + 5^2 = 23 + 24 + 33 + 33 + 33 + 34 + 43 + 52$$
$$:= 2^4 + 2^4 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 6^2 = 24 + 24 + 32 + 32 + 33 + 34 + 34 + 62$$
$$:= 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 = 24 + 26 + 32 + 32 + 34 + 42 + 42 + 43$$

$$277 := 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 4^3 + 5^2 + 6^2 = 22 + 22 + 24 + 26 + 26 + 43 + 52 + 62$$
$$:= 2^2 + 2^2 + 2^5 + 2^5 + 2^7 + 4^2 + 5^2 + 6^2 = 22 + 22 + 25 + 25 + 27 + 42 + 52 + 62$$
$$:= 2^2 + 2^3 + 2^5 + 2^6 + 3^3 + 3^4 + 5^2 + 6^2 = 22 + 23 + 25 + 26 + 33 + 34 + 52 + 62$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 4^2 + 5^3 + 6^2 = 22 + 24 + 24 + 25 + 25 + 42 + 53 + 62$$
$$:= 2^2 + 2^4 + 2^5 + 2^7 + 3^2 + 3^3 + 5^2 + 6^2 = 22 + 24 + 25 + 27 + 32 + 33 + 52 + 62$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 3^4 + 4^2 + 4^3 + 6^2 = 23 + 23 + 25 + 25 + 34 + 42 + 43 + 62$$
$$:= 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 4^3 + 4^3 + 6^2 = 23 + 24 + 24 + 26 + 32 + 43 + 43 + 62$$
$$:= 2^3 + 2^5 + 2^5 + 2^5 + 4^2 + 4^2 + 4^2 + 5^3 = 23 + 25 + 25 + 25 + 42 + 42 + 42 + 53$$
$$:= 2^3 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 + 4^3 + 5^2 = 23 + 26 + 26 + 32 + 33 + 42 + 43 + 52$$
$$:= 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^3 + 5^3 + 6^2 = 24 + 24 + 24 + 25 + 32 + 33 + 53 + 62$$
$$:= 2^4 + 2^4 + 2^5 + 3^3 + 3^4 + 4^2 + 4^3 + 5^2 = 24 + 24 + 25 + 33 + 34 + 42 + 43 + 52$$
$$:= 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 5^2 = 24 + 26 + 33 + 33 + 33 + 33 + 43 + 52$$

$$278 := 2^3 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 6^3 = 23 + 32 + 32 + 32 + 32 + 32 + 32 + 63$$

$279 := 2^2 + 2^3 + 2^6 + 2^6 + 2^6 + 5^2 + 5^2 + 5^2 = 22 + 23 + 26 + 26 + 26 + 52 + 52 + 52$
$:= 2^2 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 5^2 + 6^2 = 22 + 25 + 26 + 26 + 33 + 33 + 52 + 62$
$:= 2^3 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^3 + 6^2 = 23 + 25 + 25 + 26 + 33 + 42 + 43 + 62$
$:= 2^3 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 5^2 + 6^2 = 23 + 26 + 26 + 26 + 32 + 32 + 52 + 62$
$:= 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^4 + 5^2 + 6^2 = 24 + 24 + 25 + 26 + 32 + 34 + 52 + 62$

$280 := 2^2 + 2^2 + 2^2 + 3^3 + 3^3 + 4^3 + 5^2 + 5^3 = 22 + 22 + 22 + 33 + 33 + 43 + 52 + 53$
$:= 2^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 5^3 = 22 + 32 + 32 + 32 + 33 + 34 + 42 + 53$

$281 := 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 6^2 + 6^2 = 23 + 25 + 25 + 26 + 26 + 32 + 62 + 62$
$:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 + 6^2 + 6^2 = 24 + 24 + 25 + 25 + 25 + 34 + 62 + 62$

$282 := 2^2 + 2^2 + 2^3 + 2^5 + 3^2 + 4^3 + 5^3 + 6^2 = 22 + 22 + 23 + 25 + 32 + 43 + 53 + 62$
$:= 2^2 + 2^3 + 2^4 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 = 22 + 23 + 24 + 34 + 42 + 42 + 42 + 53$
$:= 2^2 + 2^3 + 3^2 + 3^3 + 3^4 + 4^3 + 4^3 + 5^2 = 22 + 23 + 32 + 33 + 34 + 43 + 43 + 52$
$:= 2^3 + 2^4 + 3^2 + 3^2 + 3^2 + 3^4 + 5^2 + 5^3 = 23 + 24 + 32 + 32 + 32 + 34 + 52 + 53$

$284 := 2^2 + 2^2 + 2^4 + 2^5 + 4^3 + 4^3 + 4^3 + 6^2 = 22 + 22 + 24 + 25 + 43 + 43 + 43 + 62$
$:= 2^2 + 2^2 + 2^4 + 2^7 + 4^2 + 4^2 + 4^3 + 6^2 = 22 + 22 + 24 + 27 + 42 + 42 + 43 + 62$
$:= 2^2 + 2^4 + 2^6 + 3^3 + 4^2 + 4^2 + 4^2 + 5^3 = 22 + 24 + 26 + 33 + 42 + 42 + 42 + 53$
$:= 2^2 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 5^2 + 5^3 = 22 + 25 + 26 + 32 + 32 + 42 + 52 + 53$
$:= 2^2 + 2^5 + 3^2 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 = 22 + 25 + 32 + 33 + 34 + 34 + 52 + 52$
$:= 2^2 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 + 4^3 + 5^2 = 22 + 26 + 32 + 33 + 33 + 43 + 43 + 52$

$284 := 2^3 + 2^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 6^2 = 23 + 23 + 33 + 33 + 34 + 34 + 42 + 62$
$:= 2^3 + 2^5 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 25 + 32 + 33 + 42 + 43 + 43 + 43$
$:= 2^3 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 = 23 + 27 + 32 + 33 + 42 + 42 + 42 + 43$
$:= 2^4 + 2^4 + 3^2 + 3^2 + 3^4 + 4^3 + 4^3 + 5^2 = 24 + 24 + 32 + 32 + 34 + 43 + 43 + 52$
$:= 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 5^2 + 5^3 = 24 + 26 + 32 + 32 + 32 + 33 + 52 + 53$
$:= 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 6^2 = 25 + 32 + 32 + 32 + 33 + 34 + 34 + 62$

$286 := 2^2 + 2^3 + 2^5 + 2^6 + 4^3 + 4^3 + 5^2 + 5^2 = 22 + 23 + 25 + 26 + 43 + 43 + 52 + 52$
$:= 2^2 + 2^3 + 2^6 + 2^7 + 4^2 + 4^2 + 5^2 + 5^2 = 22 + 23 + 26 + 27 + 42 + 42 + 52 + 52$
$:= 2^2 + 2^4 + 2^4 + 2^4 + 3^4 + 3^4 + 6^2 + 6^2 = 22 + 24 + 24 + 24 + 34 + 34 + 62 + 62$
$:= 2^2 + 2^4 + 2^5 + 2^5 + 3^3 + 5^2 + 5^2 + 5^3 = 22 + 24 + 25 + 25 + 33 + 52 + 52 + 53$
$:= 2^2 + 2^5 + 2^5 + 2^5 + 3^2 + 4^2 + 5^3 + 6^2 = 22 + 25 + 25 + 25 + 32 + 42 + 53 + 62$
$:= 2^2 + 2^5 + 2^5 + 3^3 + 3^3 + 4^3 + 4^3 + 6^2 = 22 + 25 + 25 + 33 + 33 + 43 + 43 + 62$

$$:= 2^2 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 + 4^2 + 6^2 = 22 + 25 + 27 + 33 + 33 + 42 + 42 + 62$$
$$:= 2^2 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 = 22 + 26 + 26 + 34 + 42 + 42 + 42 + 52$$
$$:= 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 3^3 + 5^2 + 6^2 = 23 + 23 + 27 + 33 + 33 + 33 + 52 + 62$$
$$:= 2^3 + 2^4 + 2^4 + 2^6 + 4^2 + 4^2 + 5^2 + 5^3 = 23 + 24 + 24 + 26 + 42 + 42 + 52 + 53$$
$$:= 2^3 + 2^4 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 6^2 = 23 + 24 + 25 + 34 + 34 + 42 + 42 + 62$$
$$:= 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 + 6^2 = 23 + 25 + 26 + 32 + 32 + 43 + 43 + 62$$
$$:= 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 6^2 = 23 + 26 + 27 + 32 + 32 + 42 + 42 + 62$$
$$:= 2^3 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 6^2 = 23 + 26 + 33 + 33 + 33 + 34 + 42 + 62$$
$$:= 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 5^3 + 6^2 = 24 + 25 + 25 + 32 + 32 + 33 + 53 + 62$$
$$:= 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 6^2 = 24 + 27 + 32 + 33 + 33 + 33 + 42 + 62$$
$$:= 2^5 + 2^5 + 3^2 + 3^3 + 3^4 + 4^2 + 4^3 + 5^2 = 25 + 25 + 32 + 33 + 34 + 42 + 43 + 52$$
$$:= 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 5^2 + 5^2 = 26 + 26 + 32 + 32 + 32 + 34 + 52 + 52$$

$$287 := 2^2 + 2^2 + 2^2 + 3^2 + 3^2 + 4^2 + 5^2 + 6^3 = 22 + 22 + 22 + 32 + 32 + 42 + 52 + 63$$

$$288 := 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 4^2 + 6^2 + 6^2 = 22 + 22 + 26 + 26 + 26 + 42 + 62 + 62$$
$$:= 2^2 + 2^5 + 2^5 + 2^6 + 3^4 + 5^2 + 5^2 + 5^2 = 22 + 25 + 25 + 26 + 34 + 52 + 52 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 4^3 + 6^2 + 6^2 = 23 + 23 + 23 + 26 + 26 + 43 + 62 + 62$$
$$:= 2^3 + 2^4 + 2^5 + 2^7 + 3^3 + 4^2 + 5^2 + 6^2 = 23 + 24 + 25 + 27 + 33 + 42 + 52 + 62$$
$$:= 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 4^2 + 6^2 = 24 + 25 + 26 + 33 + 34 + 42 + 42 + 62$$
$$:= 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 5^2 + 6^2 = 25 + 25 + 26 + 32 + 32 + 34 + 52 + 62$$
$$:= 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 25 + 26 + 26 + 42 + 42 + 42 + 42 + 43$$
$$:= 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 6^2 = 26 + 26 + 33 + 33 + 33 + 33 + 42 + 62$$

$$290 := 2^4 + 2^6 + 2^6 + 2^6 + 4^2 + 4^2 + 5^2 + 5^2 = 24 + 26 + 26 + 26 + 42 + 42 + 52 + 52$$
$$:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 6^2 + 6^2 = 25 + 25 + 25 + 25 + 32 + 34 + 62 + 62$$
$$:= 2^5 + 2^5 + 2^5 + 2^6 + 4^2 + 4^3 + 5^2 + 5^2 = 25 + 25 + 25 + 26 + 42 + 43 + 52 + 52$$

$$291 := 2^2 + 2^2 + 2^3 + 2^3 + 3^4 + 5^2 + 5^3 + 6^2 = 22 + 22 + 23 + 23 + 34 + 52 + 53 + 62$$
$$:= 2^2 + 2^2 + 2^4 + 3^2 + 3^4 + 4^2 + 5^3 + 6^2 = 22 + 22 + 24 + 32 + 34 + 42 + 53 + 62$$
$$:= 2^2 + 2^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 + 5^2 = 22 + 22 + 34 + 34 + 42 + 42 + 43 + 52$$
$$:= 2^3 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 = 23 + 32 + 32 + 32 + 43 + 43 + 43 + 43$$
$$:= 2^3 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 5^3 = 23 + 32 + 32 + 33 + 34 + 42 + 42 + 53$$

$$293 := 2^2 + 2^2 + 2^2 + 2^6 + 3^4 + 4^3 + 6^2 + 6^2 = 22 + 22 + 22 + 26 + 34 + 43 + 62 + 62$$
$$:= 2^2 + 2^2 + 2^3 + 2^6 + 3^3 + 5^2 + 5^3 + 6^2 = 22 + 22 + 23 + 26 + 33 + 52 + 53 + 62$$
$$:= 2^2 + 2^2 + 2^7 + 3^3 + 4^2 + 4^3 + 5^2 + 5^2 = 22 + 22 + 27 + 33 + 42 + 43 + 52 + 52$$

$$:= 2^2 + 2^3 + 2^3 + 2^5 + 4^2 + 4^3 + 5^3 + 6^2 = 22 + 23 + 23 + 25 + 42 + 43 + 53 + 62$$
$$:= 2^2 + 2^4 + 2^4 + 3^3 + 4^2 + 4^3 + 5^2 + 5^3 = 22 + 24 + 24 + 33 + 42 + 43 + 52 + 53$$
$$:= 2^2 + 2^5 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 25 + 34 + 42 + 42 + 42 + 43 + 43$$
$$:= 2^2 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 + 6^2 = 22 + 27 + 32 + 32 + 33 + 42 + 43 + 62$$
$$:= 2^2 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 27 + 34 + 42 + 42 + 42 + 42 + 42$$
$$:= 2^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 + 6^2 = 22 + 33 + 33 + 33 + 33 + 34 + 43 + 62$$
$$:= 2^3 + 2^3 + 2^4 + 3^2 + 3^3 + 4^3 + 5^3 + 6^2 = 23 + 23 + 24 + 32 + 33 + 43 + 53 + 62$$
$$:= 2^3 + 2^3 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 + 5^2 = 23 + 23 + 33 + 34 + 42 + 43 + 43 + 52$$
$$:= 2^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 5^2 + 5^3 = 23 + 33 + 33 + 33 + 33 + 33 + 52 + 53$$
$$:= 2^4 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 24 + 32 + 33 + 34 + 42 + 42 + 43 + 43$$
$$:= 2^5 + 3^2 + 3^2 + 3^2 + 3^4 + 4^3 + 4^3 + 5^2 = 25 + 32 + 32 + 32 + 34 + 43 + 43 + 52$$
$$:= 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 5^3 = 26 + 32 + 32 + 33 + 33 + 42 + 42 + 53$$
$$:= 2^7 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 5^2 = 27 + 32 + 32 + 32 + 34 + 42 + 42 + 52$$
$$:= 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 5^2 = 32 + 33 + 33 + 33 + 34 + 34 + 42 + 52$$

$$\textcolor{red}{295} := 2^2 + 2^2 + 2^6 + 2^7 + 3^2 + 5^2 + 5^2 + 6^2 = 22 + 22 + 26 + 27 + 32 + 52 + 52 + 62$$
$$:= 2^2 + 2^3 + 2^4 + 2^7 + 4^3 + 5^2 + 5^2 + 5^2 = 22 + 23 + 24 + 27 + 43 + 52 + 52 + 52$$
$$:= 2^2 + 2^4 + 2^4 + 2^6 + 3^2 + 5^2 + 5^3 + 6^2 = 22 + 24 + 24 + 26 + 32 + 52 + 53 + 62$$
$$:= 2^2 + 2^4 + 2^5 + 3^2 + 3^4 + 3^4 + 6^2 + 6^2 = 22 + 24 + 25 + 32 + 34 + 34 + 62 + 62$$
$$:= 2^2 + 2^4 + 2^6 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 = 22 + 24 + 26 + 34 + 42 + 43 + 52 + 52$$
$$:= 2^2 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 6^2 + 6^2 = 22 + 26 + 27 + 32 + 32 + 32 + 62 + 62$$
$$:= 2^3 + 2^3 + 2^6 + 3^2 + 3^4 + 4^3 + 5^2 + 6^2 = 23 + 23 + 26 + 32 + 34 + 43 + 52 + 62$$
$$:= 2^3 + 2^4 + 2^4 + 2^4 + 4^3 + 5^2 + 5^2 + 5^3 = 23 + 24 + 24 + 24 + 43 + 52 + 52 + 53$$
$$:= 2^3 + 2^4 + 2^4 + 3^3 + 4^3 + 4^3 + 4^3 + 6^2 = 23 + 24 + 24 + 33 + 43 + 43 + 43 + 62$$
$$:= 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 4^3 + 5^2 + 6^2 = 23 + 24 + 27 + 32 + 32 + 43 + 52 + 62$$
$$:= 2^3 + 2^5 + 2^6 + 3^2 + 4^2 + 4^2 + 5^2 + 5^3 = 23 + 25 + 26 + 32 + 42 + 42 + 52 + 53$$
$$:= 2^3 + 2^5 + 3^3 + 3^4 + 3^4 + 4^2 + 5^2 + 5^2 = 23 + 25 + 33 + 34 + 34 + 42 + 52 + 52$$
$$:= 2^3 + 2^6 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 + 5^2 = 23 + 26 + 33 + 33 + 42 + 43 + 43 + 52$$
$$:= 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 4^2 + 5^2 + 5^3 = 24 + 25 + 33 + 33 + 33 + 42 + 52 + 53$$
$$:= 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 + 6^2 = 24 + 26 + 32 + 32 + 34 + 42 + 43 + 62$$
$$:= 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 5^2 + 5^2 = 27 + 32 + 33 + 33 + 33 + 33 + 52 + 52$$

$$\textcolor{red}{297} := 2^2 + 2^2 + 2^5 + 2^5 + 2^7 + 5^2 + 6^2 + 6^2 = 22 + 22 + 25 + 25 + 27 + 52 + 62 + 62$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 5^3 + 6^2 + 6^2 = 22 + 24 + 24 + 25 + 25 + 53 + 62 + 62$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 3^4 + 4^3 + 6^2 + 6^2 = 23 + 23 + 25 + 25 + 34 + 43 + 62 + 62$$
$$:= 2^3 + 2^5 + 2^5 + 2^5 + 4^2 + 4^2 + 5^3 + 6^2 = 23 + 25 + 25 + 25 + 42 + 42 + 53 + 62$$

$$:= 2^3 + 2^5 + 2^7 + 3^3 + 3^3 + 5^2 + 5^2 + 5^2 = 23 + 25 + 27 + 33 + 33 + 52 + 52 + 52$$
$$:= 2^3 + 2^6 + 2^6 + 3^2 + 3^3 + 4^3 + 5^2 + 6^2 = 23 + 26 + 26 + 32 + 33 + 43 + 52 + 62$$
$$:= 2^4 + 2^4 + 2^5 + 3^3 + 3^4 + 4^3 + 5^2 + 6^2 = 24 + 24 + 25 + 33 + 34 + 43 + 52 + 62$$

$$\mathbf{297} := 2^4 + 2^5 + 2^6 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 = 24 + 25 + 26 + 42 + 42 + 43 + 43 + 52$$
$$:= 2^4 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 5^2 = 24 + 26 + 27 + 42 + 42 + 42 + 42 + 52$$
$$:= 2^5 + 2^6 + 3^3 + 3^3 + 3^4 + 4^2 + 5^2 + 5^2 = 25 + 26 + 33 + 33 + 34 + 42 + 52 + 52$$

$$\mathbf{298} := 2^2 + 2^2 + 2^3 + 3^2 + 4^2 + 4^2 + 5^2 + 6^3 = 22 + 22 + 23 + 32 + 42 + 42 + 52 + 63$$

$$\mathbf{299} := 2^3 + 2^5 + 2^5 + 2^6 + 3^3 + 4^3 + 6^2 + 6^2 = 23 + 25 + 25 + 26 + 33 + 43 + 62 + 62$$
$$:= 2^4 + 2^4 + 2^6 + 2^6 + 4^3 + 5^2 + 5^2 + 5^2 = 24 + 24 + 26 + 26 + 43 + 52 + 52 + 52$$
$$:= 2^4 + 2^5 + 2^5 + 2^7 + 4^2 + 5^2 + 5^2 + 5^2 = 24 + 25 + 25 + 27 + 42 + 52 + 52 + 52$$

$$\mathbf{300} := 2^2 + 2^2 + 3^2 + 3^3 + 3^4 + 5^2 + 5^2 + 5^3 = 22 + 22 + 32 + 33 + 34 + 52 + 52 + 53$$
$$:= 2^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 5^3 + 6^2 = 22 + 32 + 32 + 32 + 33 + 34 + 53 + 62$$

$$\mathbf{302} := 2^2 + 2^3 + 2^4 + 3^4 + 4^2 + 4^2 + 5^3 + 6^2 = 22 + 23 + 24 + 34 + 42 + 42 + 53 + 62$$
$$:= 2^2 + 2^5 + 3^2 + 3^3 + 4^2 + 4^3 + 5^2 + 5^3 = 22 + 25 + 32 + 33 + 42 + 43 + 52 + 53$$
$$:= 2^2 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 + 5^2 = 22 + 33 + 33 + 33 + 43 + 43 + 43 + 52$$
$$:= 2^3 + 3^2 + 3^2 + 3^4 + 3^4 + 4^3 + 5^2 + 5^2 = 23 + 32 + 32 + 34 + 34 + 43 + 52 + 52$$
$$:= 2^4 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 + 5^2 + 5^3 = 24 + 32 + 32 + 33 + 33 + 43 + 52 + 53$$

$$\mathbf{304} := 2^2 + 2^2 + 2^4 + 2^7 + 4^2 + 4^3 + 6^2 + 6^2 = 22 + 22 + 24 + 27 + 42 + 43 + 62 + 62$$
$$:= 2^2 + 2^2 + 2^5 + 2^6 + 5^2 + 5^2 + 5^2 + 5^3 = 22 + 22 + 25 + 26 + 52 + 52 + 52 + 53$$
$$:= 2^2 + 2^4 + 2^6 + 3^3 + 4^2 + 4^2 + 5^3 + 6^2 = 22 + 24 + 26 + 33 + 42 + 42 + 53 + 62$$
$$:= 2^2 + 2^5 + 2^6 + 3^2 + 3^2 + 5^2 + 5^3 + 6^2 = 22 + 25 + 26 + 32 + 32 + 52 + 53 + 62$$
$$:= 2^3 + 2^3 + 3^3 + 3^3 + 3^4 + 3^4 + 6^2 + 6^2 = 23 + 23 + 33 + 33 + 34 + 34 + 62 + 62$$
$$:= 2^3 + 2^4 + 2^5 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 = 23 + 24 + 25 + 32 + 43 + 52 + 52 + 53$$
$$:= 2^3 + 2^5 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 + 6^2 = 23 + 25 + 32 + 33 + 43 + 43 + 43 + 62$$
$$:= 2^3 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 + 6^2 = 23 + 27 + 32 + 33 + 42 + 42 + 43 + 62$$
$$:= 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 + 5^2 + 5^2 = 26 + 32 + 32 + 33 + 34 + 43 + 52 + 52$$

$$\mathbf{306} := 2^2 + 2^3 + 2^6 + 2^7 + 4^2 + 5^2 + 5^2 + 6^2 = 22 + 23 + 26 + 27 + 42 + 52 + 52 + 62$$
$$:= 2^2 + 2^5 + 2^5 + 2^5 + 3^2 + 5^3 + 6^2 + 6^2 = 22 + 25 + 25 + 25 + 32 + 53 + 62 + 62$$
$$:= 2^2 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 + 6^2 + 6^2 = 22 + 25 + 27 + 33 + 33 + 42 + 62 + 62$$
$$:= 2^2 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 + 5^2 + 6^2 = 22 + 26 + 26 + 34 + 42 + 42 + 52 + 62$$

$$:= 2^3 + 2^4 + 2^4 + 2^6 + 4^2 + 5^2 + 5^3 + 6^2 = 23 + 24 + 24 + 26 + 42 + 52 + 53 + 62$$
$$:= 2^3 + 2^4 + 2^5 + 3^4 + 3^4 + 4^2 + 6^2 + 6^2 = 23 + 24 + 25 + 34 + 34 + 42 + 62 + 62$$
$$:= 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 + 6^2 + 6^2 = 23 + 26 + 27 + 32 + 32 + 42 + 62 + 62$$
$$:= 2^3 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 + 6^2 + 6^2 = 23 + 26 + 33 + 33 + 33 + 34 + 62 + 62$$
$$:= 2^4 + 2^4 + 2^5 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 = 24 + 24 + 25 + 43 + 43 + 43 + 52 + 52$$
$$:= 2^4 + 2^4 + 2^7 + 4^2 + 4^2 + 4^3 + 5^2 + 5^2 = 24 + 24 + 27 + 42 + 42 + 43 + 52 + 52$$
$$:= 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 6^2 + 6^2 = 24 + 27 + 32 + 33 + 33 + 33 + 62 + 62$$
$$:= 2^5 + 2^5 + 3^2 + 3^3 + 3^4 + 4^3 + 5^2 + 6^2 = 25 + 25 + 32 + 33 + 34 + 43 + 52 + 62$$

$$307 := 2^2 + 2^2 + 2^2 + 2^2 + 5^2 + 5^2 + 5^2 + 6^3 = 22 + 22 + 22 + 22 + 52 + 52 + 52 + 63$$
$$:= 2^2 + 2^2 + 2^2 + 3^2 + 3^2 + 5^2 + 6^2 + 6^3 = 22 + 22 + 22 + 32 + 32 + 52 + 62 + 63$$

$$308 := 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 6^2 + 6^2 + 6^2 = 22 + 22 + 26 + 26 + 26 + 62 + 62 + 62$$
$$:= 2^3 + 2^4 + 2^5 + 2^7 + 3^3 + 5^2 + 6^2 + 6^2 = 23 + 24 + 25 + 27 + 33 + 52 + 62 + 62$$
$$:= 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 6^2 + 6^2 = 24 + 25 + 26 + 33 + 34 + 42 + 62 + 62$$
$$:= 2^5 + 2^6 + 2^6 + 3^2 + 4^3 + 5^2 + 5^2 + 5^2 = 25 + 26 + 26 + 32 + 43 + 52 + 52 + 52$$
$$:= 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 + 6^2 = 25 + 26 + 26 + 42 + 42 + 42 + 43 + 62$$
$$:= 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 6^2 + 6^2 = 26 + 26 + 33 + 33 + 33 + 33 + 62 + 62$$

$$309 := 2^2 + 2^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 = 22 + 22 + 42 + 42 + 42 + 43 + 43 + 53$$
$$:= 2^2 + 2^3 + 2^3 + 4^2 + 4^2 + 4^2 + 5^2 + 6^3 = 22 + 23 + 23 + 42 + 42 + 42 + 52 + 63$$
$$:= 2^2 + 2^4 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 6^3 = 22 + 24 + 32 + 42 + 42 + 42 + 42 + 63$$
$$:= 2^2 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 + 5^2 + 5^3 = 22 + 32 + 32 + 32 + 43 + 43 + 52 + 53$$
$$:= 2^3 + 2^3 + 3^2 + 3^2 + 3^2 + 5^2 + 5^2 + 6^3 = 23 + 23 + 32 + 32 + 32 + 52 + 52 + 63$$
$$:= 2^4 + 3^2 + 3^2 + 3^2 + 3^2 + 4^2 + 5^2 + 6^3 = 24 + 32 + 32 + 32 + 32 + 42 + 52 + 63$$

$$310 := 2^4 + 2^6 + 2^6 + 2^6 + 4^2 + 5^2 + 5^2 + 6^2 = 24 + 26 + 26 + 26 + 42 + 52 + 52 + 62$$
$$:= 2^5 + 2^5 + 2^5 + 2^6 + 4^3 + 5^2 + 5^2 + 6^2 = 25 + 25 + 25 + 26 + 43 + 52 + 52 + 62$$

$$311 := 2^2 + 2^2 + 2^4 + 3^2 + 3^4 + 5^3 + 6^2 + 6^2 = 22 + 22 + 24 + 32 + 34 + 53 + 62 + 62$$
$$:= 2^2 + 2^2 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 + 6^2 = 22 + 22 + 34 + 34 + 42 + 43 + 52 + 62$$
$$:= 2^2 + 2^3 + 3^3 + 3^4 + 4^2 + 5^2 + 5^2 + 5^3 = 22 + 23 + 33 + 34 + 42 + 52 + 52 + 53$$
$$:= 2^3 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 5^3 + 6^2 = 23 + 32 + 32 + 33 + 34 + 42 + 53 + 62$$
$$:= 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 5^3 = 32 + 33 + 33 + 33 + 42 + 42 + 43 + 53$$

$$313 := 2^2 + 2^2 + 2^7 + 3^3 + 4^3 + 5^2 + 5^2 + 6^2 = 22 + 22 + 27 + 33 + 43 + 52 + 52 + 62$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 4^3 + 5^3 + 6^2 + 6^2 = 22 + 23 + 23 + 25 + 43 + 53 + 62 + 62$$

$$:= 2^2 + 2^4 + 2^4 + 3^3 + 4^3 + 5^2 + 5^3 + 6^2 = 22 + 24 + 24 + 33 + 43 + 52 + 53 + 62$$
$$:= 2^2 + 2^5 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 + 6^2 = 22 + 25 + 34 + 42 + 42 + 43 + 43 + 62$$
$$:= 2^2 + 2^6 + 3^3 + 3^3 + 4^2 + 5^2 + 5^2 + 5^3 = 22 + 26 + 33 + 33 + 42 + 52 + 52 + 53$$
$$:= 2^2 + 2^7 + 3^2 + 3^2 + 3^3 + 4^3 + 6^2 + 6^2 = 22 + 27 + 32 + 32 + 33 + 43 + 62 + 62$$
$$:= 2^2 + 2^7 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 = 22 + 27 + 32 + 34 + 42 + 52 + 52 + 52$$
$$:= 2^2 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 6^2 = 22 + 27 + 34 + 42 + 42 + 42 + 42 + 62$$
$$:= 2^3 + 2^3 + 2^4 + 3^4 + 5^2 + 5^2 + 5^2 + 5^3 = 23 + 23 + 24 + 34 + 52 + 52 + 52 + 53$$
$$:= 2^3 + 2^3 + 3^3 + 3^4 + 4^3 + 4^3 + 5^2 + 6^2 = 23 + 23 + 33 + 34 + 43 + 43 + 52 + 62$$
$$:= 2^3 + 2^5 + 3^3 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 = 23 + 25 + 33 + 42 + 42 + 43 + 52 + 53$$
$$:= 2^4 + 2^4 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 + 5^3 = 24 + 24 + 32 + 34 + 42 + 52 + 52 + 53$$
$$:= 2^4 + 3^2 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 + 6^2 = 24 + 32 + 33 + 34 + 42 + 43 + 43 + 62$$
$$:= 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 + 5^3 + 6^2 = 26 + 32 + 32 + 33 + 33 + 42 + 53 + 62$$
$$:= 2^6 + 3^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 26 + 32 + 42 + 42 + 42 + 43 + 43 + 43$$
$$:= 2^7 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 5^2 + 6^2 = 27 + 32 + 32 + 32 + 34 + 42 + 52 + 62$$
$$:= 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 5^2 + 6^2 = 32 + 33 + 33 + 33 + 34 + 34 + 52 + 62$$

$$315 := 2^2 + 2^4 + 2^6 + 3^4 + 4^3 + 5^2 + 5^2 + 6^2 = 22 + 24 + 26 + 34 + 43 + 52 + 52 + 62$$
$$:= 2^3 + 2^4 + 2^6 + 3^3 + 5^2 + 5^2 + 5^2 + 5^3 = 23 + 24 + 26 + 33 + 52 + 52 + 52 + 53$$
$$:= 2^3 + 2^5 + 2^6 + 3^2 + 4^2 + 5^2 + 5^3 + 6^2 = 23 + 25 + 26 + 32 + 42 + 52 + 53 + 62$$
$$:= 2^3 + 2^5 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 + 6^2 = 23 + 25 + 33 + 34 + 34 + 52 + 52 + 62$$
$$:= 2^3 + 2^6 + 3^3 + 3^3 + 4^3 + 4^3 + 5^2 + 6^2 = 23 + 26 + 33 + 33 + 43 + 43 + 52 + 62$$
$$:= 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 5^2 + 5^3 + 6^2 = 24 + 25 + 33 + 33 + 33 + 52 + 53 + 62$$
$$:= 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 4^3 + 6^2 + 6^2 = 24 + 26 + 32 + 32 + 34 + 43 + 62 + 62$$
$$:= 2^5 + 2^5 + 3^2 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 = 25 + 25 + 32 + 43 + 43 + 43 + 52 + 52$$
$$:= 2^5 + 2^7 + 3^2 + 4^2 + 4^2 + 4^3 + 5^2 + 5^2 = 25 + 27 + 32 + 42 + 42 + 43 + 52 + 52$$

$$317 := 2^3 + 2^5 + 2^5 + 2^5 + 4^2 + 5^3 + 6^2 + 6^2 = 23 + 25 + 25 + 25 + 42 + 53 + 62 + 62$$
$$:= 2^3 + 2^6 + 2^6 + 3^4 + 5^2 + 5^2 + 5^2 + 5^2 = 23 + 26 + 26 + 34 + 52 + 52 + 52 + 52$$
$$:= 2^4 + 2^5 + 2^6 + 4^2 + 4^3 + 4^3 + 5^2 + 6^2 = 24 + 25 + 26 + 42 + 43 + 43 + 52 + 62$$
$$:= 2^4 + 2^6 + 2^7 + 3^2 + 5^2 + 5^2 + 5^2 + 5^2 = 24 + 26 + 27 + 32 + 52 + 52 + 52 + 52$$
$$:= 2^4 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 + 5^2 + 6^2 = 24 + 26 + 27 + 42 + 42 + 42 + 52 + 62$$
$$:= 2^5 + 2^6 + 3^3 + 3^3 + 3^4 + 5^2 + 5^2 + 6^2 = 25 + 26 + 33 + 33 + 34 + 52 + 52 + 62$$

$$318 := 2^2 + 2^2 + 2^3 + 3^2 + 4^2 + 5^2 + 6^2 + 6^3 = 22 + 22 + 23 + 32 + 42 + 52 + 62 + 63$$
$$:= 3^2 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 5^3 + 5^3 = 32 + 32 + 32 + 32 + 42 + 42 + 53 + 53$$
$$:= 3^2 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 + 4^2 + 6^3 = 32 + 32 + 32 + 33 + 42 + 42 + 42 + 63$$

$$\mathbf{319} := 2^4 + 2^5 + 2^5 + 2^7 + 5^2 + 5^2 + 5^2 + 6^2 = 24 + 25 + 25 + 27 + 52 + 52 + 52 + 62$$
$$:= 2^6 + 2^6 + 2^6 + 3^3 + 5^2 + 5^2 + 5^2 + 5^2 = 26 + 26 + 26 + 33 + 52 + 52 + 52 + 52$$

$$\mathbf{320} := 2^3 + 2^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 6^3 = 23 + 24 + 42 + 42 + 42 + 42 + 42 + 63$$
$$:= 2^3 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^3 = 23 + 32 + 32 + 42 + 43 + 43 + 52 + 53$$

$$\mathbf{322} := 2^2 + 2^3 + 2^4 + 3^4 + 4^2 + 5^3 + 6^2 + 6^2 = 22 + 23 + 24 + 34 + 42 + 53 + 62 + 62$$
$$:= 2^2 + 2^5 + 3^2 + 3^3 + 4^3 + 5^2 + 5^3 + 6^2 = 22 + 25 + 32 + 33 + 43 + 52 + 53 + 62$$
$$:= 2^3 + 2^3 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 = 23 + 23 + 43 + 43 + 43 + 43 + 52 + 52$$
$$:= 2^4 + 3^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 = 24 + 32 + 42 + 43 + 43 + 43 + 43 + 52$$
$$:= 2^4 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 = 24 + 33 + 34 + 42 + 42 + 42 + 52 + 53$$
$$:= 2^5 + 3^2 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 + 5^3 = 25 + 32 + 32 + 34 + 42 + 52 + 52 + 53$$
$$:= 3^2 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 + 5^2 + 5^2 = 32 + 33 + 33 + 34 + 43 + 43 + 52 + 52$$

$$\mathbf{324} := 2^2 + 2^2 + 2^4 + 2^7 + 4^3 + 6^2 + 6^2 + 6^2 = 22 + 22 + 24 + 27 + 43 + 62 + 62 + 62$$
$$:= 2^2 + 2^4 + 2^6 + 3^3 + 4^2 + 5^3 + 6^2 + 6^2 = 22 + 24 + 26 + 33 + 42 + 53 + 62 + 62$$
$$:= 2^3 + 2^5 + 3^4 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 = 23 + 25 + 34 + 43 + 43 + 52 + 52 + 52$$
$$:= 2^3 + 2^7 + 3^2 + 3^3 + 4^2 + 4^3 + 6^2 + 6^2 = 23 + 27 + 32 + 33 + 42 + 43 + 62 + 62$$
$$:= 2^3 + 2^7 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 = 23 + 27 + 34 + 42 + 42 + 52 + 52 + 52$$
$$:= 2^6 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 = 26 + 34 + 34 + 42 + 42 + 42 + 52 + 52$$

$$\mathbf{326} := 2^2 + 2^3 + 2^6 + 2^7 + 5^2 + 5^2 + 6^2 + 6^2 = 22 + 23 + 26 + 27 + 52 + 52 + 62 + 62$$
$$:= 2^2 + 2^5 + 2^7 + 3^3 + 3^3 + 6^2 + 6^2 + 6^2 = 22 + 25 + 27 + 33 + 33 + 62 + 62 + 62$$
$$:= 2^2 + 2^6 + 2^6 + 3^4 + 4^2 + 5^2 + 6^2 + 6^2 = 22 + 26 + 26 + 34 + 42 + 52 + 62 + 62$$
$$:= 2^3 + 2^4 + 2^4 + 2^6 + 5^2 + 5^3 + 6^2 + 6^2 = 23 + 24 + 24 + 26 + 52 + 53 + 62 + 62$$
$$:= 2^3 + 2^4 + 2^5 + 3^4 + 3^4 + 6^2 + 6^2 + 6^2 = 23 + 24 + 25 + 34 + 34 + 62 + 62 + 62$$
$$:= 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 6^2 + 6^2 + 6^2 = 23 + 26 + 27 + 32 + 32 + 62 + 62 + 62$$
$$:= 2^4 + 2^4 + 2^7 + 4^2 + 4^3 + 5^2 + 5^2 + 6^2 = 24 + 24 + 27 + 42 + 43 + 52 + 52 + 62$$
$$:= 2^5 + 2^5 + 3^4 + 3^4 + 5^2 + 5^2 + 5^2 + 5^2 = 25 + 25 + 34 + 34 + 52 + 52 + 52 + 52$$
$$:= 2^5 + 2^6 + 3^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 = 25 + 26 + 33 + 43 + 43 + 52 + 52 + 52$$
$$:= 2^6 + 2^7 + 3^3 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 = 26 + 27 + 33 + 42 + 42 + 52 + 52 + 52$$

$$\mathbf{328} := 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 6^2 + 6^2 + 6^2 = 24 + 25 + 26 + 33 + 34 + 62 + 62 + 62$$
$$:= 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^3 + 6^2 + 6^2 = 25 + 26 + 26 + 42 + 42 + 43 + 62 + 62$$

$$\mathbf{329} := 2^2 + 2^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 + 6^2 = 22 + 22 + 42 + 42 + 43 + 43 + 53 + 62$$
$$:= 2^2 + 2^3 + 2^3 + 4^2 + 4^2 + 5^2 + 6^2 + 6^3 = 22 + 23 + 23 + 42 + 42 + 52 + 62 + 63$$

$$:= 2^2 + 2^4 + 3^2 + 3^2 + 5^2 + 5^2 + 5^2 + 6^3 = 22 + 24 + 32 + 32 + 52 + 52 + 52 + 63$$

$$\textbf{329} := 2^2 + 2^4 + 3^2 + 4^2 + 4^2 + 4^2 + 6^2 + 6^3 = 22 + 24 + 32 + 42 + 42 + 42 + 62 + 63$$
$$:= 2^4 + 3^2 + 3^2 + 3^2 + 3^2 + 5^2 + 6^2 + 6^3 = 24 + 32 + 32 + 32 + 32 + 52 + 62 + 63$$

$$\textbf{330} := 2^4 + 2^6 + 2^6 + 2^6 + 5^2 + 5^2 + 6^2 + 6^2 = 24 + 26 + 26 + 26 + 52 + 52 + 62 + 62$$

$$\textbf{331} := 2^2 + 2^2 + 3^4 + 3^4 + 4^3 + 5^2 + 6^2 + 6^2 = 22 + 22 + 34 + 34 + 43 + 52 + 62 + 62$$
$$:= 2^2 + 2^3 + 3^3 + 3^4 + 5^2 + 5^2 + 5^3 + 6^2 = 22 + 23 + 33 + 34 + 52 + 52 + 53 + 62$$
$$:= 2^3 + 3^2 + 3^2 + 3^3 + 3^4 + 5^3 + 6^2 + 6^2 = 23 + 32 + 32 + 33 + 34 + 53 + 62 + 62$$
$$:= 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 + 5^3 + 6^2 = 32 + 33 + 33 + 33 + 42 + 43 + 53 + 62$$
$$:= 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 33 + 42 + 42 + 42 + 43 + 43 + 43 + 43$$

$$\textbf{333} := 2^2 + 2^5 + 3^4 + 4^2 + 4^3 + 4^3 + 6^2 + 6^2 = 22 + 25 + 34 + 42 + 43 + 43 + 62 + 62$$
$$:= 2^2 + 2^6 + 3^3 + 3^3 + 5^2 + 5^2 + 5^3 + 6^2 = 22 + 26 + 33 + 33 + 52 + 52 + 53 + 62$$
$$:= 2^2 + 2^7 + 3^2 + 3^4 + 5^2 + 5^2 + 5^2 + 6^2 = 22 + 27 + 32 + 34 + 52 + 52 + 52 + 62$$
$$:= 2^2 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 + 6^2 + 6^2 = 22 + 27 + 34 + 42 + 42 + 42 + 62 + 62$$
$$:= 2^3 + 2^5 + 3^3 + 4^2 + 4^3 + 5^2 + 5^3 + 6^2 = 23 + 25 + 33 + 42 + 43 + 52 + 53 + 62$$
$$:= 2^4 + 2^4 + 3^2 + 3^4 + 5^2 + 5^2 + 5^3 + 6^2 = 24 + 24 + 32 + 34 + 52 + 52 + 53 + 62$$
$$:= 2^4 + 3^2 + 3^3 + 3^4 + 4^3 + 4^3 + 6^2 + 6^2 = 24 + 32 + 33 + 34 + 43 + 43 + 62 + 62$$
$$:= 2^4 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 = 24 + 34 + 34 + 42 + 43 + 52 + 52 + 52$$
$$:= 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 5^3 + 6^2 + 6^2 = 26 + 32 + 32 + 33 + 33 + 53 + 62 + 62$$
$$:= 2^6 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 6^2 = 26 + 32 + 42 + 42 + 43 + 43 + 43 + 62$$
$$:= 2^7 + 3^2 + 3^2 + 3^2 + 3^4 + 5^2 + 6^2 + 6^2 = 27 + 32 + 32 + 32 + 34 + 52 + 62 + 62$$

$$\textbf{335} := 2^3 + 2^5 + 2^6 + 3^2 + 5^2 + 5^3 + 6^2 + 6^2 = 23 + 25 + 26 + 32 + 52 + 53 + 62 + 62$$
$$:= 2^4 + 2^7 + 3^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 = 24 + 27 + 33 + 43 + 52 + 52 + 52 + 52$$
$$:= 2^5 + 2^7 + 3^2 + 4^2 + 4^3 + 5^2 + 5^2 + 6^2 = 25 + 27 + 32 + 42 + 43 + 52 + 52 + 62$$

$$\textbf{337} := 2^3 + 2^5 + 2^5 + 2^5 + 5^3 + 6^2 + 6^2 + 6^2 = 23 + 25 + 25 + 25 + 53 + 62 + 62 + 62$$
$$:= 2^4 + 2^5 + 2^6 + 4^3 + 4^3 + 5^2 + 6^2 + 6^2 = 24 + 25 + 26 + 43 + 43 + 52 + 62 + 62$$
$$:= 2^4 + 2^6 + 2^7 + 4^2 + 4^2 + 5^2 + 6^2 + 6^2 = 24 + 26 + 27 + 42 + 42 + 52 + 62 + 62$$

$$\textbf{338} := 2^2 + 2^2 + 2^3 + 3^2 + 5^2 + 6^2 + 6^2 + 6^3 = 22 + 22 + 23 + 32 + 52 + 62 + 62 + 63$$
$$:= 2^2 + 3^2 + 3^2 + 4^2 + 5^2 + 5^2 + 5^3 + 5^3 = 22 + 32 + 32 + 42 + 52 + 52 + 53 + 53$$
$$:= 2^2 + 3^2 + 3^3 + 4^2 + 4^2 + 5^2 + 5^2 + 6^3 = 22 + 32 + 33 + 42 + 42 + 52 + 52 + 63$$
$$:= 3^2 + 3^2 + 3^2 + 3^2 + 4^2 + 5^3 + 5^3 + 6^2 = 32 + 32 + 32 + 32 + 42 + 53 + 53 + 62$$

$$:= 3^2 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 + 6^2 + 6^3 = 32 + 32 + 32 + 33 + 42 + 42 + 62 + 63$$

$$\mathbf{340} := 2^2 + 2^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 = 22 + 23 + 43 + 43 + 52 + 52 + 52 + 53$$
$$:= 2^3 + 2^3 + 2^3 + 5^2 + 5^2 + 5^2 + 5^2 + 6^3 = 23 + 23 + 23 + 52 + 52 + 52 + 52 + 63$$
$$:= 2^3 + 2^4 + 3^2 + 4^2 + 5^2 + 5^2 + 5^2 + 6^3 = 23 + 24 + 32 + 42 + 52 + 52 + 52 + 63$$
$$:= 2^3 + 2^4 + 4^2 + 4^2 + 4^2 + 4^2 + 6^2 + 6^3 = 23 + 24 + 42 + 42 + 42 + 42 + 62 + 63$$
$$:= 2^3 + 3^2 + 3^2 + 4^3 + 4^3 + 5^2 + 5^3 + 6^2 = 23 + 32 + 32 + 43 + 43 + 52 + 53 + 62$$

$$\mathbf{342} := 2^2 + 2^3 + 2^4 + 3^4 + 5^3 + 6^2 + 6^2 + 6^2 = 22 + 23 + 24 + 34 + 53 + 62 + 62 + 62$$
$$:= 2^2 + 2^5 + 3^4 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 = 22 + 25 + 34 + 52 + 52 + 52 + 52 + 53$$
$$:= 2^4 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 + 6^2 = 24 + 32 + 43 + 43 + 43 + 43 + 52 + 62$$
$$:= 2^4 + 3^3 + 3^4 + 4^2 + 4^2 + 5^2 + 5^3 + 6^2 = 24 + 33 + 34 + 42 + 42 + 52 + 53 + 62$$
$$:= 2^5 + 3^2 + 3^2 + 3^4 + 5^2 + 5^2 + 5^3 + 6^2 = 25 + 32 + 32 + 34 + 52 + 52 + 53 + 62$$
$$:= 2^6 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 = 26 + 42 + 42 + 42 + 42 + 43 + 52 + 53$$

$$\mathbf{344} := 2^2 + 2^4 + 2^6 + 3^3 + 5^3 + 6^2 + 6^2 + 6^2 = 22 + 24 + 26 + 33 + 53 + 62 + 62 + 62$$
$$:= 2^3 + 2^7 + 3^2 + 3^3 + 4^3 + 6^2 + 6^2 + 6^2 = 23 + 27 + 32 + 33 + 43 + 62 + 62 + 62$$
$$:= 2^3 + 2^7 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 + 6^2 = 23 + 27 + 34 + 42 + 52 + 52 + 52 + 62$$
$$:= 2^5 + 2^5 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 = 25 + 25 + 42 + 43 + 52 + 52 + 52 + 53$$
$$:= 2^6 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 + 6^2 = 26 + 34 + 34 + 42 + 42 + 52 + 52 + 62$$

$$\mathbf{346} := 2^2 + 2^6 + 2^6 + 3^4 + 5^2 + 6^2 + 6^2 + 6^2 = 22 + 26 + 26 + 34 + 52 + 62 + 62 + 62$$
$$:= 2^4 + 2^4 + 2^7 + 4^3 + 5^2 + 5^2 + 6^2 + 6^2 = 24 + 24 + 27 + 43 + 52 + 52 + 62 + 62$$
$$:= 2^6 + 2^7 + 3^3 + 4^2 + 5^2 + 5^2 + 5^2 + 6^2 = 26 + 27 + 33 + 42 + 52 + 52 + 52 + 62$$

$$\mathbf{348} := 2^5 + 2^6 + 2^6 + 4^2 + 4^3 + 6^2 + 6^2 + 6^2 = 25 + 26 + 26 + 42 + 43 + 62 + 62 + 62$$

$$\mathbf{349} := 2^2 + 2^2 + 4^2 + 4^3 + 4^3 + 5^3 + 6^2 + 6^2 = 22 + 22 + 42 + 43 + 43 + 53 + 62 + 62$$
$$:= 2^2 + 2^3 + 2^3 + 4^2 + 5^2 + 6^2 + 6^2 + 6^3 = 22 + 23 + 23 + 42 + 52 + 62 + 62 + 63$$
$$:= 2^2 + 2^4 + 3^2 + 4^2 + 4^2 + 6^2 + 6^2 + 6^3 = 22 + 24 + 32 + 42 + 42 + 62 + 62 + 63$$
$$:= 2^3 + 3^2 + 4^2 + 4^2 + 5^2 + 5^2 + 5^3 + 5^3 = 23 + 32 + 42 + 42 + 52 + 52 + 53 + 53$$
$$:= 2^3 + 3^3 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 + 6^3 = 23 + 33 + 42 + 42 + 42 + 52 + 52 + 63$$

$$\mathbf{351} := 2^4 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 = 24 + 42 + 42 + 43 + 43 + 52 + 52 + 53$$
$$:= 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 5^3 + 6^2 + 6^2 = 32 + 33 + 33 + 33 + 43 + 53 + 62 + 62$$
$$:= 3^3 + 3^3 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 + 5^3 = 33 + 33 + 34 + 42 + 52 + 52 + 52 + 53$$
$$:= 3^3 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 6^2 = 33 + 42 + 42 + 43 + 43 + 43 + 43 + 62$$

$353 := 2^2 + 2^5 + 3^4 + 4^3 + 4^3 + 6^2 + 6^2 + 6^2 = 22 + 25 + 34 + 43 + 43 + 62 + 62 + 62$
$:= 2^2 + 2^7 + 3^4 + 4^2 + 4^2 + 6^2 + 6^2 + 6^2 = 22 + 27 + 34 + 42 + 42 + 62 + 62 + 62$
$:= 2^3 + 2^5 + 3^3 + 4^3 + 5^2 + 5^3 + 6^2 + 6^2 = 23 + 25 + 33 + 43 + 52 + 53 + 62 + 62$
$:= 2^4 + 3^4 + 3^4 + 4^3 + 5^2 + 5^2 + 5^2 + 6^2 = 24 + 34 + 34 + 43 + 52 + 52 + 52 + 62$
$:= 2^6 + 3^2 + 4^2 + 4^3 + 4^3 + 4^3 + 6^2 + 6^2 = 26 + 32 + 42 + 43 + 43 + 43 + 62 + 62$

$355 := 2^5 + 2^7 + 3^2 + 4^3 + 5^2 + 5^2 + 6^2 + 6^2 = 25 + 27 + 32 + 43 + 52 + 52 + 62 + 62$
$357 := 2^4 + 2^6 + 2^7 + 4^2 + 5^2 + 6^2 + 6^2 + 6^2 = 24 + 26 + 27 + 42 + 52 + 62 + 62 + 62$

$358 := 2^2 + 2^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 + 5^3 = 22 + 22 + 52 + 52 + 52 + 52 + 53 + 53$
$:= 2^2 + 3^2 + 3^2 + 5^2 + 5^2 + 5^3 + 5^3 + 6^2 = 22 + 32 + 32 + 52 + 52 + 53 + 53 + 62$
$:= 2^2 + 3^2 + 3^3 + 4^2 + 5^2 + 5^2 + 6^2 + 6^3 = 22 + 32 + 33 + 42 + 52 + 52 + 62 + 63$
$:= 3^2 + 3^2 + 3^2 + 3^2 + 5^3 + 5^3 + 6^2 + 6^2 = 32 + 32 + 32 + 32 + 53 + 53 + 62 + 62$
$:= 3^2 + 3^2 + 3^2 + 3^3 + 4^2 + 6^2 + 6^2 + 6^3 = 32 + 32 + 32 + 33 + 42 + 62 + 62 + 63$

$360 := 2^3 + 2^4 + 3^2 + 5^2 + 5^2 + 5^2 + 6^2 + 6^3 = 23 + 24 + 32 + 52 + 52 + 52 + 62 + 63$
$:= 2^3 + 2^4 + 4^2 + 4^2 + 4^2 + 6^2 + 6^2 + 6^3 = 23 + 24 + 42 + 42 + 42 + 62 + 62 + 63$

$362 := 2^4 + 3^3 + 3^4 + 4^2 + 5^2 + 5^3 + 6^2 + 6^2 = 24 + 33 + 34 + 42 + 52 + 53 + 62 + 62$
$:= 2^6 + 3^2 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 = 26 + 32 + 43 + 52 + 52 + 52 + 52 + 53$
$:= 2^6 + 4^2 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 + 6^2 = 26 + 42 + 42 + 42 + 43 + 52 + 53 + 62$

$364 := 2^3 + 2^7 + 3^4 + 5^2 + 5^2 + 5^2 + 6^2 + 6^2 = 23 + 27 + 34 + 52 + 52 + 52 + 62 + 62$
$:= 2^5 + 2^5 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 + 6^2 = 25 + 25 + 43 + 52 + 52 + 52 + 53 + 62$
$:= 2^6 + 3^4 + 3^4 + 4^2 + 5^2 + 5^2 + 6^2 + 6^2 = 26 + 34 + 34 + 42 + 52 + 52 + 62 + 62$

$366 := 2^6 + 2^7 + 3^3 + 5^2 + 5^2 + 5^2 + 6^2 + 6^2 = 26 + 27 + 33 + 52 + 52 + 52 + 62 + 62$
$368 := 2^5 + 2^6 + 2^6 + 4^3 + 6^2 + 6^2 + 6^2 + 6^2 = 25 + 26 + 26 + 43 + 62 + 62 + 62 + 62$

$369 := 2^2 + 2^2 + 4^3 + 4^3 + 5^3 + 6^2 + 6^2 + 6^2 = 22 + 22 + 43 + 43 + 53 + 62 + 62 + 62$
$:= 2^2 + 2^3 + 2^3 + 5^2 + 6^2 + 6^2 + 6^2 + 6^3 = 22 + 23 + 23 + 52 + 62 + 62 + 62 + 63$
$:= 2^2 + 2^4 + 3^2 + 4^2 + 6^2 + 6^2 + 6^2 + 6^3 = 22 + 24 + 32 + 42 + 62 + 62 + 62 + 63$
$:= 2^3 + 3^2 + 4^2 + 5^2 + 5^2 + 5^3 + 5^3 + 6^2 = 23 + 32 + 42 + 52 + 52 + 53 + 53 + 62$
$:= 2^3 + 3^3 + 4^2 + 4^2 + 5^2 + 5^2 + 6^2 + 6^3 = 23 + 33 + 42 + 42 + 52 + 52 + 62 + 63$

$371 := 2^4 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 + 6^2 = 24 + 42 + 43 + 43 + 52 + 52 + 53 + 62$

$$:= 3^3 + 3^3 + 3^4 + 5^2 + 5^2 + 5^2 + 5^3 + 6^2 = 33 + 33 + 34 + 52 + 52 + 52 + 53 + 62$$
$$:= 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 6^2 + 6^2 = 33 + 42 + 43 + 43 + 43 + 43 + 62 + 62$$

$$373 := 2^2 + 2^7 + 3^4 + 4^2 + 6^2 + 6^2 + 6^2 + 6^2 = 22 + 27 + 34 + 42 + 62 + 62 + 62 + 62$$
$$:= 2^6 + 3^2 + 4^3 + 4^3 + 4^3 + 6^2 + 6^2 + 6^2 = 26 + 32 + 43 + 43 + 43 + 62 + 62 + 62$$

$$377 := 2^4 + 2^6 + 2^7 + 5^2 + 6^2 + 6^2 + 6^2 + 6^2 = 24 + 26 + 27 + 52 + 62 + 62 + 62 + 62$$

$$378 := 2^2 + 3^2 + 3^3 + 5^2 + 5^2 + 6^2 + 6^2 + 6^3 = 22 + 32 + 33 + 52 + 52 + 62 + 62 + 63$$
$$:= 3^2 + 3^2 + 3^2 + 3^3 + 6^2 + 6^2 + 6^2 + 6^3 = 32 + 32 + 32 + 33 + 62 + 62 + 62 + 63$$

$$380 := 2^3 + 2^4 + 4^2 + 4^2 + 6^2 + 6^2 + 6^2 + 6^3 = 23 + 24 + 42 + 42 + 62 + 62 + 62 + 63$$
$$:= 2^5 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 + 5^2 + 6^3 = 25 + 42 + 42 + 52 + 52 + 52 + 52 + 63$$
$$:= 3^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 = 33 + 43 + 43 + 52 + 52 + 52 + 52 + 53$$

$$382 := 2^4 + 3^3 + 3^4 + 5^2 + 5^3 + 6^2 + 6^2 + 6^2 = 24 + 33 + 34 + 52 + 53 + 62 + 62 + 62$$
$$:= 2^6 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 + 6^2 + 6^2 = 26 + 42 + 42 + 43 + 52 + 53 + 62 + 62$$

$$384 := 2^6 + 3^4 + 3^4 + 5^2 + 5^2 + 6^2 + 6^2 + 6^2 = 26 + 34 + 34 + 52 + 52 + 62 + 62 + 62$$

$$389 := 2^2 + 2^4 + 3^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 = 22 + 24 + 32 + 62 + 62 + 62 + 62 + 63$$
$$:= 2^3 + 3^2 + 5^2 + 5^2 + 5^3 + 5^3 + 6^2 + 6^2 = 23 + 32 + 52 + 52 + 53 + 53 + 62 + 62$$
$$:= 2^3 + 3^3 + 4^2 + 5^2 + 5^2 + 6^2 + 6^2 + 6^3 = 23 + 33 + 42 + 52 + 52 + 62 + 62 + 63$$

$$391 := 2^4 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 + 6^2 + 6^2 = 24 + 43 + 43 + 52 + 52 + 53 + 62 + 62$$
$$:= 3^3 + 4^3 + 4^3 + 4^3 + 4^3 + 6^2 + 6^2 + 6^2 = 33 + 43 + 43 + 43 + 43 + 62 + 62 + 62$$

$$393 := 2^2 + 2^7 + 3^4 + 6^2 + 6^2 + 6^2 + 6^2 + 6^2 = 22 + 27 + 34 + 62 + 62 + 62 + 62 + 62$$

$$400 := 2^3 + 2^4 + 4^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 = 23 + 24 + 42 + 62 + 62 + 62 + 62 + 63$$
$$:= 2^5 + 4^2 + 5^2 + 5^2 + 5^2 + 5^2 + 6^2 + 6^3 = 25 + 42 + 52 + 52 + 52 + 52 + 62 + 63$$

$$402 := 2^6 + 4^2 + 4^3 + 5^2 + 5^3 + 6^2 + 6^2 + 6^2 = 26 + 42 + 43 + 52 + 53 + 62 + 62 + 62$$
$$:= 2^3 + 3^3 + 5^2 + 5^2 + 6^2 + 6^2 + 6^2 + 6^3 = 23 + 33 + 52 + 52 + 62 + 62 + 62 + 63$$

$$420 := 2^3 + 2^4 + 6^2 + 6^2 + 6^2 + 6^2 + 6^2 + 6^3 = 23 + 24 + 62 + 62 + 62 + 62 + 62 + 63$$
$$:= 2^5 + 5^2 + 5^2 + 5^2 + 5^2 + 6^2 + 6^2 + 6^3 = 25 + 52 + 52 + 52 + 52 + 62 + 62 + 63$$
$$422 := 2^6 + 4^3 + 5^2 + 5^3 + 6^2 + 6^2 + 6^2 + 6^2 = 26 + 43 + 52 + 53 + 62 + 62 + 62 + 62$$

7.5 Nine Terms Expressions

This section deals with nine terms equality expressions, where we have considered only positive expressions with both powers and bases bigger than one.

$$212 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 2^6 + 2^6 \qquad = 22 + 22 + 22 + 22 + 22 + 25 + 25 + 26 + 26$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 \qquad = 22 + 22 + 22 + 23 + 24 + 24 + 24 + 24 + 27$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^7 \qquad = 22 + 23 + 23 + 23 + 23 + 23 + 23 + 25 + 27$$

$$216 := 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 \qquad = 22 + 22 + 23 + 23 + 25 + 25 + 25 + 25 + 26$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 \qquad = 22 + 22 + 24 + 24 + 24 + 24 + 24 + 26 + 26$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 2^6 \qquad = 23 + 23 + 23 + 23 + 23 + 24 + 25 + 26 + 26$$

$$219 := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^7 + 3^3 \qquad = 22 + 22 + 22 + 22 + 23 + 23 + 25 + 27 + 33$$

$$221 := 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 3^4 \qquad = 22 + 22 + 22 + 23 + 23 + 24 + 25 + 26 + 34$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 \qquad = 22 + 22 + 22 + 23 + 24 + 24 + 25 + 27 + 32$$

$$223 := 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 3^3 \qquad = 22 + 22 + 22 + 23 + 24 + 25 + 26 + 26 + 33$$

$$225 := 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 \qquad = 22 + 22 + 24 + 24 + 24 + 25 + 26 + 26 + 32$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 \qquad = 23 + 23 + 23 + 23 + 24 + 25 + 25 + 25 + 34$$

$$227 := 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 \qquad = 22 + 22 + 25 + 25 + 25 + 25 + 25 + 25 + 33$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 \qquad = 23 + 23 + 23 + 24 + 25 + 25 + 25 + 26 + 33$$

$$230 := 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 \qquad = 22 + 22 + 22 + 23 + 25 + 25 + 27 + 32 + 32$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 3^3 + 3^3 \qquad = 22 + 22 + 23 + 23 + 23 + 24 + 27 + 33 + 33$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 3^4 + 3^4 \qquad = 22 + 23 + 23 + 23 + 23 + 24 + 24 + 34 + 34$$

$$232 := 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 3^3 + 3^4 \qquad = 22 + 22 + 22 + 24 + 25 + 25 + 25 + 33 + 34$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 4^2 \qquad = 22 + 22 + 23 + 23 + 24 + 24 + 25 + 27 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 3^3 + 3^4 \qquad = 22 + 23 + 23 + 23 + 24 + 24 + 26 + 33 + 34$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 \qquad = 22 + 23 + 23 + 24 + 24 + 24 + 27 + 32 + 33$$

$$234 := 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 \qquad = 22 + 22 + 24 + 25 + 25 + 26 + 26 + 32 + 32$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 \qquad = 22 + 23 + 23 + 24 + 24 + 26 + 26 + 33 + 33$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^4 \qquad = 23 + 23 + 24 + 24 + 24 + 24 + 26 + 32 + 34$$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 \qquad = 23 + 24 + 24 + 24 + 24 + 24 + 27 + 32 + 32$$

$$\mathbf{236} := 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 4^2 \qquad = 22 + 23 + 24 + 24 + 24 + 25 + 26 + 26 + 42$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 4^3 \qquad = 22 + 23 + 24 + 24 + 25 + 25 + 25 + 25 + 43$$
$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 \qquad = 23 + 24 + 24 + 24 + 24 + 26 + 26 + 32 + 33$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 3^3 + 3^4 \qquad = 24 + 24 + 24 + 24 + 24 + 24 + 25 + 33 + 34$$

$$\mathbf{237} := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^6 + 2^7 + 3^2 + 4^2 \qquad = 22 + 22 + 22 + 22 + 22 + 26 + 27 + 32 + 42$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 5^3 \qquad = 22 + 22 + 22 + 22 + 23 + 23 + 24 + 26 + 53$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 3^3 + 3^4 + 3^4 \qquad = 22 + 22 + 22 + 22 + 24 + 24 + 33 + 34 + 34$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 4^3 \qquad = 22 + 22 + 22 + 23 + 23 + 23 + 27 + 32 + 43$$

$$\mathbf{238} := 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 \qquad = 23 + 24 + 25 + 25 + 25 + 25 + 25 + 33 + 33$$
$$\mathbf{239} := 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 3^2 + 3^4 + 3^4 \qquad = 22 + 23 + 23 + 23 + 23 + 25 + 32 + 34 + 34$$
$$\mathbf{240} := 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 4^2 \qquad = 24 + 24 + 25 + 25 + 25 + 25 + 25 + 25 + 42$$

$$\mathbf{241} := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 2^6 + 2^6 + 5^2 \qquad = 22 + 22 + 22 + 22 + 23 + 26 + 26 + 26 + 52$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 4^3 \qquad = 22 + 22 + 23 + 23 + 24 + 26 + 26 + 32 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 4^2 \qquad = 22 + 22 + 23 + 23 + 25 + 25 + 27 + 32 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 3^4 + 4^3 \qquad = 22 + 22 + 23 + 24 + 24 + 24 + 25 + 34 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 5^3 \qquad = 22 + 23 + 23 + 23 + 23 + 24 + 25 + 25 + 53$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 3^2 + 3^3 + 3^4 \qquad = 22 + 23 + 23 + 23 + 25 + 26 + 32 + 33 + 34$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 \qquad = 22 + 23 + 23 + 24 + 25 + 27 + 32 + 32 + 33$$

$$\mathbf{243} := 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 4^3 \qquad = 22 + 22 + 24 + 24 + 24 + 25 + 26 + 33 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 \qquad = 22 + 23 + 23 + 25 + 26 + 26 + 32 + 33 + 33$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 \qquad = 22 + 23 + 24 + 24 + 25 + 25 + 33 + 33 + 34$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^7 + 3^3 + 4^2 \qquad = 23 + 23 + 23 + 24 + 24 + 24 + 27 + 33 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 \qquad = 23 + 23 + 23 + 26 + 26 + 26 + 32 + 32 + 32$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 \qquad = 23 + 23 + 24 + 24 + 25 + 26 + 32 + 32 + 34$$
$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 \qquad = 23 + 24 + 24 + 24 + 25 + 27 + 32 + 32 + 32$$

$$\mathbf{245} := 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 5^2 \qquad = 22 + 23 + 23 + 23 + 25 + 25 + 26 + 26 + 52$$
$$:= 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 \qquad = 22 + 23 + 24 + 25 + 25 + 26 + 26 + 32 + 42$$
$$:= 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 4^3 \qquad = 22 + 23 + 25 + 25 + 25 + 25 + 25 + 32 + 43$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 \qquad = 22 + 24 + 24 + 24 + 25 + 25 + 25 + 34 + 42$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 \qquad = 22 + 24 + 24 + 25 + 25 + 26 + 33 + 33 + 33$$

$$:= 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 \qquad = 23 + 24 + 24 + 25 + 26 + 26 + 32 + 32 + 33$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 3^2 + 3^3 + 3^4 \qquad = 24 + 24 + 24 + 24 + 25 + 25 + 32 + 33 + 34$$

$$\mathbf{246} := 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 3^2 + 3^3 + 3^4 + 3^4 \qquad = 22 + 22 + 22 + 22 + 25 + 32 + 33 + 34 + 34$$

$$\mathbf{248} := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 4^3 + 4^3 \qquad = 22 + 22 + 22 + 22 + 23 + 25 + 26 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 2^7 + 4^2 + 4^2 \qquad = 22 + 22 + 22 + 22 + 23 + 26 + 27 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 3^3 + 5^3 \qquad = 22 + 22 + 22 + 22 + 24 + 25 + 25 + 33 + 53$$
$$:= 2^2 + 2^2 + 2^2 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 \qquad = 22 + 22 + 22 + 26 + 26 + 32 + 32 + 32 + 34$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 4^2 + 4^3 \qquad = 22 + 22 + 23 + 23 + 23 + 23 + 27 + 42 + 43$$

$$\mathbf{249} := 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 5^2 \qquad = 24 + 24 + 24 + 24 + 25 + 25 + 25 + 26 + 52$$
$$:= 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 4^2 \qquad = 25 + 25 + 25 + 25 + 25 + 25 + 25 + 32 + 42$$

$$\mathbf{250} := 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 2^6 + 3^4 + 5^2 \qquad = 22 + 22 + 22 + 22 + 25 + 25 + 26 + 34 + 52$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 3^2 + 3^4 + 4^3 \qquad = 22 + 22 + 23 + 24 + 25 + 25 + 32 + 34 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 3^4 + 3^4 + 4^2 \qquad = 22 + 22 + 24 + 24 + 24 + 24 + 34 + 34 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 3^4 + 3^4 + 4^2 \qquad = 23 + 23 + 23 + 23 + 23 + 25 + 34 + 34 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 \qquad = 23 + 23 + 23 + 23 + 27 + 32 + 33 + 33 + 33$$

$$\mathbf{252} := 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 2^6 + 4^2 + 4^2 \qquad = 22 + 22 + 22 + 24 + 26 + 26 + 26 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 4^2 + 4^3 \qquad = 22 + 22 + 22 + 25 + 25 + 25 + 26 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^3 + 5^2 \qquad = 22 + 22 + 24 + 24 + 24 + 24 + 27 + 33 + 52$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 4^3 \qquad = 22 + 22 + 24 + 25 + 25 + 26 + 32 + 33 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 4^2 + 4^3 \qquad = 22 + 23 + 23 + 23 + 24 + 26 + 26 + 42 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 4^3 + 4^3 \qquad = 22 + 23 + 23 + 23 + 25 + 25 + 25 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^7 + 4^2 + 4^2 \qquad = 22 + 23 + 23 + 23 + 25 + 25 + 27 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^4 \qquad = 22 + 23 + 25 + 25 + 25 + 32 + 33 + 33 + 34$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^3 + 5^3 \qquad = 22 + 24 + 24 + 24 + 24 + 24 + 24 + 33 + 53$$

$$\mathbf{252} := 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^7 + 3^3 + 5^2 \qquad = 23 + 23 + 23 + 23 + 23 + 25 + 27 + 33 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 \qquad = 23 + 23 + 23 + 23 + 25 + 26 + 33 + 34 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 \qquad = 23 + 23 + 23 + 24 + 25 + 27 + 32 + 33 + 42$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 3^3 + 3^4 + 4^3 \qquad = 23 + 23 + 24 + 24 + 24 + 24 + 33 + 34 + 43$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 \qquad = 23 + 23 + 25 + 25 + 26 + 32 + 32 + 32 + 34$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 \qquad = 23 + 24 + 25 + 25 + 27 + 32 + 32 + 32 + 32$$

$$254 := 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 3^4 + 5^2 \qquad = 22 + 23 + 23 + 25 + 25 + 25 + 25 + 34 + 52$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^4 + 5^2 \qquad = 22 + 24 + 24 + 24 + 24 + 24 + 26 + 34 + 52$$
$$:= 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 4^2 \qquad = 22 + 24 + 25 + 25 + 25 + 25 + 32 + 34 + 42$$
$$:= 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 \qquad = 22 + 25 + 25 + 25 + 26 + 32 + 33 + 33 + 33$$
$$:= 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 \qquad = 23 + 23 + 23 + 25 + 26 + 26 + 33 + 33 + 42$$
$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 4^3 \qquad = 23 + 24 + 24 + 24 + 24 + 26 + 33 + 33 + 43$$
$$:= 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 \qquad = 23 + 25 + 25 + 26 + 26 + 32 + 32 + 32 + 33$$
$$:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 \qquad = 24 + 24 + 25 + 25 + 25 + 32 + 32 + 33 + 34$$

$$255 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^7 + 3^3 + 4^2 + 4^3 \qquad = 22 + 22 + 22 + 22 + 22 + 27 + 33 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 3^2 + 3^4 + 5^3 \qquad = 22 + 22 + 23 + 23 + 23 + 23 + 32 + 34 + 53$$

$$256 := 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 5^2 \qquad = 22 + 23 + 25 + 25 + 25 + 25 + 26 + 33 + 52$$
$$:= 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 \qquad = 23 + 23 + 24 + 25 + 25 + 26 + 26 + 42 + 42$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 4^2 + 4^3 \qquad = 23 + 23 + 25 + 25 + 25 + 25 + 25 + 42 + 43$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 4^2 + 4^3 \qquad = 24 + 24 + 24 + 24 + 24 + 25 + 26 + 42 + 43$$

$$257 := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^7 + 4^3 + 5^2 \qquad = 22 + 22 + 22 + 22 + 23 + 24 + 27 + 43 + 52$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 3^4 + 4^2 + 4^3 \qquad = 22 + 22 + 22 + 22 + 24 + 26 + 34 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 4^3 + 5^3 \qquad = 22 + 22 + 22 + 23 + 24 + 24 + 24 + 43 + 53$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 3^3 + 3^4 + 3^4 + 4^2 \qquad = 22 + 22 + 22 + 23 + 25 + 33 + 34 + 34 + 42$$
$$:= 2^2 + 2^2 + 2^2 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 \qquad = 22 + 22 + 22 + 27 + 32 + 33 + 33 + 33 + 33$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 3^4 + 4^3 + 4^3 \qquad = 22 + 22 + 23 + 23 + 23 + 24 + 34 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 5^3 \qquad = 22 + 22 + 23 + 23 + 23 + 26 + 32 + 33 + 53$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 \qquad = 22 + 22 + 23 + 24 + 32 + 33 + 33 + 34 + 34$$

$$258 := 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 5^2 \qquad = 24 + 24 + 25 + 25 + 25 + 25 + 26 + 32 + 52$$

$$259 := 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^7 + 3^3 + 3^3 + 5^2 \qquad = 22 + 22 + 22 + 23 + 25 + 27 + 33 + 33 + 52$$
$$:= 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 3^3 + 3^3 + 3^4 + 4^2 \qquad = 22 + 22 + 22 + 25 + 26 + 33 + 33 + 34 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 3^4 + 3^4 + 5^2 \qquad = 22 + 22 + 23 + 23 + 24 + 25 + 34 + 34 + 52$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 3^3 + 4^3 + 4^3 \qquad = 22 + 22 + 23 + 23 + 24 + 26 + 33 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 5^2 \qquad = 22 + 22 + 23 + 23 + 26 + 27 + 32 + 32 + 52$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 5^3 \qquad = 22 + 22 + 23 + 24 + 24 + 25 + 33 + 33 + 53$$
$$:= 2^2 + 2^2 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 \qquad = 22 + 22 + 23 + 26 + 26 + 32 + 32 + 34 + 42$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 3^2 + 3^4 + 3^4 + 4^2 \qquad = 22 + 22 + 24 + 24 + 25 + 32 + 34 + 34 + 42$$
$$:= 2^2 + 2^2 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 \qquad = 22 + 22 + 24 + 26 + 27 + 32 + 32 + 32 + 42$$

$$259 := 2^2 + 2^2 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 \qquad = 22 + 22 + 24 + 26 + 32 + 33 + 33 + 33 + 34$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 3^3 + 3^3 + 3^4 + 4^3 \qquad = 22 + 23 + 23 + 23 + 25 + 33 + 33 + 34 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 5^3 \qquad = 22 + 23 + 23 + 24 + 24 + 26 + 32 + 32 + 53$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 \qquad = 22 + 24 + 24 + 24 + 32 + 32 + 33 + 34 + 34$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 3^2 + 3^4 + 4^3 \qquad = 23 + 23 + 23 + 23 + 26 + 32 + 32 + 34 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 4^3 \qquad = 23 + 23 + 23 + 24 + 27 + 32 + 32 + 32 + 43$$

$$261 := 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 2^6 + 4^3 + 5^2 \qquad = 22 + 22 + 22 + 24 + 24 + 26 + 26 + 43 + 52$$
$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^7 + 4^2 + 5^2 \qquad = 22 + 22 + 22 + 24 + 25 + 25 + 27 + 42 + 52$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 5^2 \qquad = 22 + 22 + 23 + 24 + 25 + 26 + 33 + 34 + 52$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 4^2 + 5^3 \qquad = 22 + 22 + 24 + 24 + 24 + 25 + 25 + 42 + 53$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^3 + 5^2 \qquad = 22 + 22 + 24 + 24 + 25 + 27 + 32 + 33 + 52$$
$$:= 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 4^2 \qquad = 22 + 22 + 26 + 26 + 26 + 32 + 32 + 33 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^4 + 4^2 + 4^3 \qquad = 22 + 23 + 23 + 24 + 25 + 25 + 34 + 42 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 4^3 \qquad = 22 + 23 + 23 + 25 + 26 + 33 + 33 + 33 + 43$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 4^3 + 4^3 \qquad = 22 + 23 + 24 + 24 + 24 + 26 + 32 + 43 + 43$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^3 + 5^3 \qquad = 22 + 24 + 24 + 24 + 24 + 25 + 32 + 33 + 53$$
$$:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 4^3 \qquad = 23 + 23 + 23 + 26 + 26 + 32 + 32 + 33 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 3^2 + 3^3 + 3^4 + 4^3 \qquad = 23 + 23 + 24 + 24 + 25 + 32 + 33 + 34 + 43$$

$$262 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 3^2 + 3^3 + 3^4 + 5^3 \qquad = 22 + 22 + 22 + 22 + 22 + 32 + 33 + 34 + 53$$

$$263 := 2^2 + 2^2 + 2^4 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 5^2 \qquad = 22 + 22 + 24 + 25 + 26 + 26 + 33 + 33 + 52$$
$$:= 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^3 \qquad = 22 + 23 + 24 + 25 + 25 + 26 + 33 + 42 + 43$$
$$:= 2^2 + 2^3 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 5^2 \qquad = 22 + 23 + 24 + 26 + 26 + 26 + 32 + 32 + 52$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^4 + 5^2 \qquad = 22 + 24 + 24 + 24 + 25 + 26 + 32 + 34 + 52$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 4^2 \qquad = 23 + 23 + 25 + 25 + 25 + 33 + 33 + 34 + 42$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 \qquad = 23 + 24 + 24 + 25 + 26 + 32 + 33 + 33 + 43$$
$$:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 \qquad = 25 + 25 + 25 + 25 + 32 + 32 + 32 + 33 + 34$$

$$264 := 2^2 + 2^2 + 2^2 + 2^3 + 3^2 + 3^2 + 3^4 + 3^4 + 4^3 \qquad = 22 + 22 + 22 + 23 + 32 + 32 + 34 + 34 + 43$$

$$265 := 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 4^3 + 5^2 \qquad = 23 + 23 + 24 + 24 + 25 + 25 + 26 + 43 + 52$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 4^2 \qquad = 23 + 24 + 25 + 25 + 25 + 25 + 34 + 42 + 42$$
$$:= 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 \qquad = 23 + 25 + 25 + 25 + 26 + 33 + 33 + 33 + 42$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 4^2 + 5^2 \qquad = 24 + 24 + 24 + 24 + 24 + 24 + 27 + 42 + 52$$

$$:= 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 4^2 + 4^3 \qquad = 24 + 24 + 24 + 25 + 25 + 26 + 32 + 42 + 43$$

$$\mathbf{266} := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 5^2 + 5^3 \qquad = 22 + 22 + 22 + 22 + 22 + 25 + 26 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 3^2 + 4^3 + 5^3 \qquad = 22 + 22 + 22 + 23 + 24 + 25 + 32 + 43 + 53$$
$$:= 2^2 + 2^2 + 2^2 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 \qquad = 22 + 22 + 22 + 26 + 32 + 32 + 33 + 34 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 3^4 + 4^2 + 5^3 \qquad = 22 + 23 + 23 + 23 + 23 + 23 + 34 + 42 + 53$$
$$:= 2^2 + 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 \qquad = 22 + 23 + 27 + 32 + 32 + 32 + 32 + 32 + 34$$

$$\mathbf{267} := 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^2 \qquad = 24 + 25 + 25 + 25 + 25 + 26 + 33 + 42 + 42$$
$$:= 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 5^2 \qquad = 25 + 25 + 25 + 25 + 25 + 26 + 32 + 32 + 52$$

$$\mathbf{268} := 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 4^3 + 4^3 + 4^3 \qquad = 22 + 22 + 22 + 24 + 24 + 25 + 43 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 4^2 + 4^2 + 4^3 \qquad = 22 + 22 + 22 + 24 + 24 + 27 + 42 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 5^3 \qquad = 22 + 22 + 23 + 25 + 25 + 32 + 33 + 33 + 53$$
$$:= 2^2 + 2^2 + 2^3 + 2^7 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 \qquad = 22 + 22 + 23 + 27 + 33 + 33 + 33 + 33 + 42$$
$$:= 2^2 + 2^2 + 2^5 + 2^5 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 \qquad = 22 + 22 + 25 + 25 + 32 + 32 + 34 + 34 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 3^3 + 4^2 + 5^3 \qquad = 22 + 23 + 23 + 23 + 23 + 26 + 33 + 42 + 53$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 \qquad = 22 + 23 + 23 + 24 + 33 + 33 + 34 + 34 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 5^3 \qquad = 22 + 23 + 23 + 25 + 26 + 32 + 32 + 32 + 53$$
$$:= 2^2 + 2^4 + 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 \qquad = 22 + 24 + 25 + 32 + 32 + 32 + 33 + 34 + 34$$
$$:= 2^2 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 \qquad = 22 + 26 + 27 + 32 + 32 + 32 + 32 + 32 + 33$$

$$\mathbf{270} := 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 2^6 + 3^2 + 4^3 + 5^2 \qquad = 22 + 22 + 22 + 25 + 26 + 26 + 32 + 43 + 52$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 5^2 + 5^3 \qquad = 22 + 22 + 23 + 23 + 25 + 25 + 25 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 4^2 + 5^3 \qquad = 22 + 22 + 24 + 25 + 25 + 25 + 32 + 42 + 53$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 4^3 + 4^3 \qquad = 22 + 22 + 24 + 25 + 25 + 33 + 33 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 + 4^2 \qquad = 22 + 22 + 24 + 25 + 27 + 33 + 33 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 5^2 \qquad = 22 + 22 + 25 + 25 + 27 + 32 + 32 + 33 + 52$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^6 + 2^7 + 3^2 + 4^2 + 5^2 \qquad = 22 + 23 + 23 + 23 + 26 + 27 + 32 + 42 + 52$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 + 5^2 \qquad = 22 + 23 + 23 + 24 + 27 + 33 + 33 + 33 + 52$$
$$:= 2^2 + 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 3^4 + 4^2 + 4^2 \qquad = 22 + 23 + 23 + 26 + 26 + 32 + 34 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 \qquad = 22 + 23 + 24 + 24 + 25 + 34 + 34 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 \qquad = 22 + 23 + 24 + 25 + 26 + 32 + 32 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 \qquad = 22 + 23 + 24 + 26 + 27 + 32 + 32 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 \qquad = 22 + 23 + 24 + 26 + 33 + 33 + 33 + 34 + 42$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 5^3 \qquad = 22 + 24 + 24 + 25 + 25 + 32 + 32 + 33 + 53$$
$$:= 2^2 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 \qquad = 22 + 24 + 24 + 27 + 32 + 33 + 33 + 33 + 42$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 5^2 + 5^3 \qquad = 23 + 23 + 23 + 23 + 23 + 24 + 26 + 52 + 53$$

$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 4^2 + 5^3 \qquad = 23 + 23 + 23 + 24 + 24 + 26 + 32 + 42 + 53$$

$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 3^3 + 3^4 + 3^4 + 5^2 \qquad = 23 + 23 + 23 + 24 + 24 + 33 + 34 + 34 + 52$$

$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 3^3 + 5^3 \qquad = 23 + 23 + 24 + 24 + 24 + 33 + 33 + 33 + 53$$

$$:= 2^3 + 2^3 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 \qquad = 23 + 23 + 25 + 25 + 32 + 32 + 33 + 34 + 43$$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 \qquad = 23 + 24 + 24 + 24 + 32 + 33 + 34 + 34 + 42$$

$$:= 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 \qquad = 24 + 26 + 26 + 32 + 32 + 32 + 32 + 32 + 34$$

272 $:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 3^3 + 4^2 + 5^2 \qquad = 22 + 23 + 24 + 24 + 25 + 27 + 33 + 42 + 52$

$$:= 2^2 + 2^3 + 2^6 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 + 4^2 \qquad = 22 + 23 + 26 + 26 + 26 + 32 + 33 + 42 + 42$$

$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 4^2 \qquad = 22 + 24 + 24 + 25 + 26 + 33 + 34 + 42 + 42$$

$$:= 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 5^2 \qquad = 22 + 24 + 25 + 25 + 26 + 32 + 32 + 34 + 52$$

$$:= 2^2 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 \qquad = 22 + 24 + 26 + 26 + 33 + 33 + 33 + 33 + 42$$

$$:= 2^2 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 \qquad = 22 + 25 + 25 + 25 + 33 + 33 + 33 + 33 + 43$$

$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 4^2 + 4^3 + 4^3 \qquad = 23 + 23 + 24 + 24 + 24 + 26 + 42 + 43 + 43$$

272 $:= 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 3^4 + 5^2 \qquad = 23 + 23 + 24 + 24 + 26 + 33 + 33 + 34 + 52$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 3^3 + 4^2 + 5^3 \qquad = 23 + 24 + 24 + 24 + 24 + 25 + 33 + 42 + 53$$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 5^2 \qquad = 23 + 24 + 24 + 24 + 27 + 32 + 33 + 33 + 52$$

$$:= 2^3 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 \qquad = 23 + 25 + 25 + 26 + 32 + 32 + 33 + 33 + 43$$

$$:= 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 \qquad = 24 + 24 + 24 + 26 + 32 + 33 + 33 + 34 + 42$$

273 $:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 3^3 + 3^4 + 4^2 + 5^3 \qquad = 22 + 22 + 22 + 22 + 23 + 33 + 34 + 42 + 53$

274 $:= 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 2^6 + 5^2 + 5^2 \qquad = 23 + 23 + 23 + 23 + 26 + 26 + 26 + 52 + 52$

$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 5^2 + 5^2 \qquad = 23 + 23 + 24 + 24 + 24 + 25 + 27 + 52 + 52$$

$$:= 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 4^2 + 5^2 \qquad = 23 + 23 + 24 + 26 + 26 + 26 + 32 + 42 + 52$$

$$:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 4^3 + 5^2 \qquad = 23 + 23 + 25 + 25 + 25 + 26 + 32 + 43 + 52$$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^4 + 4^2 + 5^2 \qquad = 23 + 24 + 24 + 24 + 25 + 26 + 34 + 42 + 52$$

$$:= 2^3 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 5^2 \qquad = 23 + 24 + 24 + 26 + 26 + 33 + 33 + 33 + 52$$

$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 4^2 + 5^2 \qquad = 24 + 24 + 24 + 24 + 25 + 27 + 32 + 42 + 52$$

$$:= 2^4 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 4^2 + 4^2 \qquad = 24 + 24 + 26 + 26 + 26 + 32 + 32 + 42 + 42$$

$$:= 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 4^3 \qquad = 24 + 25 + 25 + 25 + 26 + 32 + 32 + 42 + 43$$

275 $:= 2^2 + 2^2 + 2^2 + 2^2 + 2^6 + 3^3 + 3^3 + 4^2 + 5^3 \qquad = 22 + 22 + 22 + 22 + 26 + 33 + 33 + 42 + 53$

$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^7 + 3^2 + 3^4 + 4^2 + 5^2 \qquad = 22 + 22 + 22 + 22 + 27 + 32 + 34 + 42 + 52$$

$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 3^4 + 5^2 + 5^3 \qquad = 22 + 22 + 22 + 23 + 23 + 24 + 34 + 52 + 53$$

$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 3^2 + 3^4 + 4^2 + 5^3 \qquad = 22 + 22 + 22 + 24 + 24 + 32 + 34 + 42 + 53$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 3^3 + 3^3 + 4^3 + 5^3 \qquad = 22 + 22 + 23 + 23 + 23 + 33 + 33 + 43 + 53$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 3^2 + 3^4 + 3^4 + 4^2 + 4^3 \qquad = 22 + 22 + 23 + 23 + 32 + 34 + 34 + 42 + 43$$

$$\mathbf{276} := 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^3 + 4^2 + 5^2 \qquad = 24 + 24 + 24 + 25 + 26 + 26 + 33 + 42 + 52$$
$$:= 2^4 + 2^4 + 2^5 + 2///^5 + 2^5 + 2^5 + 3^3 + 4^3 + 5^2 = 24 + 24 + 25 + 25 + 25 + 25 + 33 + 43 + 52$$

$$\mathbf{277} := 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 3^3 + 5^2 + 5^3 \qquad = 22 + 22 + 22 + 23 + 24 + 26 + 33 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 3^2 + 4^3 + 4^3 + 4^3 \qquad = 22 + 22 + 22 + 25 + 25 + 32 + 43 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 4^2 + 4^2 + 4^3 \qquad = 22 + 22 + 22 + 25 + 27 + 32 + 42 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 4^2 + 4^3 + 5^3 \qquad = 22 + 22 + 23 + 23 + 24 + 25 + 42 + 43 + 53$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^7 + 3^2 + 3^3 + 4^3 + 5^2 \qquad = 22 + 22 + 23 + 23 + 27 + 32 + 33 + 43 + 52$$
$$:= 2^2 + 2^2 + 2^3 + 2^6 + 3^2 + 3^3 + 3^4 + 4^2 + 4^3 \qquad = 22 + 22 + 23 + 26 + 32 + 33 + 34 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 \qquad = 22 + 22 + 24 + 27 + 32 + 32 + 33 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 \qquad = 22 + 22 + 24 + 33 + 33 + 33 + 33 + 34 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 3^2 + 3^3 + 4^3 + 5^3 \qquad = 22 + 23 + 23 + 24 + 24 + 32 + 33 + 43 + 53$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 3^2 + 3^3 + 3^4 + 4^3 + 4^3 \qquad = 23 + 23 + 23 + 23 + 32 + 33 + 34 + 43 + 43$$
$$:= 2^3 + 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 \qquad = 23 + 23 + 27 + 32 + 32 + 32 + 32 + 34 + 42$$
$$:= 2^3 + 2^3 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 \qquad = 23 + 23 + 32 + 32 + 33 + 33 + 33 + 34 + 34$$

$$\mathbf{279} := 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 2^6 + 3^4 + 5^2 + 5^2 \qquad = 22 + 22 + 22 + 23 + 26 + 26 + 34 + 52 + 52$$
$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 2^7 + 3^2 + 5^2 + 5^2 \qquad = 22 + 22 + 22 + 24 + 26 + 27 + 32 + 52 + 52$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 5^2 + 5^3 \qquad = 22 + 22 + 24 + 24 + 24 + 26 + 32 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 4^2 + 4^3 \qquad = 22 + 22 + 26 + 26 + 32 + 33 + 33 + 42 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 3^2 + 3^4 + 4^3 + 5^2 \qquad = 22 + 23 + 23 + 24 + 26 + 32 + 34 + 43 + 52$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 3^3 + 3^3 + 4^2 + 5^3 \qquad = 22 + 23 + 23 + 25 + 25 + 33 + 33 + 42 + 53$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 3^3 + 4^3 + 4^3 + 4^3 \qquad = 22 + 23 + 24 + 24 + 24 + 33 + 43 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 4^3 + 5^2 \qquad = 22 + 23 + 24 + 24 + 27 + 32 + 32 + 43 + 52$$
$$:= 2^2 + 2^3 + 2^5 + 2^5 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 \qquad = 22 + 23 + 25 + 25 + 32 + 34 + 34 + 42 + 42$$
$$:= 2^2 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 \qquad = 22 + 24 + 24 + 26 + 32 + 32 + 34 + 42 + 43$$
$$:= 2^2 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 5^3 \qquad = 22 + 25 + 25 + 25 + 32 + 32 + 32 + 33 + 53$$
$$:= 2^2 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 \qquad = 22 + 25 + 27 + 32 + 32 + 33 + 33 + 33 + 42$$
$$:= 2^2 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 \qquad = 22 + 25 + 33 + 33 + 33 + 33 + 33 + 33 + 34$$
$$:= 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 5^3 \qquad = 23 + 23 + 23 + 25 + 26 + 32 + 32 + 42 + 53$$
$$:= 2^3 + 2^3 + 2^3 + 2^5 + 3^2 + 3^3 + 3^4 + 3^4 + 5^2 \qquad = 23 + 23 + 23 + 25 + 32 + 33 + 34 + 34 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 + 4^3 \qquad = 23 + 23 + 23 + 26 + 32 + 33 + 33 + 43 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 5^3 \qquad = 23 + 23 + 24 + 25 + 32 + 33 + 33 + 33 + 53$$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 3^2 + 3^2 + 4^3 + 5^3 \qquad = 23 + 24 + 24 + 24 + 24 + 32 + 32 + 43 + 53$$
$$:= 2^3 + 2^4 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 \qquad = 23 + 24 + 25 + 32 + 32 + 33 + 34 + 34 + 42$$
$$:= 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 4^2 \qquad = 23 + 26 + 27 + 32 + 32 + 32 + 32 + 33 + 42$$
$$:= 2^3 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 \qquad = 23 + 26 + 32 + 32 + 33 + 33 + 33 + 33 + 34$$
$$:= 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 \qquad = 24 + 27 + 32 + 32 + 32 + 33 + 33 + 33 + 33$$

$$\mathbf{281} := 2^2 + 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 3^3 + 5^2 + 5^2 \qquad = 22 + 22 + 22 + 26 + 26 + 26 + 33 + 52 + 52$$
$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 4^2 + 4^3 + 5^2 \qquad = 22 + 22 + 23 + 25 + 26 + 26 + 42 + 43 + 52$$
$$:= 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 4^2 + 4^2 + 5^3 \qquad = 22 + 23 + 24 + 25 + 25 + 25 + 42 + 42 + 53$$
$$:= 2^2 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 4^3 + 5^2 \qquad = 22 + 23 + 24 + 26 + 26 + 32 + 33 + 43 + 52$$
$$:= 2^2 + 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 5^2 \qquad = 22 + 23 + 25 + 25 + 27 + 32 + 33 + 42 + 52$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 3^3 + 3^4 + 4^3 + 5^2 \qquad = 22 + 24 + 24 + 24 + 25 + 33 + 34 + 43 + 52$$
$$:= 2^2 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 \qquad = 22 + 25 + 25 + 26 + 32 + 33 + 34 + 42 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 4^3 + 4^3 + 5^2 \qquad = 23 + 23 + 23 + 23 + 25 + 26 + 43 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 2^7 + 4^2 + 4^2 + 5^2 \qquad = 23 + 23 + 23 + 23 + 26 + 27 + 42 + 42 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 5^2 + 5^3 \qquad = 23 + 23 + 23 + 24 + 25 + 25 + 33 + 52 + 53$$
$$:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 + 4^2 \qquad = 23 + 23 + 23 + 26 + 26 + 34 + 42 + 42 + 42$$
$$:= 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 \qquad = 23 + 23 + 24 + 25 + 26 + 32 + 42 + 43 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 2^6 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 \qquad = 23 + 23 + 24 + 26 + 27 + 32 + 42 + 42 + 42$$
$$:= 2^3 + 2^3 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 5^2 \qquad = 23 + 23 + 25 + 26 + 32 + 33 + 33 + 34 + 52$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 3^2 + 3^3 + 4^2 + 5^3 \qquad = 23 + 24 + 24 + 25 + 25 + 32 + 33 + 42 + 53$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 \qquad = 23 + 24 + 24 + 25 + 33 + 33 + 33 + 43 + 43$$
$$:= 2^3 + 2^4 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 \qquad = 23 + 24 + 24 + 27 + 33 + 33 + 33 + 42 + 42$$
$$:= 2^3 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 5^2 \qquad = 23 + 24 + 25 + 27 + 32 + 32 + 33 + 33 + 52$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^2 + 4^3 + 4^3 + 4^3 \qquad = 24 + 24 + 24 + 24 + 24 + 32 + 43 + 43 + 43$$
$$:= 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 \qquad = 24 + 25 + 26 + 32 + 32 + 33 + 33 + 34 + 42$$
$$:= 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 \qquad = 26 + 26 + 32 + 32 + 33 + 33 + 33 + 33 + 33$$

$$\mathbf{283} := 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 3^4 + 5^2 + 5^2 \qquad = 23 + 23 + 23 + 25 + 25 + 26 + 34 + 52 + 52$$
$$:= 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 5^2 + 5^2 \qquad = 23 + 23 + 24 + 25 + 25 + 27 + 32 + 52 + 52$$
$$:= 2^3 + 2^3 + 2^6 + 2^6 + 2^6 + 3^3 + 4^2 + 4^2 + 4^2 \qquad = 23 + 23 + 26 + 26 + 26 + 33 + 42 + 42 + 42$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^4 + 4^2 + 5^2 \qquad = 23 + 24 + 25 + 25 + 26 + 32 + 34 + 42 + 52$$
$$:= 2^3 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 5^2 \qquad = 23 + 25 + 26 + 26 + 32 + 33 + 33 + 33 + 52$$
$$:= 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 3^3 + 4^2 + 4^3 + 4^3 \qquad = 24 + 24 + 24 + 25 + 25 + 33 + 42 + 43 + 43$$
$$:= 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 \qquad = 24 + 24 + 24 + 25 + 27 + 33 + 42 + 42 + 42$$
$$:= 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 4^3 + 5^2 \qquad = 24 + 24 + 24 + 26 + 26 + 32 + 32 + 43 + 52$$

$$:= 2^4 + 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 4^2 + 5^2 \qquad = 24 + 24 + 25 + 25 + 27 + 32 + 32 + 42 + 52$$

$$:= 2^4 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 3^4 + 5^2 \qquad = 24 + 24 + 25 + 25 + 33 + 33 + 33 + 34 + 52$$

$$:= 2^5 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 \qquad = 25 + 26 + 26 + 26 + 32 + 32 + 32 + 42 + 42$$

$$\mathbf{284} := 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 4^3 + 4^3 + 4^3 + 4^3 \qquad = 22 + 22 + 22 + 23 + 23 + 43 + 43 + 43 + 43$$

$$:= 2^2 + 2^2 + 2^2 + 2^5 + 3^2 + 3^2 + 3^4 + 4^2 + 5^3 \qquad = 22 + 22 + 22 + 25 + 32 + 32 + 34 + 42 + 53$$

$$:= 2^2 + 2^2 + 2^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 \qquad = 22 + 22 + 22 + 32 + 33 + 33 + 34 + 43 + 43$$

$$:= 2^2 + 2^2 + 2^4 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 5^3 \qquad = 22 + 22 + 24 + 32 + 32 + 32 + 33 + 34 + 53$$

$$\mathbf{285} := 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 5^2 \qquad = 22 + 25 + 25 + 25 + 26 + 26 + 42 + 42 + 52$$

$$:= 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 3^3 + 5^2 + 5^2 \qquad = 23 + 23 + 25 + 25 + 26 + 26 + 33 + 52 + 52$$

$$:= 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 + 5^2 \qquad = 24 + 25 + 25 + 26 + 26 + 32 + 33 + 42 + 52$$

$$:= 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 4^3 + 5^2 \qquad = 25 + 25 + 25 + 25 + 25 + 32 + 33 + 43 + 52$$

$$\mathbf{286} := 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 3^4 + 4^3 + 4^3 + 5^2 \qquad = 22 + 22 + 22 + 23 + 25 + 34 + 43 + 43 + 52$$

$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^7 + 3^4 + 4^2 + 4^2 + 5^2 \qquad = 22 + 22 + 22 + 23 + 27 + 34 + 42 + 42 + 52$$

$$:= 2^2 + 2^2 + 2^2 + 2^6 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 \qquad = 22 + 22 + 22 + 26 + 34 + 34 + 42 + 42 + 42$$

$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 3^4 + 4^2 + 4^2 + 5^3 \qquad = 22 + 22 + 23 + 24 + 24 + 34 + 42 + 42 + 53$$

$$:= 2^2 + 2^2 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 5^2 \qquad = 22 + 22 + 26 + 32 + 32 + 32 + 34 + 34 + 52$$

$$:= 2^2 + 2^3 + 2^3 + 2^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 \qquad = 22 + 23 + 23 + 23 + 34 + 34 + 42 + 42 + 43$$

$$:= 2^2 + 2^3 + 2^3 + 2^5 + 3^2 + 3^2 + 3^3 + 4^3 + 5^3 \qquad = 22 + 23 + 23 + 25 + 32 + 32 + 33 + 43 + 53$$

$$:= 2^2 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 \qquad = 22 + 27 + 32 + 32 + 32 + 32 + 33 + 33 + 43$$

$$:= 2^3 + 2^4 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^3 \qquad = 23 + 24 + 32 + 32 + 32 + 32 + 34 + 34 + 43$$

$$\mathbf{288} := 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 3^4 + 3^4 + 5^2 + 5^2 \qquad = 22 + 22 + 22 + 25 + 25 + 34 + 34 + 52 + 52$$

$$:= 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 3^3 + 4^3 + 4^3 + 5^2 \qquad = 22 + 22 + 22 + 25 + 26 + 33 + 43 + 43 + 52$$

$$:= 2^2 + 2^2 + 2^2 + 2^6 + 2^7 + 3^3 + 4^2 + 4^2 + 5^2 \qquad = 22 + 22 + 22 + 26 + 27 + 33 + 42 + 42 + 52$$

$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 4^2 + 4^3 + 4^3 + 4^3 \qquad = 22 + 22 + 23 + 25 + 25 + 42 + 43 + 43 + 43$$

$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^7 + 4^2 + 4^2 + 4^2 + 4^3 \qquad = 22 + 22 + 23 + 25 + 27 + 42 + 42 + 42 + 43$$

$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 3^3 + 4^2 + 4^2 + 5^3 \qquad = 22 + 22 + 24 + 24 + 26 + 33 + 42 + 42 + 53$$

$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 5^2 + 5^3 \qquad = 22 + 22 + 24 + 25 + 26 + 32 + 32 + 52 + 53$$

$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^7 + 3^3 + 4^2 + 4^3 + 5^2 \qquad = 22 + 23 + 23 + 23 + 27 + 33 + 42 + 43 + 52$$

$$:= 2^2 + 2^3 + 2^3 + 2^6 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 \qquad = 22 + 23 + 23 + 26 + 33 + 34 + 42 + 42 + 43$$

$$\mathbf{288} := 2^2 + 2^3 + 2^4 + 2^5 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 \qquad = 22 + 23 + 24 + 25 + 32 + 33 + 43 + 43 + 43$$

$$:= 2^2 + 2^3 + 2^4 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 \qquad = 22 + 23 + 24 + 27 + 32 + 33 + 42 + 42 + 43$$

$$:= 2^2 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 4^3 + 5^2 \qquad = 22 + 23 + 25 + 27 + 32 + 32 + 32 + 43 + 52$$

$$:= 2^2 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 \qquad = 22 + 25 + 26 + 32 + 32 + 32 + 34 + 42 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 3^3 + 4^2 + 4^3 + 5^3 \qquad = 23 + 23 + 23 + 24 + 24 + 33 + 42 + 43 + 53$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 3^2 + 3^2 + 3^2 + 4^3 + 5^3 \qquad = 23 + 24 + 24 + 25 + 32 + 32 + 32 + 43 + 53$$
$$:= 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 \qquad = 24 + 26 + 32 + 32 + 32 + 32 + 33 + 34 + 43$$

290 $:= 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 2^7 + 4^2 + 5^2 + 5^2 \qquad = 22 + 22 + 23 + 24 + 26 + 27 + 42 + 52 + 52$
$$:= 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 + 5^2 \qquad = 22 + 22 + 24 + 26 + 26 + 34 + 42 + 42 + 52$$
$$:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 4^3 + 5^2 \qquad = 22 + 22 + 25 + 25 + 25 + 34 + 42 + 43 + 52$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 4^2 + 5^2 + 5^3 \qquad = 22 + 23 + 24 + 24 + 24 + 26 + 42 + 52 + 53$$
$$:= 2^2 + 2^3 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 \qquad = 22 + 23 + 26 + 26 + 33 + 33 + 42 + 42 + 43$$
$$:= 2^2 + 2^4 + 2^5 + 2^5 + 3^2 + 3^3 + 3^4 + 4^3 + 5^2 \qquad = 22 + 24 + 25 + 25 + 32 + 33 + 34 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 4^3 + 5^2 + 5^2 \qquad = 23 + 23 + 23 + 23 + 24 + 27 + 43 + 52 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 3^4 + 4^2 + 4^3 + 5^2 \qquad = 23 + 23 + 23 + 24 + 26 + 34 + 42 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 4^2 + 4^3 + 5^2 \qquad = 23 + 23 + 24 + 24 + 27 + 32 + 42 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 \qquad = 23 + 23 + 25 + 25 + 34 + 34 + 42 + 42 + 42$$
$$:= 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 \qquad = 23 + 24 + 24 + 26 + 32 + 34 + 42 + 42 + 43$$
$$:= 2^3 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 4^2 + 5^3 \qquad = 23 + 25 + 25 + 25 + 32 + 32 + 33 + 42 + 53$$
$$:= 2^3 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 \qquad = 23 + 25 + 25 + 32 + 33 + 33 + 33 + 43 + 43$$
$$:= 2^3 + 2^5 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 \qquad = 23 + 25 + 27 + 32 + 33 + 33 + 33 + 42 + 42$$
$$:= 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 \qquad = 24 + 24 + 24 + 25 + 32 + 32 + 43 + 43 + 43$$
$$:= 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 \qquad = 24 + 24 + 24 + 27 + 32 + 32 + 42 + 42 + 43$$
$$:= 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 \qquad = 24 + 24 + 24 + 33 + 33 + 33 + 34 + 42 + 43$$

290 $:= 2^2 + 2^4 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 \qquad = 22 + 24 + 25 + 26 + 26 + 42 + 42 + 42 + 43$
$$:= 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 4^2 + 4^2 + 4^3 + 4^3 \qquad = 22 + 25 + 25 + 25 + 25 + 42 + 42 + 43 + 43$$
$$:= 2^2 + 2^5 + 2^5 + 2^5 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 \qquad = 22 + 25 + 25 + 25 + 27 + 42 + 42 + 42 + 42$$
$$:= 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^3 + 4^2 + 4^3 + 5^2 \qquad = 23 + 23 + 24 + 26 + 26 + 33 + 42 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 3^3 + 4^3 + 4^3 + 5^2 \qquad = 23 + 23 + 25 + 25 + 25 + 33 + 43 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 5^2 \qquad = 23 + 23 + 25 + 25 + 27 + 33 + 42 + 42 + 52$$
$$:= 2^3 + 2^5 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 \qquad = 23 + 25 + 25 + 26 + 33 + 34 + 42 + 42 + 42$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^4 + 3^4 + 5^2 + 5^2 \qquad = 24 + 24 + 24 + 24 + 24 + 34 + 34 + 52 + 52$$
$$:= 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 \qquad = 24 + 24 + 26 + 26 + 32 + 33 + 42 + 42 + 43$$
$$:= 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 \qquad = 24 + 25 + 25 + 25 + 32 + 33 + 42 + 43 + 43$$
$$:= 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^2 \qquad = 24 + 25 + 25 + 27 + 32 + 33 + 42 + 42 + 42$$
$$:= 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 4^3 + 5^2 \qquad = 24 + 25 + 26 + 26 + 32 + 32 + 32 + 43 + 52$$
$$:= 2^5 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 5^2 \qquad = 25 + 25 + 25 + 27 + 32 + 32 + 32 + 42 + 52$$

$$:= 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 5^2 \qquad = 25 + 25 + 25 + 32 + 33 + 33 + 33 + 34 + 52$$

$$\mathbf{294} := 2^2 + 2^4 + 2^4 + 2^6 + 2^6 + 2^6 + 4^2 + 5^2 + 5^2 \qquad = 22 + 24 + 24 + 26 + 26 + 26 + 42 + 52 + 52$$
$$:= 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 4^3 + 5^2 + 5^2 \qquad = 22 + 24 + 25 + 25 + 25 + 26 + 43 + 52 + 52$$
$$:= 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 + 3^4 + 5^2 + 5^2 \qquad = 23 + 25 + 25 + 25 + 25 + 33 + 34 + 52 + 52$$
$$:= 2^5 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 \qquad = 25 + 25 + 26 + 26 + 33 + 33 + 42 + 42 + 42$$

$$\mathbf{295} := 2^2 + 2^2 + 2^2 + 2^4 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 \qquad = 22 + 22 + 22 + 24 + 34 + 34 + 42 + 43 + 52$$
$$:= 2^2 + 2^2 + 2^3 + 2^5 + 3^2 + 3^4 + 4^2 + 4^2 + 5^3 \qquad = 22 + 22 + 23 + 25 + 32 + 34 + 42 + 42 + 53$$
$$:= 2^2 + 2^2 + 2^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 \qquad = 22 + 22 + 23 + 33 + 33 + 34 + 42 + 43 + 43$$
$$:= 2^2 + 2^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 5^3 \qquad = 22 + 22 + 33 + 33 + 33 + 33 + 33 + 33 + 53$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 3^2 + 3^3 + 3^4 + 5^2 + 5^3 \qquad = 22 + 23 + 23 + 23 + 32 + 33 + 34 + 52 + 53$$
$$:= 2^2 + 2^3 + 2^4 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 5^3 \qquad = 22 + 23 + 24 + 32 + 32 + 33 + 34 + 42 + 53$$

$$\mathbf{296} := 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 5^2 + 5^2 \qquad = 25 + 25 + 25 + 25 + 26 + 33 + 33 + 52 + 52$$

$$\mathbf{297} := 2^2 + 2^2 + 2^2 + 2^4 + 2^7 + 3^3 + 4^3 + 5^2 + 5^2 \qquad = 22 + 22 + 22 + 24 + 27 + 33 + 43 + 52 + 52$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 3^3 + 4^3 + 5^2 + 5^3 \qquad = 22 + 22 + 24 + 24 + 24 + 33 + 43 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 \qquad = 22 + 22 + 24 + 25 + 34 + 42 + 42 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 \qquad = 22 + 22 + 24 + 27 + 34 + 42 + 42 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^5 + 2^6 + 3^2 + 3^3 + 4^2 + 4^2 + 5^3 \qquad = 22 + 22 + 25 + 26 + 32 + 33 + 42 + 42 + 53$$
$$:= 2^2 + 2^2 + 2^5 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 5^2 \qquad = 22 + 22 + 25 + 33 + 33 + 34 + 34 + 42 + 52$$
$$:= 2^2 + 2^2 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 \qquad = 22 + 22 + 26 + 33 + 33 + 33 + 42 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 3^3 + 3^4 + 4^3 + 4^3 + 5^2 \qquad = 22 + 23 + 23 + 24 + 33 + 34 + 43 + 43 + 52$$
$$:= 2^2 + 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 3^3 + 5^2 + 5^3 \qquad = 22 + 23 + 23 + 26 + 32 + 33 + 33 + 52 + 53$$
$$:= 2^2 + 2^3 + 2^3 + 2^7 + 3^2 + 3^2 + 3^4 + 5^2 + 5^2 \qquad = 22 + 23 + 23 + 27 + 32 + 32 + 34 + 52 + 52$$
$$:= 2^2 + 2^3 + 2^6 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 5^2 \qquad = 22 + 23 + 26 + 32 + 32 + 34 + 34 + 42 + 52$$
$$:= 2^2 + 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 \qquad = 22 + 24 + 24 + 32 + 33 + 34 + 42 + 43 + 43$$
$$:= 2^2 + 2^4 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 + 5^3 \qquad = 22 + 24 + 26 + 32 + 32 + 33 + 33 + 42 + 53$$
$$:= 2^2 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 5^2 \qquad = 22 + 24 + 27 + 32 + 32 + 32 + 34 + 42 + 52$$
$$:= 2^2 + 2^4 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 5^2 \qquad = 22 + 24 + 32 + 33 + 33 + 33 + 34 + 34 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^5 + 3^2 + 3^3 + 4^2 + 4^3 + 5^3 \qquad = 23 + 23 + 23 + 25 + 32 + 33 + 42 + 43 + 53$$
$$:= 2^3 + 2^3 + 2^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 \qquad = 23 + 23 + 23 + 33 + 33 + 33 + 43 + 43 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 3^2 + 3^2 + 3^4 + 5^2 + 5^3 \qquad = 23 + 23 + 24 + 24 + 32 + 32 + 34 + 52 + 53$$
$$:= 2^3 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^2 + 4^3 + 5^3 \qquad = 23 + 25 + 25 + 32 + 32 + 32 + 32 + 43 + 53$$
$$:= 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 + 4^3 \qquad = 23 + 27 + 32 + 32 + 32 + 33 + 33 + 42 + 43$$
$$:= 2^3 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 \qquad = 23 + 32 + 33 + 33 + 33 + 33 + 33 + 34 + 43$$

$$:= 2^4 + 2^4 + 2^4 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 5^3 \qquad = 24 + 24 + 24 + 32 + 32 + 32 + 34 + 42 + 53$$

299 $:= 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 3^4 + 4^3 + 5^2 + 5^2 \qquad = 22 + 22 + 24 + 24 + 26 + 34 + 43 + 52 + 52$

$:= 2^2 + 2^2 + 2^5 + 2^7 + 3^3 + 3^3 + 3^3 + 5^2 + 5^2 \qquad = 22 + 22 + 25 + 27 + 33 + 33 + 33 + 52 + 52$

$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 5^2 + 5^2 + 5^3 \qquad = 22 + 23 + 23 + 23 + 25 + 26 + 52 + 52 + 53$

$:= 2^2 + 2^3 + 2^4 + 2^5 + 2^6 + 3^2 + 4^2 + 5^2 + 5^3 \qquad = 22 + 23 + 24 + 25 + 26 + 32 + 42 + 52 + 53$

$:= 2^2 + 2^3 + 2^4 + 2^5 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 \qquad = 22 + 23 + 24 + 25 + 33 + 34 + 34 + 52 + 52$

$:= 2^2 + 2^3 + 2^4 + 2^6 + 3^3 + 3^3 + 4^3 + 4^3 + 5^2 \qquad = 22 + 23 + 24 + 26 + 33 + 33 + 43 + 43 + 52$

$:= 2^2 + 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 3^3 + 5^2 + 5^2 \qquad = 22 + 23 + 26 + 27 + 32 + 32 + 33 + 52 + 52$

$:= 2^2 + 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 5^2 + 5^3 \qquad = 22 + 24 + 24 + 25 + 33 + 33 + 33 + 52 + 53$

$:= 2^2 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 \qquad = 22 + 25 + 25 + 33 + 33 + 34 + 42 + 42 + 43$

$:= 2^2 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 5^2 \qquad = 22 + 26 + 26 + 32 + 32 + 33 + 34 + 42 + 52$

$:= 2^3 + 2^3 + 2^4 + 2^5 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 \qquad = 23 + 23 + 24 + 25 + 33 + 42 + 43 + 43 + 43$

$:= 2^3 + 2^3 + 2^4 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 \qquad = 23 + 23 + 24 + 27 + 33 + 42 + 42 + 42 + 43$

299 $:= 2^3 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 4^2 + 4^3 + 5^2 \qquad = 23 + 23 + 25 + 27 + 32 + 32 + 42 + 43 + 52$

$:= 2^3 + 2^3 + 2^5 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 + 5^2 \qquad = 23 + 23 + 25 + 33 + 33 + 33 + 34 + 43 + 52$

$:= 2^3 + 2^4 + 2^4 + 2^4 + 3^2 + 3^4 + 4^3 + 4^3 + 5^2 \qquad = 23 + 24 + 24 + 24 + 32 + 34 + 43 + 43 + 52$

$:= 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^3 + 5^2 + 5^3 \qquad = 23 + 24 + 24 + 26 + 32 + 32 + 33 + 52 + 53$

$:= 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 \qquad = 23 + 25 + 26 + 32 + 32 + 34 + 42 + 42 + 43$

$:= 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 \qquad = 24 + 25 + 25 + 32 + 32 + 32 + 43 + 43 + 43$

$:= 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 \qquad = 24 + 25 + 27 + 32 + 32 + 32 + 42 + 42 + 43$

$:= 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 \qquad = 24 + 25 + 32 + 33 + 33 + 33 + 34 + 42 + 43$

$:= 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 \qquad = 26 + 32 + 33 + 33 + 33 + 33 + 33 + 33 + 43$

300 $:= 2^2 + 2^2 + 2^2 + 2^2 + 3^2 + 3^2 + 4^2 + 5^3 + 5^3 \qquad = 22 + 22 + 22 + 22 + 32 + 32 + 42 + 53 + 53$

301 $:= 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 4^2 + 4^3 + 4^3 + 5^2 \qquad = 22 + 24 + 24 + 25 + 26 + 42 + 43 + 43 + 52$

$:= 2^2 + 2^4 + 2^4 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 + 5^2 \qquad = 22 + 24 + 24 + 26 + 27 + 42 + 42 + 42 + 52$

$:= 2^2 + 2^4 + 2^5 + 2^6 + 3^3 + 3^3 + 3^4 + 5^2 + 5^2 \qquad = 22 + 24 + 25 + 26 + 33 + 33 + 34 + 52 + 52$

$:= 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 3^4 + 4^2 + 4^3 + 5^2 \qquad = 23 + 24 + 25 + 25 + 33 + 34 + 42 + 43 + 52$

$:= 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^4 + 5^2 + 5^2 \qquad = 23 + 24 + 26 + 26 + 32 + 32 + 34 + 52 + 52$

$:= 2^3 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 5^2 \qquad = 23 + 25 + 26 + 33 + 33 + 33 + 33 + 43 + 52$

$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 4^2 + 4^2 + 4^2 + 5^3 \qquad = 24 + 24 + 24 + 24 + 26 + 42 + 42 + 42 + 53$

$:= 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^4 + 3^4 + 5^2 + 5^2 \qquad = 24 + 24 + 24 + 25 + 32 + 34 + 34 + 52 + 52$

$:= 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^3 + 4^3 + 4^3 + 5^2 \qquad = 24 + 24 + 24 + 26 + 32 + 33 + 43 + 43 + 52$

$:= 2^4 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 5^2 + 5^2 \qquad = 24 + 24 + 26 + 27 + 32 + 32 + 32 + 52 + 52$

$$:= 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 \qquad = 25 + 26 + 26 + 32 + 32 + 33 + 42 + 42 + 43$$

$$\mathbf{302} := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 4^3 + 4^3 + 5^2 + 5^3 \qquad = 22 + 22 + 22 + 22 + 23 + 43 + 43 + 52 + 53$$

$$\mathbf{303} := 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^7 + 5^2 + 5^2 + 5^2 \qquad = 22 + 24 + 24 + 25 + 25 + 27 + 52 + 52 + 52$$
$$:= 2^2 + 2^5 + 2^6 + 2^6 + 2^6 + 3^2 + 4^2 + 5^2 + 5^2 \qquad = 22 + 25 + 26 + 26 + 26 + 32 + 42 + 52 + 52$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 5^2 + 5^2 + 5^3 \qquad = 24 + 24 + 24 + 24 + 25 + 25 + 52 + 52 + 53$$
$$:= 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 4^2 + 4^3 + 5^2 \qquad = 24 + 25 + 25 + 26 + 33 + 33 + 42 + 43 + 52$$
$$:= 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 5^2 + 5^2 \qquad = 24 + 26 + 26 + 26 + 32 + 32 + 33 + 52 + 52$$

$$\mathbf{304} := 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 3^4 + 5^2 + 5^2 + 5^3 \qquad = 22 + 22 + 22 + 22 + 25 + 34 + 52 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^6 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 + 5^3 \qquad = 22 + 22 + 26 + 32 + 32 + 32 + 42 + 43 + 53$$
$$:= 2^2 + 2^2 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^3 + 5^2 \qquad = 22 + 22 + 32 + 32 + 33 + 34 + 34 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 + 5^3 \qquad = 23 + 23 + 23 + 32 + 32 + 32 + 43 + 43 + 53$$
$$:= 2^3 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 5^3 \qquad = 23 + 32 + 32 + 32 + 32 + 33 + 33 + 34 + 53$$
$$:= 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 + 4^2 \qquad = 32 + 32 + 32 + 32 + 32 + 34 + 34 + 34 + 42$$

$$\mathbf{306} := 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 4^2 + 4^3 + 5^2 + 5^3 \qquad = 22 + 22 + 22 + 25 + 25 + 42 + 43 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^3 + 2^6 + 3^2 + 4^3 + 4^3 + 4^3 + 5^2 \qquad = 22 + 22 + 23 + 26 + 32 + 43 + 43 + 43 + 52$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 3^2 + 3^3 + 4^3 + 5^2 + 5^3 \qquad = 22 + 22 + 24 + 25 + 32 + 33 + 43 + 52 + 53$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 \qquad = 22 + 23 + 23 + 25 + 34 + 42 + 42 + 42 + 53$$
$$:= 2^2 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 \qquad = 22 + 25 + 32 + 32 + 33 + 34 + 42 + 43 + 43$$
$$:= 2^2 + 2^7 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 \qquad = 22 + 27 + 32 + 32 + 33 + 34 + 42 + 42 + 42$$
$$:= 2^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 \qquad = 22 + 33 + 33 + 33 + 33 + 34 + 34 + 42 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 3^3 + 3^4 + 4^2 + 5^2 + 5^3 \qquad = 23 + 23 + 23 + 23 + 33 + 34 + 42 + 52 + 53$$
$$:= 2^3 + 2^3 + 2^4 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 \qquad = 23 + 23 + 24 + 32 + 32 + 43 + 43 + 43 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 5^3 \qquad = 23 + 23 + 24 + 32 + 33 + 34 + 42 + 42 + 53$$
$$:= 2^3 + 2^3 + 2^5 + 3^2 + 3^2 + 3^2 + 3^4 + 5^2 + 5^3 \qquad = 23 + 23 + 25 + 32 + 32 + 32 + 34 + 52 + 53$$
$$:= 2^4 + 2^5 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 5^3 \qquad = 24 + 25 + 32 + 32 + 32 + 32 + 34 + 42 + 53$$
$$:= 2^4 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 \qquad = 24 + 32 + 32 + 32 + 33 + 33 + 34 + 43 + 43$$
$$:= 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 5^3 \qquad = 26 + 32 + 32 + 32 + 32 + 33 + 33 + 33 + 53$$
$$:= 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 5^2 \qquad = 27 + 32 + 32 + 32 + 32 + 32 + 33 + 34 + 52$$

$$\mathbf{308} := 2^2 + 2^2 + 2^5 + 2^6 + 3^2 + 3^4 + 4^3 + 5^2 + 5^2 \qquad = 22 + 22 + 25 + 26 + 32 + 34 + 43 + 52 + 52$$
$$:= 2^2 + 2^3 + 2^5 + 2^6 + 3^3 + 4^2 + 4^2 + 4^2 + 5^3 \qquad = 22 + 23 + 25 + 26 + 33 + 42 + 42 + 42 + 53$$
$$:= 2^2 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 5^2 + 5^3 \qquad = 22 + 25 + 25 + 32 + 33 + 33 + 33 + 52 + 53$$
$$:= 2^2 + 2^7 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 5^2 \qquad = 22 + 27 + 33 + 33 + 33 + 33 + 33 + 42 + 52$$

$$:= 2^3 + 2^3 + 2^3 + 2^6 + 3^3 + 3^3 + 4^2 + 5^2 + 5^3 = 23 + 23 + 23 + 26 + 33 + 33 + 42 + 52 + 53$$

$$:= 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 = 23 + 23 + 23 + 27 + 32 + 34 + 42 + 52 + 52$$

$$:= 2^3 + 2^3 + 2^6 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 = 23 + 23 + 26 + 32 + 34 + 34 + 42 + 42 + 52$$

$$:= 2^3 + 2^4 + 2^4 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 24 + 24 + 33 + 34 + 42 + 42 + 43 + 43$$

$$:= 2^3 + 2^4 + 2^5 + 3^2 + 3^2 + 3^4 + 4^3 + 4^3 + 5^2 = 23 + 24 + 25 + 32 + 32 + 34 + 43 + 43 + 52$$

$$:= 2^3 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 5^3 = 23 + 24 + 26 + 32 + 33 + 33 + 42 + 42 + 53$$

$$:= 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 5^2 = 23 + 24 + 27 + 32 + 32 + 34 + 42 + 42 + 52$$

$$:= 2^3 + 2^4 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 5^2 = 23 + 24 + 33 + 33 + 33 + 34 + 34 + 42 + 52$$

$$:= 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 5^2 + 5^3 = 23 + 25 + 26 + 32 + 32 + 32 + 33 + 52 + 53$$

$$:= 2^4 + 2^4 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 5^3 = 24 + 24 + 33 + 33 + 33 + 33 + 33 + 42 + 53$$

$$:= 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 24 + 26 + 32 + 32 + 34 + 34 + 42 + 42 + 42$$

$$:= 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 = 26 + 26 + 32 + 32 + 32 + 32 + 42 + 43 + 43$$

310 $:= 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 3^3 + 5^2 + 5^2 + 5^3 = 22 + 23 + 25 + 25 + 25 + 33 + 52 + 52 + 53$

$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^7 + 4^2 + 4^3 + 5^2 + 5^2 = 22 + 24 + 24 + 24 + 27 + 42 + 43 + 52 + 52$$

$$:= 2^2 + 2^5 + 2^5 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 + 5^2 = 22 + 25 + 25 + 26 + 32 + 42 + 43 + 43 + 52$$

$$:= 2^2 + 2^5 + 2^6 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 + 5^2 = 22 + 25 + 26 + 27 + 32 + 42 + 42 + 42 + 52$$

$$:= 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 4^2 + 4^2 + 5^2 + 5^3 = 23 + 23 + 24 + 25 + 26 + 42 + 42 + 52 + 53$$

$$:= 2^3 + 2^3 + 2^6 + 2^7 + 3^2 + 3^3 + 4^2 + 5^2 + 5^2 = 23 + 23 + 26 + 27 + 32 + 33 + 42 + 52 + 52$$

$$:= 2^3 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 + 3^3 + 5^2 + 5^2 = 23 + 24 + 27 + 33 + 33 + 33 + 33 + 52 + 52$$

$$:= 2^3 + 2^6 + 2^6 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 5^2 = 23 + 26 + 26 + 32 + 33 + 34 + 42 + 42 + 52$$

$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 4^2 + 4^3 + 5^2 + 5^3 = 24 + 24 + 24 + 24 + 24 + 42 + 43 + 52 + 53$$

310 $:= 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 4^2 + 4^2 + 4^2 + 5^3 = 24 + 24 + 25 + 26 + 32 + 42 + 42 + 42 + 53$

$$:= 2^4 + 2^4 + 2^5 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 = 24 + 24 + 25 + 33 + 34 + 34 + 42 + 42 + 52$$

$$:= 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 = 24 + 24 + 26 + 33 + 33 + 42 + 42 + 43 + 43$$

$$:= 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^4 + 3^4 + 5^2 + 5^2 = 24 + 25 + 25 + 32 + 32 + 34 + 34 + 52 + 52$$

$$:= 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 4^3 + 4^3 + 5^2 = 24 + 25 + 26 + 32 + 32 + 33 + 43 + 43 + 52$$

$$:= 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 + 5^2 = 24 + 26 + 27 + 32 + 32 + 33 + 42 + 42 + 52$$

$$:= 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 5^2 = 24 + 26 + 33 + 33 + 33 + 33 + 34 + 42 + 52$$

$$:= 2^5 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 5^2 + 5^2 = 25 + 26 + 27 + 32 + 32 + 32 + 32 + 52 + 52$$

311 $:= 2^2 + 2^2 + 2^2 + 2^3 + 3^2 + 4^2 + 4^2 + 5^3 + 5^3 = 22 + 22 + 22 + 23 + 32 + 42 + 42 + 53 + 53$

312 $:= 2^2 + 2^5 + 2^5 + 2^5 + 2^7 + 3^2 + 5^2 + 5^2 + 5^2 = 22 + 25 + 25 + 25 + 27 + 32 + 52 + 52 + 52$

$$:= 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 5^2 + 5^2 + 5^3 = 24 + 24 + 25 + 25 + 25 + 32 + 52 + 52 + 53$$

$$:= 2^4 + 2^4 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 + 5^2 + 5^2 = 24 + 24 + 25 + 27 + 33 + 33 + 42 + 52 + 52$$

$$:= 2^6 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 5^2 \qquad = 26 + 26 + 26 + 32 + 33 + 33 + 42 + 42 + 52$$

$$313 := 2^2 + 2^2 + 2^2 + 2^4 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 \qquad = 22 + 22 + 22 + 24 + 42 + 42 + 43 + 43 + 53$$
$$:= 2^2 + 2^2 + 2^2 + 3^3 + 3^3 + 3^4 + 4^2 + 5^2 + 5^3 \qquad = 22 + 22 + 22 + 33 + 33 + 34 + 42 + 52 + 53$$
$$:= 2^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 4^3 + 4^3 + 4^3 \qquad = 22 + 32 + 32 + 32 + 32 + 34 + 43 + 43 + 43$$

$$314 := 2^3 + 2^5 + 2^6 + 2^6 + 2^6 + 4^2 + 4^2 + 5^2 + 5^2 \qquad = 23 + 25 + 26 + 26 + 26 + 42 + 42 + 52 + 52$$

$$315 := 2^2 + 2^2 + 2^3 + 2^4 + 3^3 + 3^4 + 5^2 + 5^2 + 5^3 \qquad = 22 + 22 + 23 + 24 + 33 + 34 + 52 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^5 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 5^3 \qquad = 22 + 22 + 25 + 33 + 33 + 42 + 42 + 43 + 53$$
$$:= 2^2 + 2^3 + 2^3 + 3^3 + 3^3 + 3^3 + 4^3 + 5^2 + 5^3 \qquad = 22 + 23 + 23 + 33 + 33 + 33 + 43 + 52 + 53$$
$$:= 2^2 + 2^3 + 2^6 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 + 5^3 \qquad = 22 + 23 + 26 + 32 + 32 + 42 + 42 + 43 + 53$$
$$:= 2^2 + 2^3 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 \qquad = 22 + 23 + 32 + 33 + 34 + 34 + 42 + 43 + 52$$
$$:= 2^2 + 2^4 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 + 5^3 \qquad = 22 + 24 + 32 + 33 + 33 + 33 + 42 + 43 + 53$$

$$317 := 2^2 + 2^2 + 2^3 + 2^6 + 3^4 + 3^4 + 5^2 + 5^2 + 5^2 \qquad = 22 + 22 + 23 + 26 + 34 + 34 + 52 + 52 + 52$$
$$:= 2^2 + 2^2 + 2^4 + 2^6 + 3^3 + 3^3 + 5^2 + 5^2 + 5^3 \qquad = 22 + 22 + 24 + 26 + 33 + 33 + 52 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^4 + 2^7 + 3^2 + 3^4 + 5^2 + 5^2 + 5^2 \qquad = 22 + 22 + 24 + 27 + 32 + 34 + 52 + 52 + 52$$
$$:= 2^2 + 2^3 + 2^3 + 2^6 + 4^2 + 4^3 + 4^3 + 4^3 + 5^2 \qquad = 22 + 23 + 23 + 26 + 42 + 43 + 43 + 43 + 52$$
$$:= 2^2 + 2^3 + 2^4 + 2^5 + 3^3 + 4^2 + 4^3 + 5^2 + 5^3 \qquad = 22 + 23 + 24 + 25 + 33 + 42 + 43 + 52 + 53$$
$$:= 2^2 + 2^3 + 2^7 + 3^2 + 3^3 + 3^3 + 4^3 + 5^2 + 5^2 \qquad = 22 + 23 + 27 + 32 + 33 + 33 + 43 + 52 + 52$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 3^2 + 3^4 + 5^2 + 5^2 + 5^3 \qquad = 22 + 24 + 24 + 24 + 32 + 34 + 52 + 52 + 53$$
$$:= 2^2 + 2^4 + 2^6 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 \qquad = 22 + 24 + 26 + 32 + 42 + 42 + 43 + 43 + 43$$
$$:= 2^2 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 + 5^2 \qquad = 22 + 26 + 32 + 33 + 33 + 34 + 42 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^4 + 3^2 + 3^4 + 3^4 + 4^3 + 5^2 + 5^2 \qquad = 23 + 23 + 24 + 32 + 34 + 34 + 43 + 52 + 52$$
$$:= 2^3 + 2^4 + 2^4 + 3^2 + 3^3 + 3^3 + 4^3 + 5^2 + 5^3 \qquad = 23 + 24 + 24 + 32 + 33 + 33 + 43 + 52 + 53$$
$$:= 2^3 + 2^5 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 \qquad = 23 + 25 + 32 + 33 + 34 + 42 + 42 + 43 + 43$$
$$:= 2^3 + 2^7 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 \qquad = 23 + 27 + 32 + 33 + 34 + 42 + 42 + 42 + 42$$
$$:= 2^4 + 2^4 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 \qquad = 24 + 24 + 32 + 32 + 34 + 34 + 42 + 43 + 52$$
$$:= 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 5^3 \qquad = 25 + 32 + 33 + 33 + 33 + 33 + 33 + 42 + 53$$
$$:= 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 \qquad = 33 + 33 + 33 + 33 + 33 + 33 + 33 + 43 + 43$$

$$319 := 2^2 + 2^2 + 2^6 + 2^6 + 3^3 + 3^4 + 5^2 + 5^2 + 5^2 \qquad = 22 + 22 + 26 + 26 + 33 + 34 + 52 + 52 + 52$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^7 + 4^3 + 5^2 + 5^2 + 5^2 \qquad = 22 + 23 + 23 + 25 + 27 + 43 + 52 + 52 + 52$$
$$:= 2^2 + 2^3 + 2^5 + 2^6 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 \qquad = 22 + 23 + 25 + 26 + 34 + 42 + 43 + 52 + 52$$
$$:= 2^2 + 2^4 + 2^5 + 2^7 + 3^2 + 4^2 + 4^3 + 5^2 + 5^2 \qquad = 22 + 24 + 25 + 27 + 32 + 42 + 43 + 52 + 52$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 23 + 23 + 24 + 24 + 25 + 43 + 52 + 52 + 53$$

$$:= 2^3 + 2^4 + 2^6 + 3^2 + 3^3 + 3^4 + 4^3 + 5^2 + 5^2 \qquad = 23 + 24 + 26 + 32 + 33 + 34 + 43 + 52 + 52$$
$$:= 2^3 + 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 4^2 + 5^2 + 5^3 \qquad = 23 + 25 + 25 + 33 + 33 + 33 + 42 + 52 + 53$$
$$:= 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 4^2 + 4^3 + 5^2 + 5^3 \qquad = 24 + 24 + 24 + 25 + 32 + 42 + 43 + 52 + 53$$
$$:= 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 + 5^2 \qquad = 24 + 24 + 24 + 33 + 33 + 43 + 43 + 43 + 52$$
$$:= 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 4^3 + 5^2 + 5^2 \qquad = 24 + 24 + 27 + 32 + 32 + 33 + 43 + 52 + 52$$
$$:= 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 5^3 \qquad = 25 + 25 + 26 + 32 + 32 + 42 + 42 + 42 + 53$$
$$:= 2^5 + 2^5 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 \qquad = 25 + 25 + 32 + 33 + 34 + 34 + 42 + 42 + 52$$
$$:= 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 \qquad = 25 + 26 + 32 + 33 + 33 + 42 + 42 + 43 + 43$$
$$:= 2^6 + 2^7 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 \qquad = 26 + 27 + 32 + 33 + 33 + 42 + 42 + 42 + 42$$

320 $:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 5^2 + 5^2 + 5^3 + 5^3 \qquad = 22 + 22 + 22 + 22 + 22 + 52 + 52 + 53 + 53$

321 $:= 2^2 + 2^5 + 2^6 + 2^6 + 3^3 + 4^2 + 4^3 + 5^2 + 5^2 \qquad = 22 + 25 + 26 + 26 + 33 + 42 + 43 + 52 + 52$
$$:= 2^3 + 2^5 + 2^5 + 2^6 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 \qquad = 23 + 25 + 25 + 26 + 42 + 42 + 43 + 43 + 52$$
$$:= 2^3 + 2^5 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 5^2 \qquad = 23 + 25 + 26 + 27 + 42 + 42 + 42 + 42 + 52$$
$$:= 2^4 + 2^5 + 2^5 + 2^5 + 3^3 + 4^2 + 4^2 + 5^2 + 5^3 \qquad = 24 + 25 + 25 + 25 + 33 + 42 + 42 + 52 + 53$$
$$:= 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 + 5^2 + 5^2 \qquad = 24 + 26 + 26 + 32 + 33 + 33 + 43 + 52 + 52$$
$$:= 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 5^2 + 5^2 + 5^3 \qquad = 25 + 25 + 25 + 25 + 32 + 32 + 52 + 52 + 53$$
$$:= 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 3^3 + 4^2 + 5^2 + 5^2 \qquad = 25 + 25 + 27 + 32 + 33 + 33 + 42 + 52 + 52$$
$$:= 2^5 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 \qquad = 25 + 26 + 26 + 34 + 42 + 42 + 42 + 42 + 42$$

322 $:= 2^2 + 2^2 + 2^3 + 2^3 + 4^2 + 4^2 + 4^2 + 5^3 + 5^3 \qquad = 22 + 22 + 23 + 23 + 42 + 42 + 42 + 53 + 53$
$$:= 2^2 + 2^2 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 + 5^3 \qquad = 22 + 22 + 32 + 32 + 33 + 42 + 43 + 43 + 53$$
$$:= 2^2 + 2^3 + 2^3 + 3^2 + 3^2 + 3^2 + 5^2 + 5^3 + 5^3 \qquad = 22 + 23 + 23 + 32 + 32 + 32 + 52 + 53 + 53$$
$$:= 2^2 + 2^4 + 3^2 + 3^2 + 3^2 + 3^2 + 4^2 + 5^3 + 5^3 \qquad = 22 + 24 + 32 + 32 + 32 + 32 + 42 + 53 + 53$$

323 $:= 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 4^3 + 5^2 + 5^2 + 5^2 \qquad = 23 + 24 + 25 + 26 + 26 + 43 + 52 + 52 + 52$
$$:= 2^3 + 2^5 + 2^5 + 2^5 + 2^7 + 4^2 + 5^2 + 5^2 + 5^2 \qquad = 23 + 25 + 25 + 25 + 27 + 42 + 52 + 52 + 52$$
$$:= 2^5 + 2^5 + 2^5 + 2^6 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 \qquad = 25 + 25 + 25 + 26 + 34 + 42 + 42 + 52 + 52$$

324 $:= 2^2 + 2^2 + 2^2 + 2^6 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 22 + 22 + 22 + 26 + 32 + 43 + 52 + 52 + 53$
$$:= 2^2 + 2^2 + 2^3 + 3^3 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 \qquad = 22 + 22 + 23 + 33 + 43 + 43 + 43 + 43 + 52$$
$$:= 2^2 + 2^2 + 3^4 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 \qquad = 22 + 22 + 34 + 34 + 34 + 42 + 42 + 42 + 52$$
$$:= 2^2 + 2^3 + 2^4 + 3^2 + 3^2 + 4^3 + 4^3 + 5^2 + 5^3 \qquad = 22 + 23 + 24 + 32 + 32 + 43 + 43 + 52 + 53$$
$$:= 2^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 + 5^2 + 5^2 \qquad = 22 + 32 + 32 + 32 + 34 + 34 + 34 + 52 + 52$$
$$:= 2^3 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 + 4^3 \qquad = 23 + 32 + 32 + 32 + 34 + 42 + 43 + 43 + 43$$
$$:= 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 5^3 \qquad = 32 + 32 + 32 + 33 + 33 + 33 + 33 + 43 + 53$$

$$\begin{aligned}
\mathbf{326} := &\ 2^2 + 2^2 + 2^5 + 3^3 + 3^4 + 4^3 + 4^3 + 5^2 + 5^2 && = 22 + 22 + 25 + 33 + 34 + 43 + 43 + 52 + 52 \\
:= &\ 2^2 + 2^2 + 2^7 + 3^3 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 && = 22 + 22 + 27 + 33 + 34 + 42 + 42 + 52 + 52 \\
:= &\ 2^2 + 2^4 + 2^4 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 && = 22 + 24 + 24 + 32 + 43 + 43 + 43 + 43 + 52 \\
:= &\ 2^2 + 2^4 + 2^4 + 3^3 + 3^4 + 4^2 + 4^2 + 5^2 + 5^3 && = 22 + 24 + 24 + 33 + 34 + 42 + 42 + 52 + 53 \\
:= &\ 2^2 + 2^4 + 2^5 + 3^2 + 3^2 + 3^4 + 5^2 + 5^2 + 5^3 && = 22 + 24 + 25 + 32 + 32 + 34 + 52 + 52 + 53 \\
:= &\ 2^2 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 && = 22 + 25 + 34 + 34 + 42 + 42 + 42 + 42 + 43 \\
:= &\ 2^3 + 2^3 + 2^6 + 3^2 + 4^2 + 4^2 + 4^2 + 4^3 + 5^3 && = 23 + 23 + 26 + 32 + 42 + 42 + 42 + 43 + 53 \\
:= &\ 2^3 + 2^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 + 5^2 && = 23 + 23 + 33 + 34 + 34 + 42 + 42 + 43 + 52 \\
:= &\ 2^3 + 2^4 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 5^3 && = 23 + 24 + 33 + 33 + 33 + 42 + 42 + 43 + 53 \\
:= &\ 2^3 + 2^5 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 + 5^2 + 5^3 && = 23 + 25 + 32 + 32 + 33 + 33 + 43 + 52 + 53 \\
:= &\ 2^4 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 && = 24 + 32 + 33 + 34 + 34 + 42 + 42 + 42 + 43 \\
:= &\ 2^5 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 && = 25 + 32 + 32 + 32 + 34 + 34 + 42 + 43 + 52 \\
:= &\ 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 && = 26 + 32 + 32 + 32 + 33 + 42 + 43 + 43 + 43
\end{aligned}$$

$$\begin{aligned}
\mathbf{328} := &\ 2^2 + 2^3 + 2^4 + 2^7 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 && = 22 + 23 + 24 + 27 + 34 + 42 + 52 + 52 + 52 \\
:= &\ 2^2 + 2^4 + 2^6 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 && = 22 + 24 + 26 + 34 + 34 + 42 + 42 + 52 + 52 \\
:= &\ 2^2 + 2^5 + 2^5 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 5^2 && = 22 + 25 + 25 + 33 + 42 + 43 + 43 + 43 + 52 \\
:= &\ 2^2 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 5^2 && = 22 + 25 + 27 + 33 + 42 + 42 + 42 + 43 + 52 \\
:= &\ 2^2 + 2^6 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 + 5^2 + 5^2 && = 22 + 26 + 26 + 32 + 32 + 43 + 43 + 52 + 52 \\
:= &\ 2^3 + 2^3 + 2^5 + 2^5 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 && = 23 + 23 + 25 + 25 + 32 + 43 + 52 + 52 + 53 \\
:= &\ 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 4^2 + 4^3 + 5^2 + 5^2 && = 23 + 23 + 27 + 33 + 33 + 42 + 43 + 52 + 52 \\
:= &\ 2^3 + 2^4 + 2^4 + 2^4 + 3^4 + 4^2 + 5^2 + 5^2 + 5^3 && = 23 + 24 + 24 + 24 + 34 + 42 + 52 + 52 + 53 \\
:= &\ 2^3 + 2^4 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 && = 23 + 24 + 26 + 42 + 42 + 42 + 43 + 43 + 43 \\
:= &\ 2^3 + 2^6 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 5^2 && = 23 + 26 + 33 + 33 + 34 + 42 + 42 + 43 + 52 \\
:= &\ 2^4 + 2^4 + 2^5 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 5^3 && = 24 + 24 + 25 + 33 + 42 + 42 + 42 + 43 + 53 \\
:= &\ 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 4^2 + 4^3 + 5^2 + 5^3 && = 24 + 25 + 25 + 32 + 32 + 42 + 43 + 52 + 53 \\
:= &\ 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 + 5^2 && = 24 + 25 + 32 + 33 + 33 + 43 + 43 + 43 + 52 \\
:= &\ 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 5^2 && = 24 + 27 + 32 + 33 + 33 + 42 + 42 + 43 + 52 \\
:= &\ 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 4^3 + 5^2 + 5^2 && = 25 + 27 + 32 + 32 + 32 + 33 + 43 + 52 + 52
\end{aligned}$$

$$\begin{aligned}
\mathbf{330} := &\ 2^2 + 2^4 + 2^6 + 2^7 + 3^3 + 4^2 + 5^2 + 5^2 + 5^2 && = 22 + 24 + 26 + 27 + 33 + 42 + 52 + 52 + 52 \\
:= &\ 2^3 + 2^4 + 2^5 + 2^5 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 && = 23 + 24 + 25 + 25 + 43 + 43 + 43 + 52 + 52 \\
:= &\ 2^3 + 2^4 + 2^5 + 2^7 + 4^2 + 4^2 + 4^3 + 5^2 + 5^2 && = 23 + 24 + 25 + 27 + 42 + 42 + 43 + 52 + 52 \\
:= &\ 2^4 + 2^4 + 2^4 + 2^6 + 3^3 + 4^2 + 5^2 + 5^2 + 5^3 && = 24 + 24 + 24 + 26 + 33 + 42 + 52 + 52 + 53 \\
:= &\ 2^4 + 2^5 + 2^6 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 + 5^2 && = 24 + 25 + 26 + 34 + 42 + 42 + 42 + 43 + 52
\end{aligned}$$

$$:= 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 5^2 \qquad = 26 + 26 + 33 + 33 + 33 + 42 + 42 + 43 + 52$$

$$\mathbf{331} := 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 5^3 + 5^3 \qquad = 32 + 32 + 32 + 32 + 32 + 32 + 33 + 53 + 53$$

$$\mathbf{332} := 2^3 + 2^4 + 2^4 + 2^6 + 2^7 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 23 + 24 + 24 + 26 + 27 + 52 + 52 + 52 + 52$$
$$:= 2^4 + 2^4 + 2^6 + 2^6 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 \qquad = 24 + 24 + 26 + 26 + 34 + 42 + 52 + 52 + 52$$
$$:= 2^4 + 2^5 + 2^5 + 2^5 + 3^4 + 4^3 + 5^2 + 5^2 + 5^2 \qquad = 24 + 25 + 25 + 25 + 34 + 43 + 52 + 52 + 52$$

$$\mathbf{333} := 2^2 + 2^3 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 \qquad = 22 + 23 + 32 + 33 + 42 + 42 + 43 + 43 + 53$$
$$:= 2^3 + 2^3 + 2^3 + 3^2 + 3^2 + 4^2 + 5^2 + 5^3 + 5^3 \qquad = 23 + 23 + 23 + 32 + 32 + 42 + 52 + 53 + 53$$
$$:= 2^3 + 2^4 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 5^3 + 5^3 \qquad = 23 + 24 + 32 + 32 + 32 + 42 + 42 + 53 + 53$$

$$\mathbf{335} := 2^2 + 2^2 + 2^3 + 2^6 + 4^2 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 22 + 22 + 23 + 26 + 42 + 43 + 52 + 52 + 53$$
$$:= 2^2 + 2^4 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 \qquad = 22 + 24 + 33 + 42 + 42 + 43 + 43 + 43 + 43$$
$$:= 2^2 + 2^5 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 \qquad = 22 + 25 + 32 + 32 + 43 + 43 + 43 + 43 + 52$$
$$:= 2^2 + 2^5 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 5^2 + 5^3 \qquad = 22 + 25 + 32 + 33 + 34 + 42 + 42 + 52 + 53$$
$$:= 2^2 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 \qquad = 22 + 27 + 32 + 32 + 42 + 42 + 43 + 43 + 52$$
$$:= 2^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 + 5^2 \qquad = 22 + 33 + 33 + 33 + 34 + 42 + 43 + 43 + 52$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 23 + 23 + 23 + 23 + 43 + 43 + 52 + 52 + 53$$
$$:= 2^3 + 2^3 + 2^4 + 3^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^3 \qquad = 23 + 23 + 24 + 32 + 42 + 43 + 43 + 52 + 53$$
$$:= 2^3 + 2^3 + 3^2 + 3^3 + 3^3 + 3^4 + 5^2 + 5^2 + 5^3 \qquad = 23 + 23 + 32 + 33 + 33 + 34 + 52 + 52 + 53$$
$$:= 2^3 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 + 4^2 + 5^2 + 5^2 \qquad = 23 + 32 + 32 + 34 + 34 + 34 + 42 + 52 + 52$$
$$:= 2^4 + 2^4 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 \qquad = 24 + 24 + 32 + 32 + 42 + 42 + 43 + 43 + 53$$
$$:= 2^4 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 5^2 + 5^3 \qquad = 24 + 32 + 32 + 33 + 33 + 34 + 42 + 52 + 53$$

$$\mathbf{337} := 2^2 + 2^4 + 2^4 + 3^4 + 3^4 + 4^3 + 5^2 + 5^2 + 5^2 \qquad = 22 + 24 + 24 + 34 + 34 + 43 + 52 + 52 + 52$$
$$:= 2^2 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 5^3 \qquad = 22 + 26 + 26 + 42 + 42 + 42 + 42 + 42 + 53$$
$$:= 2^3 + 2^3 + 2^3 + 2^5 + 3^4 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 23 + 23 + 23 + 25 + 34 + 52 + 52 + 52 + 53$$
$$:= 2^3 + 2^4 + 2^4 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 \qquad = 23 + 24 + 24 + 42 + 43 + 43 + 43 + 43 + 52$$
$$:= 2^3 + 2^4 + 2^5 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 + 5^3 \qquad = 23 + 24 + 25 + 32 + 34 + 42 + 52 + 52 + 53$$
$$:= 2^3 + 2^4 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 + 5^2 + 5^2 \qquad = 23 + 24 + 33 + 33 + 34 + 43 + 43 + 52 + 52$$
$$:= 2^3 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 5^2 + 5^2 + 5^3 \qquad = 23 + 26 + 32 + 33 + 33 + 33 + 52 + 52 + 53$$
$$:= 2^3 + 2^7 + 3^2 + 3^2 + 3^3 + 3^4 + 5^2 + 5^2 + 5^2 \qquad = 23 + 27 + 32 + 32 + 33 + 34 + 52 + 52 + 52$$
$$:= 2^5 + 2^5 + 3^2 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 5^3 \qquad = 25 + 25 + 32 + 33 + 42 + 42 + 42 + 43 + 53$$
$$:= 2^5 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 \qquad = 25 + 33 + 33 + 33 + 42 + 42 + 43 + 43 + 43$$
$$:= 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 5^2 + 5^3 \qquad = 26 + 26 + 32 + 32 + 32 + 42 + 42 + 52 + 53$$
$$:= 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 5^2 + 5^2 \qquad = 26 + 32 + 32 + 33 + 34 + 34 + 42 + 52 + 52$$

$$:= 2^7 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 \qquad = 27 + 33 + 33 + 33 + 42 + 42 + 42 + 42 + 43$$

$$\mathbf{339} := 2^2 + 2^5 + 2^5 + 2^6 + 4^2 + 4^2 + 5^2 + 5^2 + 5^3 \qquad = 22 + 25 + 25 + 26 + 42 + 42 + 52 + 52 + 53$$
$$:= 2^3 + 2^3 + 2^5 + 2^6 + 3^3 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 23 + 23 + 25 + 26 + 33 + 52 + 52 + 52 + 53$$
$$:= 2^3 + 2^6 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 \qquad = 23 + 26 + 26 + 32 + 42 + 43 + 43 + 52 + 52$$
$$:= 2^4 + 2^4 + 2^5 + 3^4 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 \qquad = 24 + 24 + 25 + 34 + 42 + 43 + 43 + 52 + 52$$
$$:= 2^4 + 2^4 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 \qquad = 24 + 24 + 27 + 34 + 42 + 42 + 42 + 52 + 52$$
$$:= 2^4 + 2^5 + 2^6 + 3^2 + 3^3 + 4^2 + 5^2 + 5^2 + 5^3 \qquad = 24 + 25 + 26 + 32 + 33 + 42 + 52 + 52 + 53$$
$$:= 2^4 + 2^5 + 3^3 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 + 5^2 \qquad = 24 + 25 + 33 + 33 + 34 + 34 + 52 + 52 + 52$$
$$:= 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 5^2 + 5^2 \qquad = 24 + 26 + 33 + 33 + 33 + 43 + 43 + 52 + 52$$
$$:= 2^6 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 5^2 + 5^2 + 5^2 \qquad = 26 + 27 + 32 + 32 + 33 + 33 + 52 + 52 + 52$$

$$\mathbf{341} := 2^3 + 2^5 + 2^6 + 2^7 + 3^2 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 23 + 25 + 26 + 27 + 32 + 52 + 52 + 52 + 52$$
$$:= 2^5 + 2^6 + 2^6 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 \qquad = 25 + 26 + 26 + 32 + 34 + 42 + 52 + 52 + 52$$

$$\mathbf{342} := 2^2 + 2^2 + 2^2 + 3^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 22 + 22 + 22 + 33 + 43 + 43 + 52 + 52 + 53$$
$$:= 2^2 + 2^2 + 2^4 + 3^2 + 3^2 + 5^2 + 5^2 + 5^3 + 5^3 \qquad = 22 + 22 + 24 + 32 + 32 + 52 + 52 + 53 + 53$$
$$:= 2^2 + 2^2 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 5^3 \qquad = 22 + 22 + 34 + 42 + 42 + 42 + 42 + 43 + 53$$
$$:= 2^2 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 + 5^2 + 5^3 \qquad = 22 + 32 + 32 + 32 + 34 + 42 + 43 + 52 + 53$$

$$\mathbf{344} := 2^2 + 2^3 + 3^2 + 3^4 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 \qquad = 22 + 23 + 32 + 34 + 43 + 43 + 43 + 52 + 52$$
$$:= 2^3 + 2^3 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 \qquad = 23 + 23 + 33 + 42 + 42 + 42 + 43 + 43 + 53$$
$$:= 2^5 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^3 \qquad = 25 + 32 + 32 + 32 + 42 + 42 + 43 + 43 + 53$$
$$:= 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 5^3 \qquad = 27 + 32 + 32 + 32 + 42 + 42 + 42 + 42 + 53$$
$$:= 3^2 + 3^2 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 \qquad = 32 + 32 + 33 + 33 + 42 + 43 + 43 + 43 + 43$$
$$:= 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 \qquad = 32 + 33 + 33 + 33 + 34 + 42 + 42 + 42 + 53$$

$$\mathbf{346} := 2^2 + 2^4 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 \qquad = 22 + 24 + 26 + 42 + 42 + 42 + 43 + 52 + 53$$
$$:= 2^2 + 2^5 + 3^2 + 3^4 + 3^4 + 4^3 + 5^2 + 5^2 + 5^2 \qquad = 22 + 25 + 32 + 34 + 34 + 43 + 52 + 52 + 52$$
$$:= 2^2 + 2^6 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 \qquad = 22 + 26 + 32 + 33 + 43 + 43 + 43 + 52 + 52$$
$$:= 2^3 + 2^5 + 3^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 \qquad = 23 + 25 + 32 + 42 + 43 + 43 + 43 + 43 + 52$$
$$:= 2^3 + 2^5 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 \qquad = 23 + 25 + 33 + 34 + 42 + 42 + 42 + 52 + 53$$
$$:= 2^3 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 \qquad = 23 + 27 + 32 + 42 + 42 + 42 + 43 + 43 + 52$$
$$:= 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 24 + 26 + 32 + 32 + 32 + 43 + 52 + 52 + 53$$
$$:= 2^6 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 \qquad = 26 + 32 + 34 + 42 + 42 + 42 + 42 + 43 + 43$$

$$\mathbf{344} := 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 5^3 \qquad = 32 + 33 + 33 + 33 + 34 + 42 + 42 + 42 + 53$$

$$348 := 2^2 + 2^4 + 2^5 + 2^5 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 22 + 24 + 25 + 25 + 43 + 52 + 52 + 52 + 53$$
$$:= 2^5 + 2^5 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 \qquad = 25 + 25 + 32 + 34 + 42 + 43 + 43 + 52 + 52$$
$$:= 2^5 + 2^6 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 \qquad = 25 + 26 + 33 + 33 + 42 + 42 + 42 + 52 + 53$$
$$:= 2^5 + 2^7 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 \qquad = 25 + 27 + 32 + 34 + 42 + 42 + 42 + 52 + 52$$

$$350 := 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 25 + 25 + 25 + 33 + 33 + 52 + 52 + 52 + 53$$
$$351 := 2^2 + 2^2 + 3^2 + 3^3 + 4^2 + 4^2 + 5^2 + 5^3 + 5^3 \qquad = 22 + 22 + 32 + 33 + 42 + 42 + 52 + 53 + 53$$

$$353 := 2^2 + 2^3 + 2^3 + 2^3 + 5^2 + 5^2 + 5^2 + 5^3 + 5^3 \qquad = 22 + 23 + 23 + 23 + 52 + 52 + 52 + 53 + 53$$
$$:= 2^2 + 2^3 + 2^4 + 3^2 + 4^2 + 5^2 + 5^2 + 5^3 + 5^3 \qquad = 22 + 23 + 24 + 32 + 42 + 52 + 52 + 53 + 53$$
$$:= 2^3 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 \qquad = 23 + 32 + 32 + 34 + 42 + 42 + 43 + 52 + 53$$

$$355 := 2^2 + 2^2 + 2^7 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 \qquad = 22 + 22 + 27 + 42 + 43 + 43 + 52 + 52 + 52$$
$$:= 2^2 + 2^3 + 3^4 + 3^4 + 3^4 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 22 + 23 + 34 + 34 + 34 + 52 + 52 + 52 + 52$$
$$:= 2^2 + 2^4 + 2^4 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 22 + 24 + 24 + 42 + 43 + 43 + 52 + 52 + 53$$
$$:= 2^2 + 2^4 + 3^3 + 3^3 + 3^4 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 22 + 24 + 33 + 33 + 34 + 52 + 52 + 52 + 53$$
$$:= 2^3 + 2^3 + 3^4 + 4^2 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 \qquad = 23 + 23 + 34 + 42 + 43 + 43 + 43 + 52 + 52$$
$$:= 2^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 23 + 33 + 33 + 33 + 33 + 43 + 52 + 52 + 53$$
$$:= 2^4 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 5^2 \qquad = 24 + 32 + 34 + 42 + 42 + 43 + 43 + 43 + 52$$
$$:= 2^6 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 + 5^2 + 5^3 \qquad = 26 + 32 + 32 + 33 + 42 + 42 + 43 + 52 + 53$$
$$:= 3^2 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 \qquad = 32 + 33 + 33 + 34 + 34 + 42 + 43 + 52 + 52$$

$$357 := 2^2 + 2^6 + 2^6 + 3^2 + 4^2 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 22 + 26 + 26 + 32 + 42 + 52 + 52 + 52 + 53$$
$$:= 2^2 + 2^6 + 3^3 + 3^4 + 3^4 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 22 + 26 + 33 + 34 + 34 + 52 + 52 + 52 + 52$$
$$:= 2^3 + 2^5 + 3^4 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 \qquad = 23 + 25 + 34 + 34 + 42 + 43 + 52 + 52 + 52$$
$$:= 2^3 + 2^6 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 \qquad = 23 + 26 + 33 + 42 + 43 + 43 + 43 + 52 + 52$$
$$:= 2^4 + 2^5 + 3^3 + 3^3 + 4^2 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 24 + 25 + 33 + 33 + 42 + 43 + 52 + 52 + 53$$
$$:= 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 5^2 + 5^2 + 5^2 \qquad = 27 + 32 + 33 + 33 + 33 + 43 + 52 + 52 + 52$$

$$359 := 2^3 + 2^5 + 2^7 + 3^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 23 + 25 + 27 + 33 + 43 + 52 + 52 + 52 + 52$$
$$:= 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 \qquad = 25 + 26 + 33 + 34 + 42 + 43 + 52 + 52 + 52$$

$$362 := 2^2 + 2^2 + 3^2 + 3^4 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 22 + 22 + 32 + 34 + 43 + 52 + 52 + 52 + 53$$
$$:= 2^2 + 2^3 + 3^3 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 + 5^3 \qquad = 22 + 23 + 33 + 42 + 42 + 42 + 52 + 53 + 53$$
$$:= 2^3 + 3^2 + 3^2 + 3^2 + 3^3 + 5^2 + 5^2 + 5^3 + 5^3 \qquad = 23 + 32 + 32 + 32 + 33 + 52 + 52 + 53 + 53$$

$$364 := 2^2 + 2^5 + 3^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 22 + 25 + 32 + 42 + 43 + 43 + 52 + 52 + 53$$

$$:= 2^2 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 + 5^3 \qquad = 22 + 27 + 32 + 42 + 42 + 42 + 52 + 52 + 53$$

$$:= 2^2 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 \qquad = 22 + 33 + 33 + 43 + 43 + 43 + 43 + 52 + 52$$

$$:= 2^3 + 2^3 + 2^4 + 4^2 + 4^2 + 5^2 + 5^2 + 5^3 + 5^3 \qquad = 23 + 23 + 24 + 42 + 42 + 52 + 52 + 53 + 53$$

$$:= 2^4 + 2^4 + 3^2 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 + 5^3 \qquad = 24 + 24 + 32 + 42 + 42 + 42 + 52 + 53 + 53$$

$$:= 2^4 + 3^2 + 3^2 + 3^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 24 + 32 + 32 + 33 + 43 + 43 + 52 + 52 + 53$$

$$:= 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 27 + 32 + 32 + 32 + 32 + 52 + 52 + 52 + 53$$

$$:= 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 \qquad = 33 + 34 + 42 + 42 + 42 + 42 + 43 + 43 + 43$$

$$366 := 2^4 + 3^4 + 3^4 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 \qquad = 24 + 34 + 34 + 34 + 42 + 42 + 52 + 52 + 52$$

$$:= 2^6 + 3^2 + 3^2 + 3^4 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 \qquad = 26 + 32 + 32 + 34 + 43 + 43 + 52 + 52 + 52$$

$$368 := 2^3 + 2^6 + 2^6 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 23 + 26 + 26 + 42 + 42 + 52 + 52 + 52 + 53$$

$$:= 2^4 + 2^7 + 3^3 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 24 + 27 + 33 + 34 + 42 + 52 + 52 + 52 + 52$$

$$371 := 3^5 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 \qquad = 35 + 42 + 42 + 42 + 42 + 42 + 42 + 42 + 42$$

$$373 := 2^2 + 2^3 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 22 + 23 + 34 + 42 + 43 + 52 + 52 + 52 + 53$$

$$:= 2^4 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 5^3 + 5^3 \qquad = 24 + 33 + 42 + 42 + 42 + 42 + 42 + 53 + 53$$

$$:= 2^5 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 + 5^3 \qquad = 25 + 32 + 32 + 42 + 42 + 42 + 52 + 53 + 53$$

$$:= 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^3 \qquad = 32 + 33 + 33 + 42 + 42 + 43 + 43 + 52 + 53$$

$$375 := 2^2 + 2^6 + 3^3 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 22 + 26 + 33 + 42 + 43 + 52 + 52 + 52 + 53$$

$$:= 2^3 + 2^5 + 4^2 + 4^2 + 4^3 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 23 + 25 + 42 + 42 + 43 + 43 + 52 + 52 + 53$$

$$:= 2^3 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 + 5^3 \qquad = 23 + 27 + 42 + 42 + 42 + 42 + 52 + 52 + 53$$

$$:= 2^6 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 5^2 + 5^3 \qquad = 26 + 34 + 42 + 42 + 42 + 42 + 42 + 52 + 53$$

$$377 := 2^3 + 2^4 + 2^6 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 23 + 24 + 26 + 43 + 52 + 52 + 52 + 52 + 53$$

$$:= 2^5 + 2^5 + 3^4 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 25 + 25 + 34 + 42 + 42 + 52 + 52 + 52 + 53$$

$$381 := 2^6 + 2^6 + 2^6 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 26 + 26 + 26 + 43 + 52 + 52 + 52 + 52 + 52$$

$$384 := 2^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 + 5^2 + 5^2 + 5^3 \qquad = 24 + 34 + 42 + 42 + 42 + 43 + 52 + 52 + 53$$

$$:= 3^2 + 3^3 + 3^4 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 \qquad = 32 + 33 + 34 + 43 + 43 + 43 + 52 + 52 + 52$$

$$388 := 2^5 + 2^6 + 4^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 25 + 26 + 43 + 43 + 43 + 52 + 52 + 52 + 52$$

$$:= 2^6 + 2^7 + 4^2 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 26 + 27 + 42 + 42 + 43 + 52 + 52 + 52 + 52$$

$$391 := 3^2 + 3^5 + 4^2 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 \qquad = 32 + 35 + 42 + 42 + 42 + 42 + 52 + 52 + 52$$

$$393 := 2^2 + 2^5 + 4^2 + 4^2 + 5^2 + 5^2 + 5^2 + 5^3 + 5^3 \qquad = 22 + 25 + 42 + 42 + 52 + 52 + 52 + 53 + 53$$
$$:= 2^3 + 2^3 + 3^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 + 5^3 \qquad = 23 + 23 + 33 + 52 + 52 + 52 + 52 + 53 + 53$$
$$:= 2^4 + 3^2 + 3^3 + 4^2 + 5^2 + 5^2 + 5^2 + 5^3 + 5^3 \qquad = 24 + 32 + 33 + 42 + 52 + 52 + 52 + 53 + 53$$
$$:= 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 4^3 + 5^2 \qquad = 42 + 42 + 42 + 43 + 43 + 43 + 43 + 43 + 52$$

$$395 := 2^3 + 2^7 + 3^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 23 + 27 + 32 + 52 + 52 + 52 + 52 + 52 + 53$$
$$:= 2^6 + 3^2 + 3^4 + 4^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 26 + 32 + 34 + 42 + 52 + 52 + 52 + 52 + 53$$
$$:= 3^3 + 3^4 + 3^4 + 3^4 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 33 + 34 + 34 + 34 + 52 + 52 + 52 + 52 + 52$$

$$397 := 2^4 + 2^7 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 24 + 27 + 43 + 43 + 52 + 52 + 52 + 52 + 52$$
$$402 := 3^3 + 3^3 + 4^2 + 4^2 + 4^2 + 5^2 + 5^2 + 5^3 + 5^3 \qquad = 33 + 33 + 42 + 42 + 42 + 52 + 52 + 53 + 53$$
$$411 := 3^2 + 3^2 + 3^5 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 32 + 32 + 35 + 52 + 52 + 52 + 52 + 52 + 52$$
$$413 := 3^3 + 3^4 + 4^2 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 33 + 34 + 42 + 43 + 52 + 52 + 52 + 52 + 53$$
$$420 := 4^2 + 4^2 + 4^2 + 4^2 + 4^4 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 42 + 42 + 42 + 42 + 44 + 52 + 52 + 52 + 52$$
$$440 := 3^2 + 4^4 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 \qquad = 32 + 44 + 52 + 52 + 52 + 52 + 52 + 52 + 52$$
$$442 := 4^3 + 4^3 + 4^3 + 5^2 + 5^2 + 5^2 + 5^2 + 5^2 + 5^3 \qquad = 43 + 43 + 43 + 52 + 52 + 52 + 52 + 52 + 53$$

7.6 Ten Terms Expressions

This section deals with ten terms equality expressions, where we have considered only positive expressions with both powers and bases bigger than one.

$$236 := 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 2^6 = 22 + 22 + 22 + 23 + 23 + 23 + 23 + 26 + 26 + 26$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^7 = 22 + 22 + 22 + 23 + 23 + 24 + 24 + 24 + 25 + 27$$

$$240 := 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 = 22 + 22 + 23 + 24 + 24 + 24 + 24 + 25 + 26 + 26$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 2^6 = 23 + 23 + 23 + 23 + 23 + 23 + 25 + 25 + 26 + 26$$

$$241 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 2^6 + 3^4 = 22 + 22 + 22 + 22 + 22 + 22 + 23 + 26 + 26 + 34$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 2^7 + 3^2 = 22 + 22 + 22 + 22 + 22 + 22 + 24 + 26 + 27 + 32$$

$$243 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^6 + 2^6 + 2^6 + 3^3 = 22 + 22 + 22 + 22 + 22 + 22 + 26 + 26 + 26 + 33$$
$$244 := 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 = 22 + 24 + 24 + 24 + 25 + 25 + 25 + 25 + 25 + 25$$

$$245 := 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 3^4 = 22 + 22 + 22 + 23 + 23 + 23 + 25 + 25 + 26 + 34$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^7 + 3^2 = 22 + 22 + 22 + 23 + 23 + 24 + 25 + 25 + 27 + 32$$

$247 := 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 3^3 = 22 + 22 + 22 + 23 + 23 + 25 + 25 + 26 + 26 + 33$
$\quad := 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^3 = 22 + 23 + 23 + 23 + 24 + 24 + 24 + 24 + 27 + 33$

$249 := 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 = 22 + 22 + 23 + 24 + 24 + 25 + 25 + 26 + 26 + 32$
$\quad := 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^4 = 22 + 22 + 24 + 24 + 24 + 24 + 25 + 25 + 25 + 34$
$\quad := 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 3^4 = 23 + 23 + 23 + 23 + 23 + 25 + 25 + 25 + 25 + 34$
$\quad := 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^4 = 23 + 23 + 23 + 24 + 24 + 24 + 24 + 24 + 26 + 34$
$\quad := 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 = 23 + 23 + 24 + 24 + 24 + 24 + 24 + 24 + 27 + 32$

$250 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 3^4 + 3^4 = 22 + 22 + 22 + 22 + 22 + 22 + 25 + 25 + 34 + 34$

$251 := 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 = 23 + 23 + 23 + 23 + 25 + 25 + 25 + 25 + 26 + 33$
$\quad := 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 = 23 + 23 + 24 + 24 + 24 + 24 + 24 + 26 + 26 + 33$

$252 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 2^7 + 4^2 = 22 + 22 + 22 + 22 + 22 + 23 + 24 + 26 + 27 + 42$
$\quad := 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 4^3 = 22 + 22 + 22 + 23 + 23 + 23 + 23 + 24 + 27 + 43$

$253 := 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 = 22 + 24 + 25 + 25 + 25 + 25 + 25 + 25 + 25 + 32$

$254 := 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^4 + 3^4 = 22 + 22 + 22 + 24 + 24 + 24 + 24 + 24 + 34 + 34$
$\quad := 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^7 + 3^3 + 3^3 = 22 + 22 + 23 + 23 + 23 + 23 + 25 + 27 + 33 + 33$
$\quad := 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 3^4 + 3^4 = 22 + 23 + 23 + 23 + 23 + 23 + 24 + 25 + 34 + 34$
$\quad := 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 2^7 + 3^2 + 3^2 = 22 + 23 + 23 + 23 + 23 + 23 + 26 + 27 + 32 + 32$

$256 := 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 2^6 + 2^6 + 4^2 = 22 + 22 + 22 + 22 + 24 + 24 + 26 + 26 + 26 + 42$
$\quad := 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 4^3 = 22 + 22 + 22 + 22 + 24 + 25 + 25 + 25 + 26 + 43$
$\quad := 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 + 3^4 = 22 + 22 + 22 + 23 + 25 + 25 + 25 + 25 + 33 + 34$
$\quad := 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 2^6 + 4^3 = 22 + 22 + 23 + 23 + 23 + 24 + 24 + 26 + 26 + 43$
$\quad := 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^7 + 4^2 = 22 + 22 + 23 + 23 + 23 + 24 + 25 + 25 + 27 + 42$
$\quad := 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 3^3 + 3^4 = 22 + 23 + 23 + 23 + 23 + 24 + 25 + 26 + 33 + 34$
$\quad := 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^3 = 22 + 23 + 23 + 23 + 24 + 24 + 25 + 27 + 32 + 33$

$258 := 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 = 22 + 22 + 22 + 25 + 25 + 25 + 25 + 26 + 33 + 33$
$\quad := 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 = 22 + 22 + 23 + 25 + 25 + 25 + 26 + 26 + 32 + 32$
$\quad := 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 = 22 + 22 + 24 + 24 + 25 + 25 + 25 + 25 + 32 + 34$
$\quad := 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 = 22 + 23 + 23 + 23 + 24 + 25 + 26 + 26 + 33 + 33$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 = 23 + 23 + 23 + 23 + 24 + 26 + 26 + 26 + 32 + 32$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^4 = 23 + 23 + 23 + 24 + 24 + 24 + 25 + 26 + 32 + 34$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 = 23 + 23 + 24 + 24 + 24 + 24 + 25 + 27 + 32 + 32$$

$$\mathbf{259} := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^7 + 3^3 + 4^3 = 22 + 22 + 22 + 22 + 22 + 22 + 24 + 27 + 33 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^7 + 3^2 + 3^2 + 3^4 = 22 + 22 + 22 + 22 + 23 + 23 + 27 + 32 + 32 + 34$$

$$\mathbf{260} := 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 4^2 = 22 + 23 + 23 + 24 + 24 + 25 + 25 + 26 + 26 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 4^3 = 22 + 23 + 23 + 24 + 25 + 25 + 25 + 25 + 25 + 43$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 4^3 = 22 + 24 + 24 + 24 + 24 + 24 + 24 + 25 + 26 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 = 23 + 23 + 24 + 24 + 24 + 25 + 26 + 26 + 32 + 33$$
$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 3^3 + 3^4 = 23 + 24 + 24 + 24 + 24 + 24 + 25 + 25 + 33 + 34$$

$$\mathbf{261} := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 3^4 + 4^3 = 22 + 22 + 22 + 22 + 22 + 24 + 24 + 26 + 34 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^7 + 3^3 + 3^3 + 3^3 = 22 + 22 + 22 + 22 + 22 + 25 + 27 + 33 + 33 + 33$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 3^3 + 3^4 + 3^4 = 22 + 22 + 22 + 22 + 23 + 24 + 25 + 33 + 34 + 34$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 2^7 + 3^2 + 3^2 + 3^3 = 22 + 22 + 22 + 22 + 23 + 26 + 27 + 32 + 32 + 33$$

$$\mathbf{262} := 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 = 23 + 23 + 25 + 25 + 25 + 25 + 25 + 25 + 33 + 33$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 = 24 + 24 + 24 + 24 + 24 + 25 + 25 + 26 + 33 + 33$$

$$\mathbf{263} := 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^6 + 3^3 + 3^3 + 3^4 = 22 + 22 + 22 + 22 + 24 + 25 + 26 + 33 + 33 + 34$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^4 = 22 + 22 + 22 + 23 + 24 + 26 + 26 + 32 + 32 + 34$$
$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^4 + 3^4 = 22 + 22 + 22 + 24 + 24 + 24 + 25 + 32 + 34 + 34$$
$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 = 22 + 22 + 22 + 24 + 24 + 26 + 27 + 32 + 32 + 32$$

$$\mathbf{264} := 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 4^2 = 23 + 24 + 25 + 25 + 25 + 25 + 25 + 25 + 25 + 42$$

$$\mathbf{265} := 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 2^6 + 2^6 + 3^2 + 4^2 = 22 + 22 + 22 + 22 + 25 + 26 + 26 + 26 + 32 + 42$$
$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 = 22 + 22 + 22 + 24 + 26 + 26 + 26 + 32 + 32 + 33$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 3^2 + 4^3 = 22 + 22 + 23 + 23 + 23 + 25 + 26 + 26 + 32 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 3^4 + 4^3 = 22 + 22 + 23 + 23 + 24 + 24 + 25 + 25 + 34 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 = 22 + 23 + 23 + 23 + 25 + 25 + 27 + 32 + 32 + 33$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 2^7 + 3^2 + 4^2 = 23 + 23 + 23 + 23 + 23 + 23 + 26 + 27 + 32 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 = 23 + 23 + 23 + 23 + 23 + 24 + 27 + 33 + 33 + 33$$

$$\mathbf{267} := 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 4^3 = 22 + 22 + 23 + 24 + 24 + 25 + 25 + 26 + 33 + 43$$

$$:= 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^4 = 22 + 22 + 25 + 25 + 25 + 25 + 25 + 32 + 32 + 34$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 = 22 + 23 + 23 + 24 + 25 + 25 + 25 + 33 + 33 + 34$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 3^3 + 4^2 = 23 + 23 + 23 + 23 + 24 + 24 + 25 + 27 + 33 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 = 23 + 23 + 23 + 24 + 25 + 25 + 26 + 32 + 32 + 34$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 = 23 + 23 + 24 + 24 + 25 + 25 + 27 + 32 + 32 + 32$$

$$269 := 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 = 22 + 23 + 23 + 25 + 25 + 25 + 26 + 26 + 32 + 42$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 = 22 + 23 + 24 + 24 + 25 + 25 + 25 + 25 + 34 + 42$$
$$:= 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 = 22 + 23 + 24 + 25 + 25 + 25 + 26 + 33 + 33 + 33$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 4^3 = 22 + 24 + 24 + 24 + 24 + 25 + 25 + 26 + 32 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 = 23 + 23 + 24 + 25 + 25 + 26 + 26 + 32 + 32 + 33$$
$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 3^4 = 23 + 24 + 24 + 24 + 25 + 25 + 25 + 32 + 33 + 34$$

$$270 := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 3^2 + 3^4 + 4^3 = 22 + 22 + 22 + 22 + 22 + 25 + 26 + 32 + 34 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 3^4 + 4^2 = 22 + 22 + 22 + 23 + 23 + 23 + 27 + 32 + 34 + 42$$

$$271 := 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 = 22 + 24 + 24 + 25 + 25 + 25 + 25 + 26 + 33 + 42$$
$$:= 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 = 24 + 24 + 24 + 25 + 25 + 25 + 26 + 32 + 33 + 33$$

$$272 := 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^7 + 4^2 + 4^3 = 22 + 22 + 22 + 22 + 24 + 24 + 24 + 27 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^6 + 2^7 + 3^2 + 3^3 + 4^2 = 22 + 22 + 22 + 23 + 23 + 26 + 27 + 32 + 33 + 42$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 + 3^3 = 22 + 22 + 22 + 23 + 24 + 27 + 33 + 33 + 33 + 33$$
$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^4 + 3^4 = 22 + 22 + 22 + 24 + 25 + 25 + 32 + 32 + 34 + 34$$
$$:= 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 = 22 + 22 + 22 + 25 + 26 + 27 + 32 + 32 + 32 + 32$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 3^3 + 3^3 + 3^4 + 3^4 = 22 + 22 + 23 + 23 + 24 + 24 + 33 + 33 + 34 + 34$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 3^3 + 4^3 = 22 + 23 + 23 + 23 + 23 + 23 + 27 + 32 + 33 + 43$$

$$274 := 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 = 22 + 22 + 22 + 24 + 24 + 25 + 27 + 33 + 33 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^4 + 4^2 = 22 + 22 + 23 + 23 + 24 + 26 + 26 + 32 + 34 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 4^3 = 22 + 22 + 23 + 23 + 25 + 25 + 25 + 32 + 34 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 3^4 + 3^4 + 4^2 = 22 + 22 + 23 + 24 + 24 + 24 + 25 + 34 + 34 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 = 22 + 22 + 23 + 24 + 24 + 26 + 27 + 32 + 32 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 = 22 + 22 + 23 + 24 + 24 + 26 + 33 + 33 + 33 + 34$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 = 22 + 22 + 24 + 24 + 24 + 27 + 32 + 33 + 33 + 33$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 3^4 = 22 + 23 + 24 + 24 + 24 + 24 + 32 + 33 + 34 + 34$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 3^2 + 3^4 + 4^3 = 23 + 23 + 23 + 23 + 23 + 24 + 26 + 32 + 34 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 4^3 = 23 + 23 + 23 + 23 + 24 + 24 + 27 + 32 + 32 + 43$$

$$276 := 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 2^6 + 4^2 + 4^2 = 22 + 22 + 22 + 23 + 25 + 26 + 26 + 26 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 = 22 + 22 + 23 + 24 + 26 + 26 + 26 + 32 + 33 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 4^3 = 22 + 22 + 23 + 25 + 25 + 25 + 26 + 32 + 33 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 = 22 + 22 + 24 + 24 + 24 + 25 + 26 + 33 + 34 + 42$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 = 22 + 22 + 24 + 24 + 26 + 26 + 33 + 33 + 33 + 33$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 2^6 + 4^2 + 4^3 = 22 + 23 + 23 + 23 + 23 + 25 + 26 + 26 + 42 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 4^3 + 4^3 = 22 + 23 + 23 + 24 + 24 + 24 + 24 + 26 + 43 + 43$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 = 22 + 24 + 24 + 24 + 24 + 26 + 32 + 33 + 33 + 34$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 4^3 = 23 + 23 + 23 + 23 + 24 + 26 + 26 + 32 + 33 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 = 23 + 23 + 23 + 23 + 25 + 25 + 27 + 32 + 33 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 3^3 + 3^4 + 4^3 = 23 + 23 + 23 + 24 + 24 + 24 + 25 + 33 + 34 + 43$$
$$:= 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 = 23 + 23 + 25 + 25 + 25 + 27 + 32 + 32 + 32 + 32$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^2 + 3^2 + 3^4 + 3^4 = 24 + 24 + 24 + 24 + 24 + 24 + 32 + 32 + 34 + 34$$

$$278 := 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^4 + 4^2 = 22 + 23 + 25 + 25 + 25 + 25 + 25 + 32 + 34 + 42$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 4^2 = 22 + 24 + 24 + 24 + 26 + 26 + 26 + 32 + 32 + 42$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 4^3 = 22 + 24 + 24 + 25 + 25 + 25 + 26 + 32 + 32 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 3^3 + 4^3 = 23 + 23 + 24 + 24 + 24 + 25 + 26 + 33 + 33 + 43$$
$$:= 2^3 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 = 23 + 24 + 25 + 25 + 25 + 25 + 32 + 32 + 33 + 34$$

$$279 := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^7 + 3^2 + 3^3 + 3^3 + 4^3 = 22 + 22 + 22 + 22 + 23 + 27 + 32 + 33 + 33 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 3^2 + 3^4 + 3^4 + 4^3 = 22 + 22 + 22 + 23 + 23 + 24 + 32 + 34 + 34 + 43$$

$$280 := 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 4^2 = 22 + 25 + 25 + 25 + 25 + 25 + 26 + 32 + 33 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 = 23 + 23 + 23 + 25 + 25 + 25 + 26 + 26 + 42 + 42$$
$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 4^2 + 4^3 = 23 + 24 + 24 + 24 + 24 + 25 + 25 + 26 + 42 + 43$$
$$:= 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 = 24 + 25 + 25 + 25 + 25 + 26 + 32 + 32 + 33 + 33$$

$$281 := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 3^4 + 4^2 + 4^3 = 22 + 22 + 22 + 22 + 23 + 25 + 26 + 34 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^5 + 2^7 + 3^2 + 4^2 + 4^3 = 22 + 22 + 22 + 22 + 24 + 25 + 27 + 32 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 3^2 + 3^3 + 3^4 + 4^3 = 22 + 22 + 22 + 23 + 24 + 26 + 32 + 33 + 34 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 4^3 = 22 + 22 + 22 + 24 + 24 + 27 + 32 + 32 + 33 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 3^4 + 4^3 + 4^3 = 22 + 22 + 23 + 23 + 23 + 23 + 25 + 34 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 3^4 + 4^2 + 4^2 = 22 + 22 + 23 + 23 + 23 + 23 + 27 + 34 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^5 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 = 22 + 22 + 23 + 23 + 25 + 32 + 33 + 33 + 34 + 34$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 = 22 + 23 + 23 + 23 + 26 + 32 + 32 + 32 + 34 + 34$$

$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 = 22 + 23 + 23 + 24 + 27 + 32 + 32 + 32 + 32 + 34$$

$$\mathbf{283} := 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 2^6 + 2^6 + 3^3 + 4^2 + 4^3 = 22 + 22 + 22 + 22 + 25 + 26 + 26 + 33 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 = 22 + 22 + 22 + 24 + 26 + 26 + 32 + 33 + 33 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 3^3 + 4^2 = 22 + 22 + 22 + 25 + 25 + 27 + 32 + 33 + 33 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 3^3 + 4^3 + 4^3 = 22 + 22 + 23 + 23 + 23 + 25 + 26 + 33 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^6 + 2^7 + 3^3 + 4^2 + 4^2 = 22 + 22 + 23 + 23 + 23 + 26 + 27 + 33 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 3^2 + 3^4 + 3^4 + 4^2 = 22 + 22 + 23 + 24 + 25 + 25 + 32 + 34 + 34 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 = 22 + 22 + 23 + 25 + 26 + 27 + 32 + 32 + 32 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 = 22 + 22 + 23 + 25 + 26 + 32 + 33 + 33 + 33 + 34$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 4^3 = 22 + 22 + 24 + 24 + 24 + 26 + 32 + 32 + 34 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 = 22 + 22 + 24 + 25 + 27 + 32 + 32 + 33 + 33 + 33$$
$$:= 2^2 + 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 = 22 + 23 + 23 + 26 + 26 + 32 + 32 + 32 + 33 + 34$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 = 22 + 23 + 24 + 24 + 25 + 32 + 32 + 33 + 34 + 34$$
$$:= 2^2 + 2^3 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 = 22 + 23 + 24 + 26 + 27 + 32 + 32 + 32 + 32 + 33$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^7 + 3^3 + 4^2 + 4^3 = 23 + 23 + 23 + 23 + 23 + 23 + 27 + 33 + 42 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 4^3 = 23 + 23 + 23 + 23 + 25 + 27 + 32 + 32 + 32 + 43$$

$$\mathbf{285} := 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 2^5 + 2^6 + 3^4 + 4^2 + 4^2 = 22 + 22 + 22 + 25 + 25 + 25 + 26 + 34 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 3^4 + 4^2 = 22 + 22 + 24 + 25 + 25 + 26 + 32 + 33 + 34 + 42$$
$$:= 2^2 + 2^2 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 = 22 + 22 + 25 + 26 + 26 + 32 + 33 + 33 + 33 + 33$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 = 22 + 23 + 23 + 23 + 24 + 26 + 26 + 34 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 4^3 = 22 + 23 + 23 + 23 + 25 + 25 + 25 + 34 + 42 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 4^3 + 4^3 = 22 + 23 + 23 + 24 + 24 + 25 + 26 + 32 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 2^7 + 3^2 + 4^2 + 4^2 = 22 + 23 + 23 + 24 + 24 + 26 + 27 + 32 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 + 4^2 = 22 + 23 + 24 + 24 + 24 + 27 + 33 + 33 + 33 + 42$$
$$:= 2^2 + 2^3 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 = 22 + 23 + 26 + 26 + 26 + 32 + 32 + 32 + 33 + 33$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 = 22 + 24 + 24 + 25 + 26 + 32 + 32 + 33 + 33 + 34$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^2 + 3^3 + 3^4 + 4^3 = 23 + 23 + 23 + 24 + 25 + 25 + 32 + 33 + 34 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 3^3 + 3^4 + 3^4 + 4^2 = 23 + 23 + 24 + 24 + 24 + 24 + 33 + 34 + 34 + 42$$
$$:= 2^3 + 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 = 23 + 24 + 24 + 26 + 26 + 32 + 32 + 32 + 32 + 34$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 = 24 + 24 + 24 + 24 + 25 + 32 + 32 + 32 + 34 + 34$$
$$:= 2^4 + 2^4 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 = 24 + 24 + 24 + 26 + 27 + 32 + 32 + 32 + 32 + 32$$

$$\mathbf{286} := 2^2 + 2^2 + 2^2 + 2^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 = 22 + 22 + 22 + 22 + 32 + 32 + 32 + 34 + 34 + 34$$

$$\mathbf{287} := 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 2^6 + 2^6 + 3^3 + 4^2 + 4^2 = 22 + 23 + 23 + 24 + 26 + 26 + 26 + 33 + 42 + 42$$

$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^3 = 22 + 23 + 23 + 25 + 25 + 25 + 26 + 33 + 42 + 43$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 3^3 + 4^3 + 4^3 = 22 + 24 + 24 + 24 + 24 + 25 + 25 + 33 + 43 + 43$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 = 22 + 24 + 24 + 24 + 24 + 25 + 27 + 33 + 42 + 42$$
$$:= 2^2 + 2^4 + 2^5 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 4^2 = 22 + 24 + 25 + 26 + 26 + 26 + 32 + 32 + 32 + 42$$
$$:= 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 4^3 = 22 + 25 + 25 + 25 + 25 + 26 + 32 + 32 + 32 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 4^3 = 23 + 23 + 24 + 25 + 25 + 26 + 32 + 33 + 33 + 43$$
$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 3^4 + 4^2 = 23 + 24 + 24 + 24 + 24 + 26 + 33 + 33 + 34 + 42$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 3^3 + 4^2 = 24 + 24 + 24 + 24 + 24 + 27 + 32 + 33 + 33 + 42$$
$$:= 2^4 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 = 24 + 24 + 26 + 26 + 26 + 32 + 32 + 32 + 32 + 33$$

$$\mathbf{288} := 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^5 + 3^3 + 3^4 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 22 + 25 + 33 + 34 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^2 + 2^7 + 3^3 + 3^4 + 4^2 + 4^2 = 22 + 22 + 22 + 22 + 22 + 27 + 33 + 34 + 42 + 42$$

$$\mathbf{289} := 2^3 + 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 4^2 = 23 + 23 + 25 + 25 + 25 + 25 + 25 + 34 + 42 + 42$$
$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 4^2 + 4^2 = 23 + 24 + 24 + 24 + 26 + 26 + 26 + 32 + 42 + 42$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 4^2 + 4^3 = 23 + 24 + 24 + 25 + 25 + 25 + 26 + 32 + 42 + 43$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 2^6 + 3^4 + 4^2 + 4^2 = 24 + 24 + 24 + 24 + 24 + 25 + 26 + 34 + 42 + 42$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 = 24 + 24 + 24 + 24 + 26 + 26 + 33 + 33 + 33 + 42$$
$$:= 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 4^3 = 24 + 24 + 24 + 25 + 25 + 25 + 33 + 33 + 33 + 43$$

$$\mathbf{290} := 2^2 + 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 22 + 22 + 22 + 24 + 26 + 34 + 34 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^2 + 2^2 + 2^6 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 26 + 26 + 32 + 32 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 4^2 + 4^3 = 22 + 22 + 22 + 23 + 23 + 27 + 33 + 33 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 4^3 = 22 + 22 + 22 + 25 + 27 + 32 + 32 + 32 + 33 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^3 + 2^4 + 3^4 + 3^4 + 4^2 + 4^3 = 22 + 22 + 23 + 23 + 23 + 24 + 34 + 34 + 42 + 43$$

$$\mathbf{291} := 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^2 = 23 + 25 + 25 + 25 + 25 + 25 + 26 + 33 + 42 + 42$$

$$\mathbf{292} := 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 23 + 24 + 25 + 25 + 43 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 2^5 + 2^7 + 4^2 + 4^2 + 4^3 = 22 + 22 + 22 + 23 + 24 + 25 + 27 + 42 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 2^4 + 2^6 + 3^3 + 3^4 + 4^2 + 4^3 = 22 + 22 + 23 + 23 + 24 + 26 + 33 + 34 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^3 + 4^2 + 4^3 = 22 + 22 + 23 + 24 + 24 + 27 + 32 + 33 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 4^3 = 22 + 22 + 24 + 25 + 26 + 32 + 32 + 32 + 34 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^5 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 = 22 + 23 + 23 + 23 + 25 + 33 + 33 + 34 + 34 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 = 22 + 23 + 23 + 27 + 32 + 33 + 33 + 33 + 33 + 33$$
$$:= 2^2 + 2^3 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 = 22 + 23 + 25 + 25 + 32 + 32 + 32 + 33 + 34 + 34$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 3^3 + 3^4 + 4^3 + 4^3 = 23 + 23 + 23 + 23 + 23 + 24 + 33 + 34 + 43 + 43$$

$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 = 23 + 23 + 23 + 23 + 26 + 32 + 32 + 34 + 34 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 = 23 + 23 + 23 + 24 + 27 + 32 + 32 + 32 + 34 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 = 23 + 23 + 23 + 24 + 32 + 33 + 33 + 33 + 34 + 34$$

$$294 := 2^2 + 2^2 + 2^3 + 2^4 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 + 4^3 = 22 + 22 + 23 + 24 + 26 + 26 + 33 + 33 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 4^3 + 4^3 = 22 + 22 + 23 + 25 + 25 + 25 + 33 + 33 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 2^7 + 3^3 + 3^3 + 4^2 + 4^2 = 22 + 22 + 23 + 25 + 25 + 27 + 33 + 33 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 23 + 23 + 24 + 25 + 25 + 34 + 34 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 23 + 23 + 25 + 25 + 26 + 32 + 32 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 = 22 + 23 + 23 + 25 + 26 + 27 + 32 + 32 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 = 22 + 23 + 23 + 25 + 26 + 33 + 33 + 33 + 34 + 42$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 3^2 + 3^4 + 4^2 + 4^3 = 22 + 23 + 24 + 24 + 24 + 26 + 32 + 34 + 42 + 43$$
$$:= 2^2 + 2^3 + 2^4 + 2^5 + 2^7 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 = 22 + 23 + 24 + 25 + 27 + 32 + 33 + 33 + 33 + 42$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 4^2 + 4^3 = 22 + 24 + 24 + 24 + 24 + 27 + 32 + 32 + 42 + 43$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 24 + 24 + 24 + 24 + 33 + 33 + 33 + 34 + 43$$
$$:= 2^2 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 = 22 + 25 + 25 + 26 + 32 + 32 + 32 + 33 + 33 + 34$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^4 + 2^6 + 3^3 + 3^3 + 4^3 + 4^3 = 23 + 23 + 23 + 23 + 24 + 26 + 33 + 33 + 43 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 = 23 + 23 + 23 + 26 + 26 + 32 + 32 + 33 + 34 + 42$$
$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 23 + 23 + 24 + 24 + 25 + 32 + 33 + 34 + 34 + 42$$
$$:= 2^3 + 2^3 + 2^4 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 4^2 = 23 + 23 + 24 + 26 + 27 + 32 + 32 + 32 + 33 + 42$$
$$:= 2^3 + 2^3 + 2^4 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 23 + 23 + 24 + 26 + 32 + 33 + 33 + 33 + 33 + 34$$
$$:= 2^3 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 = 23 + 24 + 24 + 27 + 32 + 32 + 33 + 33 + 33 + 33$$
$$:= 2^3 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 = 23 + 25 + 26 + 26 + 32 + 32 + 32 + 32 + 32 + 34$$
$$:= 2^4 + 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 = 24 + 24 + 25 + 25 + 32 + 32 + 32 + 32 + 34 + 34$$
$$:= 2^4 + 2^5 + 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 = 24 + 25 + 26 + 27 + 32 + 32 + 32 + 32 + 32 + 32$$

$$296 := 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^3 = 22 + 22 + 24 + 24 + 25 + 26 + 26 + 42 + 42 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 4^2 + 4^3 + 4^3 = 22 + 22 + 24 + 25 + 25 + 25 + 25 + 42 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 2^5 + 2^7 + 4^2 + 4^2 + 4^2 = 22 + 22 + 24 + 25 + 25 + 25 + 27 + 42 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^4 + 2^5 + 2^5 + 2^6 + 3^3 + 3^4 + 4^2 + 4^2 = 22 + 23 + 24 + 25 + 25 + 26 + 33 + 34 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 = 22 + 23 + 25 + 26 + 26 + 33 + 33 + 33 + 33 + 42$$
$$:= 2^2 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 + 4^3 = 22 + 24 + 24 + 24 + 26 + 26 + 32 + 33 + 42 + 43$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 4^3 + 4^3 = 22 + 24 + 24 + 25 + 25 + 25 + 32 + 33 + 43 + 43$$
$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 = 22 + 24 + 24 + 25 + 25 + 27 + 32 + 33 + 42 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 4^2 + 4^3 + 4^3 = 23 + 23 + 23 + 24 + 24 + 25 + 26 + 42 + 43 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 = 23 + 23 + 23 + 24 + 24 + 26 + 27 + 42 + 42 + 42$$

$$:= 2^3 + 2^3 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 = 23 + 23 + 26 + 26 + 26 + 32 + 32 + 33 + 33 + 42$$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 4^3 + 4^3 + 4^3 = 23 + 24 + 24 + 24 + 24 + 24 + 24 + 43 + 43 + 43$$

$$:= 2^3 + 2^4 + 2^4 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 = 23 + 24 + 24 + 25 + 26 + 32 + 33 + 33 + 34 + 42$$

$$:= 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 = 23 + 24 + 26 + 26 + 32 + 33 + 33 + 33 + 33 + 33$$

$$:= 2^4 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 = 24 + 24 + 24 + 25 + 27 + 32 + 32 + 33 + 33 + 42$$

$$:= 2^4 + 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 24 + 24 + 24 + 25 + 33 + 33 + 33 + 33 + 33 + 34$$

$$:= 2^5 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 = 25 + 26 + 26 + 26 + 32 + 32 + 32 + 32 + 32 + 33$$

$$297 := 2^2 + 2^2 + 2^2 + 2^3 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 + 4^2 = 22 + 22 + 22 + 23 + 32 + 32 + 34 + 34 + 34 + 42$$

$$298 := 2^2 + 2^4 + 2^5 + 2^5 + 2^6 + 2^6 + 3^3 + 3^3 + 4^2 + 4^2 = 22 + 24 + 25 + 25 + 26 + 26 + 33 + 33 + 42 + 42$$

$$:= 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 4^2 + 4^3 = 22 + 25 + 25 + 25 + 25 + 25 + 33 + 33 + 42 + 43$$

$$:= 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 2^6 + 3^2 + 3^2 + 4^2 + 4^2 = 23 + 24 + 25 + 26 + 26 + 26 + 32 + 32 + 42 + 42$$

$$:= 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 4^3 = 23 + 25 + 25 + 25 + 25 + 26 + 32 + 32 + 42 + 43$$

$$:= 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 3^2 + 3^4 + 4^2 + 4^2 = 24 + 24 + 24 + 25 + 25 + 26 + 32 + 34 + 42 + 42$$

$$:= 2^4 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 = 24 + 24 + 25 + 26 + 26 + 32 + 33 + 33 + 33 + 42$$

$$:= 2^4 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 = 24 + 25 + 25 + 25 + 25 + 32 + 33 + 33 + 33 + 43$$

$$299 := 2^2 + 2^2 + 2^2 + 2^3 + 2^4 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 = 22 + 22 + 22 + 23 + 24 + 33 + 33 + 34 + 43 + 43$$

$$:= 2^2 + 2^2 + 2^2 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 22 + 22 + 22 + 26 + 32 + 32 + 33 + 34 + 34 + 42$$

$$:= 2^2 + 2^3 + 2^3 + 2^3 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^3 = 22 + 23 + 23 + 23 + 32 + 32 + 33 + 34 + 34 + 43$$

$$301 := 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 = 22 + 22 + 22 + 23 + 26 + 26 + 32 + 42 + 43 + 43$$

$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^5 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 22 + 22 + 24 + 24 + 25 + 34 + 42 + 43 + 43$$

$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^4 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 22 + 22 + 24 + 24 + 27 + 34 + 42 + 42 + 42$$

$$:= 2^2 + 2^2 + 2^2 + 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 22 + 22 + 22 + 24 + 26 + 33 + 33 + 33 + 43 + 43$$

$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 = 22 + 22 + 23 + 25 + 27 + 32 + 32 + 33 + 42 + 43$$

$$:= 2^2 + 2^2 + 2^3 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 22 + 23 + 25 + 33 + 33 + 33 + 33 + 34 + 43$$

$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 4^3 + 4^3 = 22 + 22 + 24 + 24 + 24 + 32 + 33 + 34 + 43 + 43$$

$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 4^3 + 4^3 + 4^3 = 22 + 23 + 23 + 23 + 23 + 26 + 32 + 43 + 43 + 43$$

$$:= 2^2 + 2^3 + 2^3 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 23 + 23 + 26 + 32 + 32 + 33 + 33 + 34 + 43$$

$$:= 2^2 + 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 = 22 + 23 + 24 + 27 + 32 + 32 + 32 + 33 + 33 + 43$$

$$:= 2^3 + 2^3 + 2^4 + 2^4 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^3 = 23 + 23 + 24 + 24 + 32 + 32 + 32 + 34 + 34 + 43$$

$$303 := 2^2 + 2^2 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 22 + 22 + 24 + 25 + 25 + 33 + 33 + 34 + 42 + 43$$

$$:= 2^2 + 2^2 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 = 22 + 22 + 25 + 26 + 33 + 33 + 33 + 33 + 33 + 43$$

$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^5 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 23 + 24 + 24 + 25 + 33 + 43 + 43 + 43$$

$$:= 2^2 + 2^3 + 2^3 + 2^4 + 2^4 + 2^7 + 3^3 + 4^2 + 4^2 + 4^3 = 22 + 23 + 23 + 24 + 24 + 27 + 33 + 42 + 42 + 43$$

$$:= 2^2 + 2^3 + 2^4 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 = 22 + 23 + 24 + 25 + 26 + 32 + 32 + 34 + 42 + 43$$

$$:= 2^2 + 2^3 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 = 22 + 23 + 26 + 26 + 32 + 32 + 33 + 33 + 33 + 43$$

$$:= 2^2 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 = 22 + 24 + 24 + 25 + 27 + 32 + 32 + 32 + 42 + 43$$

$$:= 2^2 + 2^4 + 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 24 + 24 + 25 + 32 + 33 + 33 + 33 + 34 + 43$$

$$:= 2^3 + 2^3 + 2^3 + 2^7 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 = 23 + 23 + 23 + 27 + 33 + 33 + 33 + 33 + 33 + 42$$

$$:= 2^3 + 2^3 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 23 + 23 + 25 + 25 + 32 + 32 + 33 + 34 + 34 + 42$$

$$:= 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 23 + 24 + 24 + 26 + 32 + 32 + 32 + 33 + 34 + 43$$

$$:= 2^3 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 = 23 + 25 + 27 + 32 + 32 + 32 + 33 + 33 + 33 + 33$$

$$:= 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 4^3 = 24 + 24 + 24 + 27 + 32 + 32 + 32 + 32 + 33 + 43$$

$$:= 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 = 25 + 25 + 25 + 32 + 32 + 32 + 32 + 32 + 34 + 34$$

$$305 := 2^2 + 2^2 + 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 4^2 + 4^2 + 4^3 = 22 + 22 + 25 + 25 + 26 + 26 + 32 + 42 + 42 + 43$$

$$:= 2^2 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 = 22 + 24 + 25 + 26 + 26 + 32 + 32 + 33 + 42 + 43$$

$$:= 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 4^3 + 4^3 = 22 + 25 + 25 + 25 + 25 + 32 + 32 + 33 + 43 + 43$$

$$:= 2^2 + 2^5 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^3 + 4^2 + 4^2 = 22 + 25 + 25 + 25 + 27 + 32 + 32 + 33 + 42 + 42$$

$$:= 2^2 + 2^5 + 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 = 22 + 25 + 25 + 25 + 33 + 33 + 33 + 33 + 34 + 42$$

$$:= 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 = 23 + 23 + 23 + 25 + 25 + 26 + 32 + 42 + 43 + 43$$

$$:= 2^3 + 2^3 + 2^3 + 2^5 + 2^6 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 = 23 + 23 + 23 + 25 + 26 + 27 + 32 + 42 + 42 + 42$$

$$:= 2^3 + 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 3^4 + 4^2 + 4^2 + 4^3 = 23 + 23 + 24 + 24 + 24 + 26 + 34 + 42 + 42 + 43$$

$$:= 2^3 + 2^3 + 2^4 + 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 23 + 23 + 24 + 25 + 25 + 33 + 33 + 33 + 43 + 43$$

$$:= 2^3 + 2^3 + 2^4 + 2^5 + 2^7 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 = 23 + 23 + 24 + 25 + 27 + 33 + 33 + 33 + 42 + 42$$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 4^3 + 4^3 + 4^3 = 23 + 24 + 24 + 24 + 24 + 25 + 32 + 43 + 43 + 43$$

$$:= 2^3 + 2^4 + 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 4^2 + 4^2 + 4^3 = 23 + 24 + 24 + 24 + 24 + 27 + 32 + 42 + 42 + 43$$

$$:= 2^3 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 = 23 + 25 + 25 + 26 + 32 + 32 + 33 + 33 + 34 + 42$$

$$:= 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 = 24 + 24 + 26 + 26 + 32 + 32 + 32 + 33 + 33 + 43$$

$$:= 2^4 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 = 24 + 25 + 25 + 27 + 32 + 32 + 32 + 33 + 33 + 42$$

$$:= 2^4 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 = 24 + 25 + 25 + 32 + 33 + 33 + 33 + 33 + 33 + 34$$

$$306 := 2^2 + 2^2 + 2^2 + 2^2 + 2^3 + 3^2 + 3^4 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 23 + 32 + 34 + 43 + 43 + 43$$

$$307 := 2^3 + 2^4 + 2^4 + 2^4 + 2^6 + 2^6 + 3^3 + 4^2 + 4^2 + 4^3 = 23 + 24 + 24 + 24 + 26 + 26 + 33 + 42 + 42 + 43$$

$$:= 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^5 + 3^3 + 4^2 + 4^3 + 4^3 = 23 + 24 + 24 + 25 + 25 + 25 + 33 + 42 + 43 + 43$$

$$:= 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 = 23 + 24 + 24 + 25 + 25 + 27 + 33 + 42 + 42 + 42$$

$$:= 2^4 + 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 = 24 + 25 + 25 + 25 + 26 + 32 + 32 + 34 + 42 + 42$$

$$:= 2^5 + 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 = 25 + 25 + 26 + 26 + 32 + 32 + 33 + 33 + 33 + 42$$

$$308 := 2^2 + 2^2 + 2^2 + 2^2 + 2^6 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 26 + 32 + 33 + 43 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^3 + 3^2 + 3^4 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 22 + 23 + 23 + 32 + 34 + 34 + 34 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 22 + 23 + 27 + 32 + 32 + 32 + 32 + 43 + 43$$
$$:= 2^2 + 2^4 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 = 22 + 24 + 32 + 32 + 32 + 32 + 32 + 34 + 34 + 34$$

$$310 := 2^2 + 2^2 + 2^2 + 2^5 + 2^5 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 22 + 22 + 25 + 25 + 32 + 34 + 42 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 2^5 + 2^7 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 22 + 22 + 25 + 27 + 32 + 34 + 42 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^3 + 2^6 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 22 + 23 + 26 + 32 + 33 + 34 + 34 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^4 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 + 4^3 = 22 + 22 + 24 + 25 + 32 + 32 + 33 + 34 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 = 22 + 22 + 24 + 27 + 32 + 32 + 33 + 34 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^4 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 = 22 + 22 + 24 + 33 + 33 + 33 + 33 + 34 + 34 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^3 = 23 + 23 + 23 + 23 + 32 + 33 + 34 + 34 + 42 + 43$$
$$:= 2^3 + 2^3 + 2^5 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^3 = 23 + 23 + 25 + 32 + 32 + 32 + 32 + 34 + 34 + 43$$

$$312 := 2^2 + 2^2 + 2^3 + 2^3 + 2^6 + 2^6 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 22 + 23 + 23 + 26 + 26 + 42 + 42 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 = 22 + 22 + 26 + 26 + 32 + 33 + 33 + 34 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^5 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 23 + 25 + 25 + 32 + 33 + 43 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 = 22 + 23 + 23 + 25 + 27 + 32 + 33 + 42 + 42 + 43$$
$$:= 2^2 + 2^3 + 2^4 + 2^4 + 2^4 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 23 + 24 + 24 + 24 + 33 + 34 + 42 + 43 + 43$$
$$:= 2^2 + 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 24 + 24 + 26 + 32 + 32 + 34 + 34 + 42 + 42$$
$$:= 2^2 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 = 22 + 24 + 26 + 26 + 32 + 32 + 32 + 32 + 43 + 43$$
$$:= 2^2 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 = 22 + 25 + 25 + 27 + 32 + 32 + 32 + 32 + 42 + 43$$
$$:= 2^2 + 2^5 + 2^5 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 = 22 + 25 + 25 + 32 + 32 + 33 + 33 + 33 + 34 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^3 + 2^3 + 2^6 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 23 + 23 + 23 + 23 + 26 + 42 + 43 + 43 + 43$$
$$:= 2^3 + 2^3 + 2^3 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 23 + 23 + 23 + 26 + 32 + 33 + 33 + 34 + 42 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 4^2 + 4^3 = 23 + 23 + 24 + 27 + 32 + 32 + 33 + 33 + 42 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 = 23 + 23 + 24 + 33 + 33 + 33 + 33 + 33 + 34 + 43$$
$$:= 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 4^3 = 23 + 25 + 26 + 32 + 32 + 32 + 32 + 33 + 34 + 43$$
$$:= 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 4^3 = 24 + 25 + 27 + 32 + 32 + 32 + 32 + 32 + 33 + 43$$

$$314 := 2^2 + 2^4 + 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 = 22 + 24 + 24 + 24 + 26 + 33 + 33 + 42 + 43 + 43$$
$$:= 2^3 + 2^3 + 2^4 + 2^5 + 2^6 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 = 23 + 23 + 24 + 25 + 26 + 32 + 34 + 42 + 42 + 43$$
$$:= 2^3 + 2^3 + 2^6 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 = 23 + 23 + 26 + 26 + 32 + 33 + 33 + 33 + 42 + 43$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 = 23 + 24 + 24 + 25 + 25 + 32 + 32 + 43 + 43 + 43$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 = 23 + 24 + 24 + 25 + 27 + 32 + 32 + 42 + 42 + 43$$
$$:= 2^3 + 2^4 + 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 23 + 24 + 24 + 25 + 33 + 33 + 33 + 34 + 42 + 43$$
$$:= 2^3 + 2^4 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 = 23 + 24 + 26 + 33 + 33 + 33 + 33 + 33 + 33 + 43$$

$$:= 2^4 + 2^4 + 2^4 + 2^4 + 2^4 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 = 24 + 24 + 24 + 24 + 24 + 32 + 34 + 42 + 43 + 43$$
$$:= 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 = 25 + 26 + 26 + 32 + 32 + 32 + 32 + 33 + 33 + 43$$

$$\mathbf{316} := 2^2 + 2^3 + 2^5 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 23 + 25 + 25 + 26 + 26 + 42 + 42 + 42 + 43$$
$$:= 2^3 + 2^4 + 2^5 + 2^6 + 2^6 + 3^2 + 3^3 + 4^2 + 4^2 + 4^3 = 23 + 24 + 25 + 26 + 26 + 32 + 33 + 42 + 42 + 43$$
$$:= 2^3 + 2^5 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 = 23 + 25 + 25 + 25 + 25 + 32 + 33 + 42 + 43 + 43$$
$$:= 2^3 + 2^5 + 2^5 + 2^5 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^2 = 23 + 25 + 25 + 25 + 27 + 32 + 33 + 42 + 42 + 42$$
$$:= 2^4 + 2^4 + 2^4 + 2^5 + 2^5 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 = 24 + 24 + 24 + 25 + 25 + 33 + 34 + 42 + 42 + 43$$
$$:= 2^4 + 2^4 + 2^5 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 = 24 + 24 + 25 + 26 + 33 + 33 + 33 + 33 + 42 + 43$$

$$\mathbf{317} := 2^2 + 2^2 + 2^2 + 2^3 + 2^3 + 3^4 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 23 + 23 + 34 + 42 + 43 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^2 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^3 = 22 + 22 + 22 + 32 + 33 + 33 + 34 + 34 + 42 + 43$$

$$\mathbf{319} := 2^2 + 2^2 + 2^2 + 2^3 + 2^6 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 23 + 26 + 33 + 42 + 43 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 2^3 + 3^3 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 23 + 23 + 23 + 33 + 43 + 43 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^3 + 3^4 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 23 + 23 + 23 + 34 + 34 + 34 + 42 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 = 22 + 23 + 23 + 27 + 32 + 32 + 32 + 42 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 = 22 + 23 + 23 + 32 + 33 + 33 + 33 + 34 + 43 + 43$$
$$:= 2^2 + 2^7 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 = 22 + 27 + 32 + 32 + 32 + 32 + 33 + 33 + 34 + 42$$
$$:= 2^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 = 22 + 32 + 32 + 33 + 33 + 33 + 33 + 33 + 34 + 34$$
$$:= 2^3 + 2^4 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 3^4 + 4^2 = 23 + 24 + 32 + 32 + 32 + 32 + 34 + 34 + 34 + 42$$

$$\mathbf{320} := 2^5 + 2^5 + 2^5 + 2^5 + 2^6 + 2^6 + 4^2 + 4^2 + 4^2 + 4^2 = 25 + 25 + 25 + 25 + 26 + 26 + 42 + 42 + 42 + 42$$

$$\mathbf{321} := 2^2 + 2^2 + 2^3 + 2^5 + 2^5 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 22 + 23 + 25 + 25 + 34 + 42 + 42 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^3 + 2^5 + 2^7 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 22 + 23 + 25 + 27 + 34 + 42 + 42 + 42 + 42$$
$$:= 2^2 + 2^2 + 2^4 + 2^4 + 2^6 + 3^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 22 + 24 + 24 + 26 + 32 + 42 + 43 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^3 + 2^6 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 23 + 23 + 26 + 33 + 34 + 34 + 42 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^4 + 2^5 + 3^2 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 23 + 24 + 25 + 32 + 33 + 34 + 42 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^4 + 2^7 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 23 + 24 + 27 + 32 + 33 + 34 + 42 + 42 + 42$$
$$:= 2^2 + 2^3 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 22 + 23 + 26 + 32 + 33 + 33 + 33 + 33 + 43 + 43$$
$$:= 2^2 + 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 = 22 + 25 + 26 + 32 + 32 + 32 + 34 + 34 + 42 + 42$$
$$:= 2^3 + 2^3 + 2^3 + 2^4 + 2^4 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 = 23 + 23 + 23 + 24 + 24 + 32 + 43 + 43 + 43 + 43$$
$$:= 2^3 + 2^4 + 2^4 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 = 23 + 24 + 24 + 32 + 32 + 33 + 33 + 34 + 43 + 43$$
$$:= 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 = 24 + 26 + 32 + 32 + 32 + 32 + 33 + 34 + 34 + 42$$

$$\mathbf{323} := 2^2 + 2^2 + 2^5 + 2^5 + 2^6 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 22 + 25 + 25 + 26 + 33 + 42 + 42 + 43 + 43$$

$$:= 2^2 + 2^2 + 2^5 + 2^6 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 22 + 25 + 26 + 27 + 33 + 42 + 42 + 42 + 42$$

$$:= 2^2 + 2^3 + 2^6 + 2^6 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 23 + 26 + 26 + 33 + 33 + 34 + 42 + 42 + 42$$

$$:= 2^2 + 2^4 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 = 22 + 24 + 25 + 26 + 32 + 33 + 33 + 42 + 43 + 43$$

$$:= 2^2 + 2^4 + 2^6 + 2^7 + 3^2 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 = 22 + 24 + 26 + 27 + 32 + 33 + 33 + 42 + 42 + 42$$

$$:= 2^3 + 2^3 + 2^3 + 2^5 + 2^5 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 23 + 23 + 25 + 25 + 33 + 42 + 43 + 43 + 43$$

$$:= 2^3 + 2^3 + 2^3 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 = 23 + 23 + 23 + 25 + 27 + 33 + 42 + 42 + 42 + 43$$

$$:= 2^3 + 2^4 + 2^4 + 2^6 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 23 + 24 + 24 + 26 + 32 + 34 + 34 + 42 + 42 + 42$$

$$:= 2^3 + 2^4 + 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 = 23 + 24 + 26 + 26 + 32 + 32 + 32 + 42 + 43 + 43$$

$$:= 2^3 + 2^5 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 = 23 + 25 + 25 + 25 + 32 + 32 + 32 + 43 + 43 + 43$$

$$:= 2^3 + 2^5 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 = 23 + 25 + 25 + 27 + 32 + 32 + 32 + 42 + 42 + 43$$

$$:= 2^3 + 2^5 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 23 + 25 + 25 + 32 + 33 + 33 + 33 + 34 + 42 + 43$$

$$:= 2^4 + 2^4 + 2^4 + 2^5 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 = 24 + 24 + 24 + 25 + 32 + 32 + 34 + 42 + 43 + 43$$

$$:= 2^4 + 2^4 + 2^4 + 2^7 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 = 24 + 24 + 24 + 27 + 32 + 32 + 34 + 42 + 42 + 42$$

$$:= 2^4 + 2^4 + 2^4 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 = 24 + 24 + 24 + 33 + 33 + 33 + 34 + 34 + 42 + 42$$

$$:= 2^4 + 2^4 + 2^6 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 24 + 24 + 26 + 32 + 32 + 33 + 33 + 33 + 43 + 43$$

325 $$:= 2^2 + 2^4 + 2^5 + 2^6 + 2^6 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 24 + 25 + 26 + 26 + 34 + 42 + 42 + 42 + 42$$

$$:= 2^2 + 2^5 + 2^5 + 2^5 + 2^5 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 25 + 25 + 25 + 25 + 34 + 42 + 42 + 42 + 43$$

$$:= 2^2 + 2^6 + 2^6 + 2^6 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 = 22 + 26 + 26 + 26 + 33 + 33 + 33 + 42 + 42 + 42$$

$$:= 2^4 + 2^4 + 2^6 + 2^6 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 = 24 + 24 + 26 + 26 + 32 + 33 + 34 + 42 + 42 + 42$$

$$:= 2^4 + 2^5 + 2^5 + 2^5 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 = 24 + 25 + 25 + 25 + 32 + 33 + 34 + 42 + 42 + 43$$

$$:= 2^5 + 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 = 25 + 25 + 26 + 32 + 33 + 33 + 33 + 33 + 42 + 43$$

326 $$:= 2^2 + 2^2 + 2^2 + 2^2 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 22 + 22 + 33 + 33 + 43 + 43 + 43 + 43$$

328 $$:= 2^2 + 2^2 + 2^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 22 + 23 + 33 + 33 + 34 + 34 + 42 + 42 + 43$$

$$:= 2^2 + 2^3 + 2^4 + 3^2 + 3^2 + 3^2 + 3^4 + 4^3 + 4^3 + 4^3 = 22 + 23 + 24 + 32 + 32 + 32 + 34 + 43 + 43 + 43$$

330 $$:= 2^2 + 2^2 + 2^4 + 2^5 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 22 + 24 + 25 + 34 + 34 + 42 + 42 + 42 + 43$$

$$:= 2^2 + 2^2 + 2^5 + 2^6 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 22 + 25 + 26 + 32 + 32 + 42 + 43 + 43 + 43$$

$$:= 2^2 + 2^2 + 2^6 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 22 + 26 + 27 + 32 + 32 + 42 + 42 + 42 + 43$$

$$:= 2^2 + 2^2 + 2^6 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 22 + 26 + 33 + 33 + 33 + 34 + 42 + 42 + 43$$

$$:= 2^2 + 2^4 + 2^4 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 24 + 24 + 32 + 33 + 34 + 34 + 42 + 42 + 43$$

$$:= 2^2 + 2^4 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 24 + 26 + 32 + 32 + 32 + 33 + 43 + 43 + 43$$

$$:= 2^3 + 2^3 + 2^3 + 2^5 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 = 23 + 23 + 23 + 25 + 32 + 32 + 43 + 43 + 43 + 43$$

$$:= 2^3 + 2^3 + 2^3 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 23 + 23 + 27 + 32 + 32 + 42 + 42 + 43 + 43$$

$$:= 2^3 + 2^3 + 2^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 + 4^3 = 23 + 23 + 23 + 33 + 33 + 33 + 34 + 42 + 43 + 43$$

$$:= 2^3 + 2^5 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^3 + 4^3 = 23 + 25 + 32 + 32 + 32 + 33 + 33 + 34 + 43 + 43$$

$$:= 2^3 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 = 23 + 27 + 32 + 32 + 32 + 33 + 33 + 34 + 42 + 42$$

$$:= 2^3 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 = 23 + 32 + 33 + 33 + 33 + 33 + 33 + 34 + 34 + 42$$

$$332 := 2^2 + 2^3 + 2^4 + 2^4 + 2^6 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 23 + 24 + 24 + 26 + 42 + 42 + 43 + 43 + 43$$

$$:= 2^2 + 2^5 + 2^5 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 22 + 25 + 25 + 33 + 33 + 34 + 34 + 42 + 42 + 42$$

$$:= 2^3 + 2^3 + 2^4 + 2^5 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 23 + 24 + 25 + 33 + 34 + 42 + 42 + 43 + 43$$

$$:= 2^3 + 2^3 + 2^4 + 2^7 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 = 23 + 23 + 24 + 27 + 33 + 34 + 42 + 42 + 42 + 42$$

$$:= 2^3 + 2^3 + 2^6 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 = 23 + 23 + 26 + 33 + 33 + 33 + 33 + 42 + 43 + 43$$

$$:= 2^3 + 2^5 + 2^6 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 = 23 + 25 + 26 + 32 + 32 + 34 + 34 + 42 + 42 + 42$$

$$:= 2^4 + 2^5 + 2^5 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 = 24 + 25 + 25 + 32 + 32 + 32 + 34 + 42 + 43 + 43$$

$$:= 2^4 + 2^5 + 2^7 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 = 24 + 25 + 27 + 32 + 32 + 32 + 34 + 42 + 42 + 42$$

$$:= 2^4 + 2^5 + 3^2 + 3^3 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 = 24 + 25 + 32 + 33 + 33 + 33 + 34 + 34 + 42 + 42$$

$$:= 2^5 + 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 = 25 + 26 + 32 + 32 + 32 + 33 + 33 + 33 + 43 + 43$$

$$:= 2^6 + 2^7 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 = 26 + 27 + 32 + 32 + 32 + 33 + 33 + 33 + 42 + 42$$

$$:= 2^6 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 = 26 + 32 + 33 + 33 + 33 + 33 + 33 + 33 + 34 + 42$$

$$333 := 2^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^5 + 4^2 + 4^2 = 22 + 32 + 32 + 32 + 32 + 32 + 32 + 35 + 42 + 42$$

$$334 := 2^3 + 2^4 + 2^5 + 2^6 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 24 + 25 + 26 + 33 + 33 + 42 + 42 + 43 + 43$$

$$:= 2^3 + 2^4 + 2^6 + 2^7 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 = 23 + 24 + 26 + 27 + 33 + 33 + 42 + 42 + 42 + 42$$

$$:= 2^5 + 2^6 + 2^6 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 = 25 + 26 + 26 + 32 + 32 + 33 + 34 + 42 + 42 + 42$$

$$336 := 2^4 + 2^4 + 2^5 + 2^5 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 24 + 24 + 25 + 25 + 26 + 42 + 42 + 42 + 43 + 43$$

$$:= 2^4 + 2^4 + 2^5 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 24 + 24 + 25 + 26 + 27 + 42 + 42 + 42 + 42 + 42$$

$$339 := 2^2 + 2^2 + 2^4 + 2^4 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 24 + 24 + 33 + 42 + 43 + 43 + 43 + 43$$

$$:= 2^2 + 2^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 33 + 33 + 33 + 33 + 33 + 43 + 43 + 43$$

$$:= 2^2 + 2^5 + 3^2 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 = 22 + 25 + 32 + 32 + 33 + 34 + 34 + 42 + 42 + 43$$

$$:= 2^3 + 2^3 + 2^4 + 3^2 + 3^2 + 3^4 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 23 + 24 + 32 + 32 + 34 + 42 + 43 + 43 + 43$$

$$:= 2^4 + 3^2 + 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 3^4 + 4^2 + 4^3 = 24 + 32 + 32 + 32 + 33 + 33 + 34 + 34 + 42 + 43$$

$$341 := 2^2 + 2^3 + 2^5 + 2^6 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 23 + 25 + 26 + 32 + 42 + 42 + 43 + 43 + 43$$

$$:= 2^2 + 2^3 + 2^6 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 23 + 26 + 27 + 32 + 42 + 42 + 42 + 42 + 43$$

$$:= 2^2 + 2^4 + 2^5 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 24 + 25 + 33 + 33 + 33 + 42 + 43 + 43 + 43$$

$$:= 2^2 + 2^4 + 2^7 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 = 22 + 24 + 27 + 33 + 33 + 33 + 42 + 42 + 42 + 43$$

$$:= 2^3 + 2^4 + 2^4 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 23 + 24 + 24 + 33 + 34 + 34 + 42 + 42 + 42 + 43$$

$$:= 2^3 + 2^4 + 2^6 + 3^2 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 24 + 26 + 32 + 32 + 33 + 42 + 43 + 43 + 43$$
$$:= 2^4 + 2^4 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 = 24 + 24 + 32 + 33 + 33 + 33 + 33 + 43 + 43 + 43$$
$$:= 2^6 + 2^6 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 4^2 + 4^2 + 4^3 = 26 + 26 + 32 + 32 + 32 + 32 + 34 + 42 + 42 + 43$$

$$343 := 2^4 + 2^4 + 2^6 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 24 + 24 + 26 + 33 + 33 + 34 + 42 + 42 + 42 + 43$$
$$:= 2^5 + 2^5 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 = 25 + 25 + 33 + 33 + 33 + 33 + 33 + 42 + 43 + 43$$
$$:= 2^5 + 2^7 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^2 = 25 + 27 + 33 + 33 + 33 + 33 + 33 + 42 + 42 + 42$$

$$344 := 2^3 + 3^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^5 + 4^2 + 4^2 + 4^2 = 23 + 32 + 32 + 32 + 32 + 32 + 35 + 42 + 42 + 42$$

$$345 := 2^4 + 2^6 + 2^6 + 2^6 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 24 + 26 + 26 + 26 + 32 + 42 + 42 + 42 + 42 + 43$$
$$:= 2^5 + 2^5 + 2^5 + 2^6 + 3^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 25 + 25 + 25 + 26 + 32 + 42 + 42 + 42 + 43 + 43$$
$$:= 2^5 + 2^5 + 2^6 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 25 + 25 + 26 + 27 + 32 + 42 + 42 + 42 + 42 + 42$$

$$346 := 2^2 + 3^2 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^3 + 4^3 = 22 + 32 + 32 + 32 + 32 + 34 + 34 + 42 + 43 + 43$$

$$348 := 2^2 + 2^2 + 2^5 + 3^2 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 25 + 32 + 33 + 42 + 43 + 43 + 43 + 43$$
$$:= 2^2 + 2^2 + 2^7 + 3^2 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 22 + 27 + 32 + 33 + 42 + 42 + 42 + 43 + 43$$
$$:= 2^2 + 2^4 + 3^2 + 3^2 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 24 + 32 + 32 + 33 + 33 + 43 + 43 + 43 + 43$$

$$350 := 2^2 + 2^4 + 2^6 + 3^2 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 24 + 26 + 32 + 34 + 42 + 42 + 42 + 43 + 43$$
$$:= 2^3 + 2^5 + 3^2 + 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 23 + 25 + 32 + 33 + 34 + 34 + 42 + 42 + 42 + 43$$
$$:= 2^5 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^3 + 4^3 + 4^3 = 25 + 32 + 32 + 33 + 33 + 33 + 33 + 43 + 43 + 43$$
$$:= 2^7 + 3^2 + 3^2 + 3^3 + 3^3 + 3^3 + 3^3 + 4^2 + 4^2 + 4^3 = 27 + 32 + 32 + 33 + 33 + 33 + 33 + 42 + 42 + 43$$
$$:= 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^3 = 33 + 33 + 33 + 33 + 33 + 33 + 33 + 34 + 42 + 43$$

$$352 := 2^3 + 2^3 + 2^5 + 2^6 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 23 + 23 + 25 + 26 + 42 + 42 + 42 + 43 + 43 + 43$$
$$:= 2^3 + 2^3 + 2^6 + 2^7 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 23 + 23 + 26 + 27 + 42 + 42 + 42 + 42 + 42 + 43$$
$$:= 2^4 + 2^4 + 2^4 + 2^4 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 24 + 24 + 24 + 24 + 42 + 42 + 43 + 43 + 43 + 43$$
$$:= 2^5 + 2^6 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 = 25 + 26 + 32 + 33 + 33 + 34 + 42 + 42 + 42 + 43$$

$$355 := 2^2 + 2^2 + 3^2 + 3^2 + 3^2 + 4^3 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 22 + 32 + 32 + 32 + 43 + 43 + 43 + 43 + 43$$

$$357 := 2^3 + 3^2 + 3^2 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 32 + 32 + 32 + 34 + 34 + 42 + 42 + 43 + 43$$

$$359 := 2^2 + 2^3 + 2^5 + 3^3 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 25 + 33 + 42 + 42 + 43 + 43 + 43 + 43$$
$$:= 2^2 + 2^3 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 22 + 23 + 27 + 33 + 42 + 42 + 42 + 42 + 43 + 43$$

$$:= 2^2 + 2^5 + 3^4 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 25 + 34 + 34 + 34 + 42 + 42 + 42 + 42 + 42$$

$$:= 2^3 + 2^4 + 3^2 + 3^3 + 3^3 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 23 + 24 + 32 + 33 + 33 + 42 + 43 + 43 + 43 + 43$$

$$:= 2^4 + 3^2 + 3^3 + 3^4 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 = 24 + 32 + 33 + 34 + 34 + 34 + 42 + 42 + 42 + 42$$

$$:= 2^6 + 3^2 + 3^2 + 3^2 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 = 26 + 32 + 32 + 32 + 33 + 34 + 42 + 42 + 43 + 43$$

$$\mathbf{361} := 2^3 + 2^4 + 2^6 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 23 + 24 + 26 + 34 + 42 + 42 + 42 + 42 + 43 + 43$$

$$:= 2^4 + 2^4 + 2^5 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 24 + 24 + 25 + 32 + 42 + 42 + 43 + 43 + 43 + 43$$

$$:= 2^4 + 2^4 + 2^7 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 24 + 24 + 27 + 32 + 42 + 42 + 42 + 42 + 43 + 43$$

$$\mathbf{362} := 2^2 + 2^2 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^4 = 22 + 22 + 32 + 32 + 42 + 42 + 42 + 42 + 42 + 44$$

$$\mathbf{363} := 2^4 + 2^6 + 2^6 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 24 + 26 + 26 + 33 + 42 + 42 + 42 + 42 + 43 + 43$$

$$:= 2^5 + 2^5 + 2^5 + 3^3 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 25 + 25 + 25 + 33 + 42 + 42 + 42 + 43 + 43 + 43$$

$$:= 2^5 + 2^5 + 2^7 + 3^3 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 25 + 25 + 27 + 33 + 42 + 42 + 42 + 42 + 42 + 43$$

$$\mathbf{366} := 2^2 + 2^3 + 3^2 + 3^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 23 + 32 + 32 + 42 + 43 + 43 + 43 + 43 + 43$$

$$\mathbf{368} := 2^2 + 2^4 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 22 + 24 + 33 + 34 + 42 + 42 + 42 + 43 + 43 + 43$$

$$\mathbf{370} := 2^5 + 2^5 + 3^2 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 25 + 25 + 32 + 32 + 42 + 42 + 43 + 43 + 43 + 43$$

$$:= 2^5 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 25 + 27 + 32 + 32 + 42 + 42 + 42 + 42 + 43 + 43$$

$$:= 2^5 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 25 + 33 + 33 + 33 + 34 + 42 + 42 + 42 + 43 + 43$$

$$:= 2^7 + 2^7 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 27 + 27 + 32 + 32 + 42 + 42 + 42 + 42 + 42 + 42$$

$$:= 2^7 + 3^3 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 27 + 33 + 33 + 33 + 34 + 42 + 42 + 42 + 42 + 42$$

$$\mathbf{373} := 2^2 + 2^3 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^4 = 22 + 23 + 32 + 42 + 42 + 42 + 42 + 42 + 42 + 44$$

$$\mathbf{375} := 2^2 + 2^4 + 3^5 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 22 + 24 + 35 + 42 + 42 + 42 + 42 + 42 + 42 + 42$$

$$\mathbf{377} := 2^3 + 2^3 + 3^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 + 4^3 = 23 + 23 + 32 + 42 + 42 + 43 + 43 + 43 + 43 + 43$$

$$:= 3^2 + 3^2 + 3^3 + 3^3 + 3^4 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 = 32 + 32 + 33 + 33 + 34 + 42 + 42 + 43 + 43 + 43$$

$$\mathbf{379} := 2^6 + 3^2 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 = 26 + 32 + 34 + 34 + 42 + 42 + 42 + 42 + 42 + 43$$

$$\mathbf{384} := 2^3 + 2^3 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^4 = 23 + 23 + 42 + 42 + 42 + 42 + 42 + 42 + 42 + 44$$

$$:= 3^2 + 3^2 + 3^3 + 3^5 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 32 + 32 + 33 + 35 + 42 + 42 + 42 + 42 + 42 + 42$$

$$\mathbf{386} := 2^8 + 3^2 + 3^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 = 28 + 32 + 32 + 42 + 42 + 42 + 42 + 42 + 42 + 42$$

$$388 := 2^2 + 2^6 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 + 4^3 + 4^3 = 22 + 26 + 42 + 42 + 42 + 42 + 43 + 43 + 43 + 43$$

$$397 := 3^3 + 3^4 + 3^4 + 4^2 + 4^2 + 4^2 + 4^2 + 4^2 + 4^3 + 4^3 = 33 + 34 + 34 + 42 + 42 + 42 + 42 + 42 + 43 + 43$$

Remark 7.1. *The results with positive and negative coefficients shall be dealt elsewhere.*

Acknowledgement

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