100-Magic Squares of Order 42 With Numbers 00-99

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Abstract

During past years author worked with **block-wise**, **block-bordered** and **block-wise bordered** magic squares. In this work, we shall 100-write magic squares of order 42 with numbers from 00 to 99. These numbers are equal sums with **bordered** magic squares of order 6.

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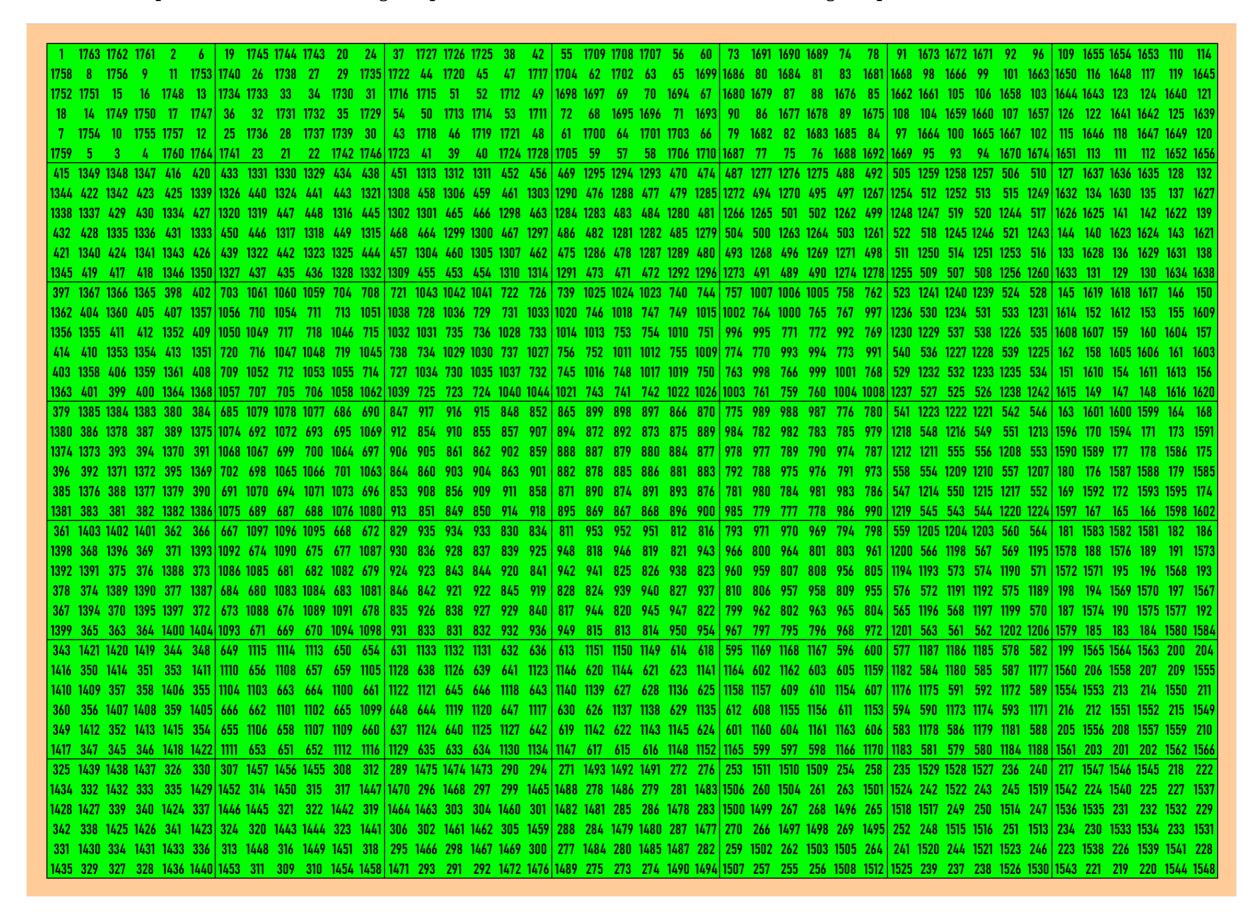
1 Introduction

During past years author [5, 6, 7, 8, 9, 10, 11] worked with **block-wise** magic squares from orders 12 to 47. Author [12, 13, 14, 15, 16, 17, 18] also worked with **bordered** magic squares. The study on **bordered** magic squares is extended to **block-bordered** magic squares [19, 20, 21]. This is specially done for the magic squares of orders p and p, where p is a prime number. This study is still extended to **block-wise bordered** magic squares [22, 23, 24, 25]. The **block-wise bordered** magic squares as multiples of magic squares of orders 4,6,8,10,12,14... can be seen in [26, 27, 28, 29, 30, 31]. Some connections with **Pythagorean triples** and **area-representations** are also made [32, 33, 34, 35, 36]. The main property of **bordered** magic squares is that if we remove external borders, still we get **sub-bordered** magic squares, i.e., each layer in itself lead us to magic squares. In many cases, the properties of **bordered** magic square are seperated by **even** and **odd** orders magic squares. In many cases, we get good properties for the **even** order **bordered** magic squares. In many cases, we have to use fractional numbers entries, specially to reach minimum perfect square sum of entries. For more study on **bordered** magic squares refer H. White's [1] and H. Danielsson's [2] web-sites.

The aim of this work is to combine the study of **block-wise** and **bordered** magic squares. In this case we considers blocks of magic squares such as magic squares of order 6, and then put them in such a way that every time removing external borders, still we are left with magic squares. Based on this idea, we wrote with **block-wise bordered** magic squares of orders 108 and 102. Every time when we remove the external border, we are left with **block-wise bordered** magic squares with minus order 12. For example, in case of order 108, removing external orders we are left with orders 96, 84, 72, etc. and in case of orders 102, removing external orders, we are left with orders 90, 78, 66, etc. Thus alternatively we complete all order magic squares multiples of 6. The first two orders 6 and 12 are not **block-wise bordered** magic squares. From order 12 onwards, we always get **block-wise bordered** magic squares multiples of 6, i.e., of orders 12, 18, 24, etc. The magic squares of order 6 are considered in two ways. One as normal magic square and another as **bordered** magic square of order 6 with inner magic square as **pandiagonal** magic square of order 4. Based on the idea of **block-wise bordered** magic squares of order 6, we have written in this work 100 magic squares of order 42 with the numbers 00 to 99

2 Magic Squares of Order 42

Below are two magic square of order 42 written in such a ways that one of them is equals sums blocks of order 6. The second one is with equal sums bordered magic squares of order 6. Below are both the magic squares:



The above magic square of 42 with equal sums magic squares order 6 are with magic sums: $S_{42\times42}:=37065$ and $S_{6\times6}:=5295$

1760 1758 3 1764 4 6 1742 1740 21 1746 22 24 1724 1722 39 1728 40 42 1706 1704 57 1710 58 60 1688 1686 75 1692 76 78 1670 1668 93 1674 94 96 1652 1650 1	
	642 119 1644 1655
8 12 1751 18 1749 1757 26 30 1733 36 1731 1739 44 48 1715 54 1713 1721 62 66 1697 72 1695 1703 80 84 1679 90 1677 1685 98 102 1661 108 1659 1667 116 120 1681 1	643 126 1641 1649
10 1754 13 1748 15 1755 28 1736 31 1730 33 1737 46 1718 49 1712 51 1719 64 1700 67 1694 69 1701 82 1682 85 1676 87 1683 100 1664 103 1658 105 1665 118 1646 1	121 1640 123 1647
1756 1747 16 1753 14 9 1738 1729 34 1735 32 27 1720 1711 52 1717 50 45 1702 1693 70 1699 68 63 1684 1675 88 1681 86 81 1666 1657 106 1663 104 99 1648 1639 1	24 1645 122 117
1759 7 1762 1 1761 5 1741 25 1744 19 1743 23 1723 43 1726 37 1725 41 1705 61 1708 55 1707 59 1687 79 1690 73 1689 77 1669 97 1672 91 1671 95 1651 115 16	654 109 1653 113
1346 1344 417 1350 418 420 1328 1326 435 1332 436 438 1310 1308 453 1314 454 456 1292 1290 471 1296 472 474 1274 1272 489 1278 490 492 1256 1254 507 1260 508 510 1634 1632 1	
416 431 1336 425 1338 1349 434 449 1318 443 1320 1331 452 467 1300 461 1302 1313 470 485 1282 479 1284 1295 488 503 1264 497 1266 1277 506 521 1246 515 1248 1259 128 143 168 148 1	524 137 1626 1637
422 426 1337 432 1335 1343 440 444 1319 450 1317 1325 458 462 1301 468 1299 1307 476 480 1283 486 1281 1289 494 498 1265 504 1263 1271 512 516 1247 522 1245 1253 134 138 168 169 1369	525 144 1623 1631
424 1340 427 1334 429 1341 442 1322 445 1316 447 1323 460 1304 463 1298 465 1305 478 1286 481 1280 483 1287 496 1268 499 1262 501 1269 514 1250 517 1244 519 1251 136 1628 1	39 1622 141 1629
1342 1333 430 1339 428 423 1324 1315 448 1321 446 441 1306 1297 466 1303 464 459 1288 1279 484 1285 482 477 1270 1261 502 1267 500 495 1252 1243 520 1249 518 513 1630 1621 1	42 1627 140 135
1345 421 1348 415 1347 419 1327 439 1330 433 1329 437 1309 457 1312 451 1311 455 1291 475 1294 469 1293 473 1273 493 1276 487 1275 491 1255 511 1258 505 1257 509 1633 133 16	536 127 1635 131
1364 1362 399 1368 400 402 1058 1056 705 1062 706 708 1040 1038 723 1044 724 726 1022 1020 741 1026 742 744 1004 1002 759 1008 760 762 1238 1236 525 1242 526 528 1616 1614 1	47 1620 148 150
398 413 1354 407 1356 1367 704 719 1048 713 1050 1061 722 737 1030 731 1032 1043 740 755 1012 749 1014 1025 758 773 994 767 996 1007 524 539 1228 533 1230 1241 146 161 16	606 155 1608 1619
404 408 1355 414 1353 1361 710 714 1049 720 1047 1055 728 732 1031 738 1029 1037 746 750 1013 756 1011 1019 764 768 995 774 993 1001 530 534 1229 540 1227 1235 152 156 16	
406 1358 409 1352 411 1359 712 1052 715 1046 717 1053 730 1034 733 1028 735 1035 748 1016 751 1010 753 1017 766 998 769 992 771 999 532 1232 535 1226 537 1233 154 1610 1	57 1604 159 1611
1360 1351 412 1357 410 405 1054 1045 718 1051 716 711 1036 1027 736 1033 734 729 1018 1009 754 1015 752 747 1000 991 772 997 770 765 1234 1225 538 1231 536 531 1612 1603 1	60 1609 158 153
1363 403 1366 397 1365 401 1057 709 1060 703 1059 707 1039 727 1042 721 1041 725 1021 745 1024 739 1023 743 1003 763 1006 757 1005 761 1237 529 1240 523 1239 527 1615 151 1615	618 145 1617 149
1382 1380 381 1386 382 384 1076 1074 687 1080 688 690 914 912 849 918 850 852 896 894 867 900 868 870 986 984 777 990 778 780 1220 1218 543 1224 544 546 1598 1596 1	65 1602 166 168
380 395 1372 389 1374 1385 686 701 1066 695 1068 1079 848 863 904 857 906 917 866 881 886 875 888 899 776 791 976 785 978 989 542 557 1210 551 1212 1223 164 179 158 159	588 173 1590 1601
386 390 1373 396 1371 1379 692 696 1067 702 1065 1073 854 858 905 864 903 911 872 876 887 882 885 893 782 786 977 792 975 983 548 552 1211 558 1209 1217 170 174 15	589 180 1587 1595
388 1376 391 1370 393 1377 694 1070 697 1064 699 1071 856 908 859 902 861 909 874 890 877 884 879 891 784 980 787 974 789 981 550 1214 553 1208 555 1215 172 1592 1	75 1586 177 1593
1378 1369 394 1375 392 387 1072 1063 700 1069 698 693 910 901 862 907 860 855 892 883 880 889 878 873 982 973 790 979 788 783 1216 1207 556 1213 554 549 1594 1585 1594	78 1591 176 171
1381 385 1384 379 1383 383 1075 691 1078 685 1077 689 913 853 916 847 915 851 895 871 898 865 897 869 985 781 988 775 987 779 1219 547 1222 541 1221 545 1597 169 16	500 163 1599 167
1400 1398 363 1404 364 366 1094 1092 669 1098 670 672 932 930 831 936 832 834 950 948 813 954 814 816 968 966 795 972 796 798 1202 1200 561 1206 562 564 1580 1578 1	
362 377 1390 371 1392 1403 668 683 1084 677 1086 1097 830 845 922 839 924 935 812 827 940 821 942 953 794 809 958 803 960 971 560 575 1192 569 1194 1205 182 197 15	570 191 1572 1583
368 372 1391 378 1389 1397 674 678 1085 684 1083 1091 836 840 923 846 921 929 818 822 941 828 939 947 800 804 959 810 957 965 566 570 1193 576 1191 1199 188 192 1	
370 1394 373 1388 375 1395 676 1088 679 1082 681 1089 838 926 841 920 843 927 820 944 823 938 825 945 802 962 805 956 807 963 568 1196 571 1190 573 1197 190 1574 1	93 1568 195 1575
1396 1387 376 1393 374 369 1090 1081 682 1087 680 675 928 919 844 925 842 837 946 937 826 943 824 819 964 955 808 961 806 801 1198 1189 574 1195 572 567 1576 1567 1576 1567 1576 1567 1576	
1399 367 1402 361 1401 365 1093 673 1096 667 1095 671 931 835 934 829 933 833 949 817 952 811 951 815 967 799 970 793 969 797 1201 565 1204 559 1203 563 1579 187 15	
1418 1416 345 1422 346 348 1112 1110 651 1116 652 654 1130 1128 633 1134 634 636 1148 1146 615 1152 616 618 1166 1164 597 1170 598 600 1184 1182 579 1188 580 582 1562 1560 2	
344 359 1408 353 1410 1421 650 665 1102 659 1104 1115 632 647 1120 641 1122 1133 614 629 1138 623 1140 1151 596 611 1156 605 1158 1169 578 593 1174 587 1176 1187 200 215 1198 1199	
350 354 1409 360 1407 1415 656 660 1103 666 1101 1109 638 642 1121 648 1119 1127 620 624 1139 630 1137 1145 602 606 1157 612 1155 1163 584 588 1175 594 1173 1181 206 210 11	
352 1412 355 1406 357 1413 658 1106 661 1100 663 1107 640 1124 643 1118 645 1125 622 1142 625 1136 627 1143 604 1160 607 1154 609 1161 586 1178 589 1172 591 1179 208 1556 208 1179 208 20	
1414 1405 358 1411 356 351 1108 1099 664 1105 662 657 1126 1117 646 1123 644 639 1144 1135 628 1141 626 621 1162 1153 610 1159 608 603 1180 1171 592 1177 590 585 1558 1549 2	
1417 349 1420 343 1419 347 1111 655 1114 649 1113 653 1129 637 1132 631 1131 635 1147 619 1150 613 1149 617 1165 601 1168 595 1167 599 1183 583 1186 577 1185 581 1561 205 15	
1436 1434 327 1440 328 330 1454 1452 309 1458 310 312 1472 1470 291 1476 292 294 1490 1488 273 1494 274 276 1508 1506 255 1512 256 258 1526 1524 237 1530 238 240 1544 1542 2	
326 341 1426 335 1428 1439 308 323 1444 317 1446 1457 290 305 1462 299 1464 1475 272 287 1480 281 1482 1493 254 269 1498 263 1500 1511 236 251 1516 245 1518 1529 218 233 15	
332 336 1427 342 1425 1433 314 318 1445 324 1443 1451 296 300 1463 306 1461 1469 278 282 1481 288 1479 1487 260 264 1499 270 1497 1505 242 246 1517 252 1515 1523 224 228 153	
334 1430 337 1424 339 1431 316 1448 319 1442 321 1449 298 1466 301 1460 303 1467 280 1484 283 1478 285 1485 262 1502 265 1496 267 1503 244 1520 247 1514 249 1521 226 1538 285 1485 285 1485 285 1485 262 1502 265 1496 267 1503 244 1520 247 1514 249 1521 226 1538 285 1485 285 28	29 1532 231 1539
1432 1423 340 1429 338 333 1450 1441 322 1447 320 315 1468 1459 304 1465 302 297 1486 1477 286 1483 284 279 1504 1495 268 1501 266 261 1522 1513 250 1519 248 243 1540 1531 2	
1435 331 1438 325 1437 329 1453 313 1456 307 1455 311 1471 295 1474 289 1473 293 1489 277 1492 271 1491 275 1507 259 1510 253 1509 257 1525 241 1528 235 1527 239 1543 223 15	546 217 1545 221

The above magic square of 42 with equal sums **bordered** magic squares order 6 are with magic sums: $S_{42\times42} := 37065$, $S_{6\times6} := 5295$ and $S_{4\times4} := 3530$. The magic squareS of order 4 considered in **bordered** magic squares order 6 are **pandiagonal**.

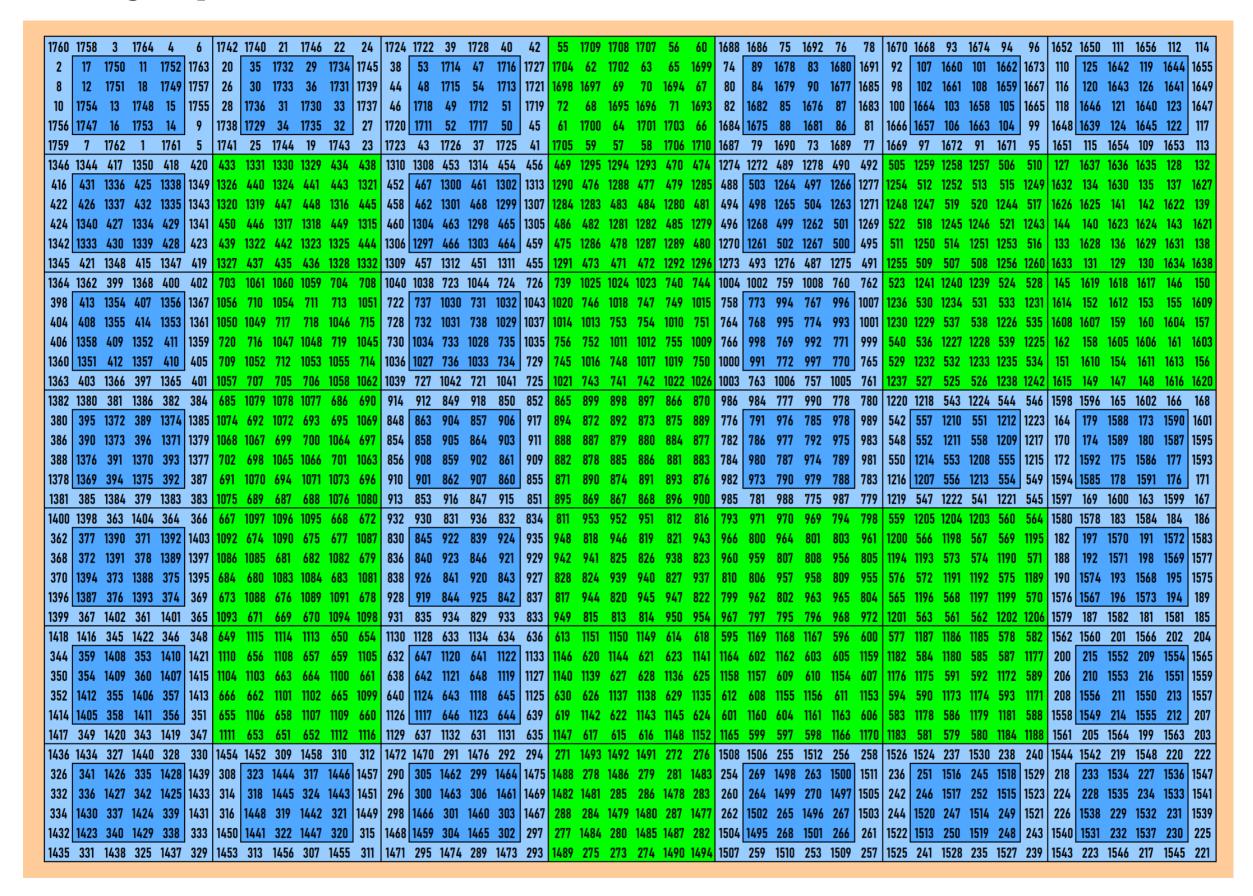
3 Magic Squares of Order 42 With Numbers 00 to 99

There are total 100 magic squares of order 42 having numbers from 00 to 99. Since it is little difficult to put all the 100 magic square here in this work. We have put only few. The other can be seen in excel file attached with the work. These can also be seen at author's sites: https://inderjtaneja.com/ [3] and https://inderjtaneja.com/ [3] and https://inderjtaneja.com/ [3] and https://inderjtaneja.com/ [3]

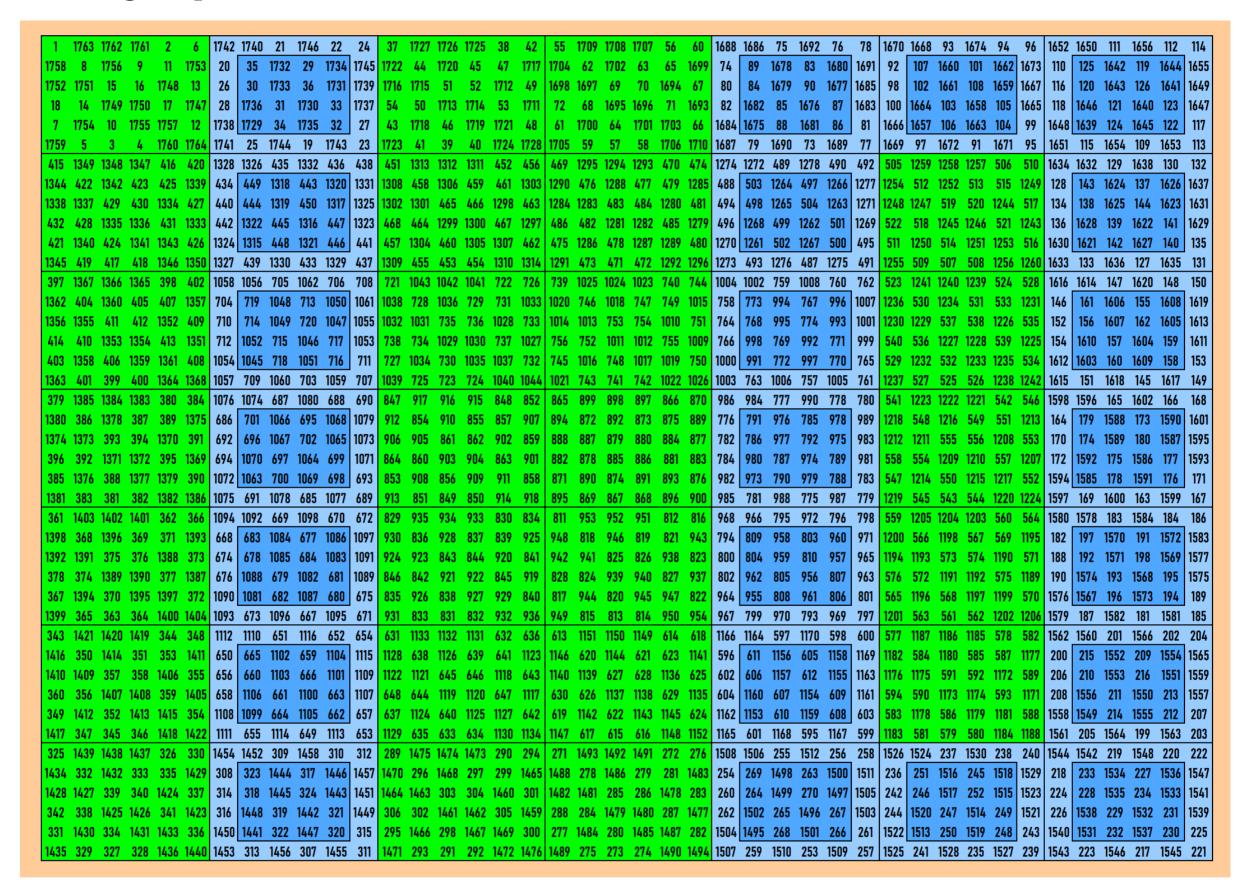
3.1 Magic Squares of Order 42 With Number 00

1760 1758 3		1742 1740			- I															_										
	11 1752 1763			29 1734																										44 1655
	18 1749 1757			36 1731															0 1677										126 164	
10 1754 13																														
1756 1747 16		1738 1729			-	_			_			00 64							81 86	_					_		_		645 12	_
	1 1761 5																													
1346 1344 417																				1										
416 431 1336																													137 162	
422 426 1337																													144 162	
424 1340 427																														
1342 1333 430	1339 428 423	439 1322	442 1	323 1325	444	1306 12	97 466	1303	464 4	59 47	75 128	36 478	1287	1289	480	1270	1261	502 12	57 500	495	511	1250	514	1251 1	253 5	6 163	1621	142 1	627 14	0 135
1345 421 1348																										_				
1364 1362 399						_			_											- 1										_
398 413 1354	407 1356 1367	1056 710	1054	711 713	1051	722 73	7 1030	731	1032 10	43 102	20 74	6 1018	747	749	1015	758	773 9	994 76	7 996	1007	1236	530	1234	531	533 12	31 14	6 161	1606	155 160	1619
404 408 1355	414 1353 1361	1050 1049	717	718 1046	715	728 73	2 1031	738	1029 10	37 10	14 10	13 753	754	1010	751	764	768 9	995 77	4 993	1001	1230	1229	537	538 1	226 5	5 15	2 156	1607	162 160	1613
406 1358 409	1352 411 1359	720 716	1047 1	048 719	1045	730 103	34 733	1028	735 10	35 75	6 75	2 1011	1012	755	1009	766	998 7	769 99	2 771	999	540	536	1227	1228 !	539 12	25 15	4 1610	157 1	604 15	9 1611
1360 1351 412	1357 410 405	709 1052	712 1	1053 1055	714	1036 10	27 736	1033	734 7	29 74	45 10°	16 748	1017	1019	750	1000	991 7	772 99	7 770	765	529	1232	532	1233 1	235 5	4 16	2 1603	160 1	609 15	8 153
1363 403 1366	397 1365 401	1057 707	705	706 1058	1062	1039 72	7 1042	721	1041 7	25 10	21 74	3 741	742	1022	1026	1003	763 1	006 75	7 1005	761	1237	527	525	526 1	238 12	16	5 151	1618	145 161	7 149
1382 1380 381	1386 382 384	685 1079	1078 1	077 686	690	914 9	2 849	918	850 8	52 86	55 89	9 898	897	866	870	986	984 7	777 99	0 778	780	541	1223	1222	1221 !	542 5	6 159	8 1596	165 1	602 16	6 168
380 395 1372	389 1374 1385	1074 692	1072	693 695	1069	848 86	3 904	857	906 9	17 89	4 87	2 892	873	875	889	776	791 9	976 78	5 978	989	1218	548	1216	549	551 12	16	4 179	1588	173 159	0 1601
386 390 1373	396 1371 1379	1068 1067	699	700 1064	697	854 85	8 905	864	903 9	11 88	88 88	7 879	880	884	877	782	786	977 79	2 975	983	1212	1211	555	556 1	208 5	3 17	0 174	1589	180 158	87 1595
388 1376 391	1370 393 1377	702 698	1065 1	066 701	1063	856 90	859	902	861 9	09 88	32 87	8 885	886	881	883	784	980 7	787 97	4 789	981	558	554	1209	1210 !	557 12	17	2 1592	175 1	586 17	7 1593
1378 1369 394	1375 392 387	691 1070	694 1	1071 1073	696	910 91	1 862	907	860 8	55 87	71 89	0 874	891	893	876	982	973	790 97	9 788	783	547	1214	550	1215 1	217 5	2 159	4 1585	178	1591 17	6 171
1381 385 1384	379 1383 383	1075 689	687	688 1076	1080	913 85	3 916	847	915 8	51 89	75 86	9 867	868	896	900	985	781 9	988 77	5 987	779	1219	545	543	544 1	220 12	159	7 169	1600	163 159	9 167
1400 1398 363 1	1404 364 366	667 1097	1096 1	095 668	672	932 93	0 831	936	832 83	34 81	11 95	3 952	951	812	816	968	966	795 97	2 796	798	559	1205	1204	1203 !	560 5	4 158	1578	183 1	584 18	4 186
362 377 1390	371 1392 1403	1092 674	1090	675 677	1087	830 84	5 922	839	924 9	35 94	48 81	8 946	819	821	943	794	809 9	958 80	3 960	971	1200	566	1198	567	69 11	5 18	2 197	1570	191 157	1583
368 372 1391	378 1389 1397	1086 1085	681	682 1082	679	836 84	0 923	846	921 9	29 94	2 94	1 825	826	938	823	800	804 9	959 81	0 957	965	1194	1193	573	574 1	190 5	1 18	8 192	1571	198 156	9 1577
370 1394 373	1388 375 1395	684 680	1083 1	084 683	1081	838 92	6 841	920	843 9	27 82	28 82	4 939	940	827	937	802	962 8	805 95	6 807	963	576	572	1191	1192 !	575 11	9 19	0 1574	193 1	568 19	5 1575
1396 1387 376	1393 374 369	673 1088	676 1	089 1091	678	928 91	9 844	925	842 8	37 81	7 94	4 820	945	947	822	964	955 8	808 96	1 806	801	565	1196	568	1197 1	199 5	0 157	6 1567	196 1	573 19	4 189
1399 367 1402	361 1401 365	1093 671	669	670 1094	1098	931 83	5 934	829	933 8	33 94	9 81	5 813	814	950	954	967	799 9	970 79	3 969	797	1201	563	561	562 1	202 12	157	9 187	1582	181 15	81 185
1418 1416 345	1422 346 348	649 1115	1114 1	1113 650	654	1130 112	28 633	1134	634 6	36 61	3 11!	1150	1149	614	618	1166	1164	597 11	70 598	600	577	1187	1186	1185 !	578 5	2 156	2 1560	201 1	566 20	2 204
344 359 1408	353 1410 1421	1110 656	1108	657 659	1105	632 64	7 1120	641	1122 11	33 114	46 62	0 1144	621	623	1141	596	611 1	156 60	1158	1169	1182	584	1180	585 !	587 11	7 20	0 215	1552	209 15	1565
350 354 1409	360 1407 1415	1104 1103	663	664 1100	661	638 64	2 1121	648	1119 11	27 114	40 113	9 627	628	1136	625	602	606 1	157 61	2 1155	1163	1176	1175	591	592 1	172 5	9 20	6 210	1553	216 15	51 1559
352 1412 355	1406 357 1413	666 662	1101 1	1102 665	1099	640 112	24 643	1118	645 11	25 63	30 62	6 1137	1138	629	1135	604	1160 6	607 119	4 609	1161	594	590	1173	1174 !	93 11	71 20	8 1556	211 1	550 21	3 1557
1414 1405 358	1411 356 351	655 1106	658 1	1107 1109	660	1126 11	7 646	1123	644 6	39 61	9 114	2 622	1143	1145	624	1162	1153	610 11!	59 608	603	583	1178	586	1179 1	181 5	8 15	8 1549	214 1	555 21	2 207
1417 349 1420	343 1419 347	1111 653	651	652 1112	1116	1129 63	7 1132	631	1131 6	35 114	47 61	7 615	616	1148	1152	1165	601 1	168 59	5 1167	599	1183	581	579	580 1	184 11	15	1 205	1564	199 156	3 203
1436 1434 327 1	1440 328 330	1454 1452	309 1	458 310	312	1472 14	70 291	1476	292 29	74 27	71 14	3 1492	1491	272	276	1508	1506 2	255 15	12 256	258	1526	1524	237	1530 2	238 2	0 154	4 1542	219 1	548 22	0 222
326 341 1426	335 1428 1439	308 323	1444	317 1446	1457	290 30	5 1462	299	1464 14	75 14	88 27	8 1486	279	281	1483	254	269 1	498 26	3 1500	1511	236	251	1516	245 1	518 15	29 21	8 233	1534	227 153	36 1547
332 336 1427																														
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1435 331 1438					- 1	_			_											_	· '				_		_			
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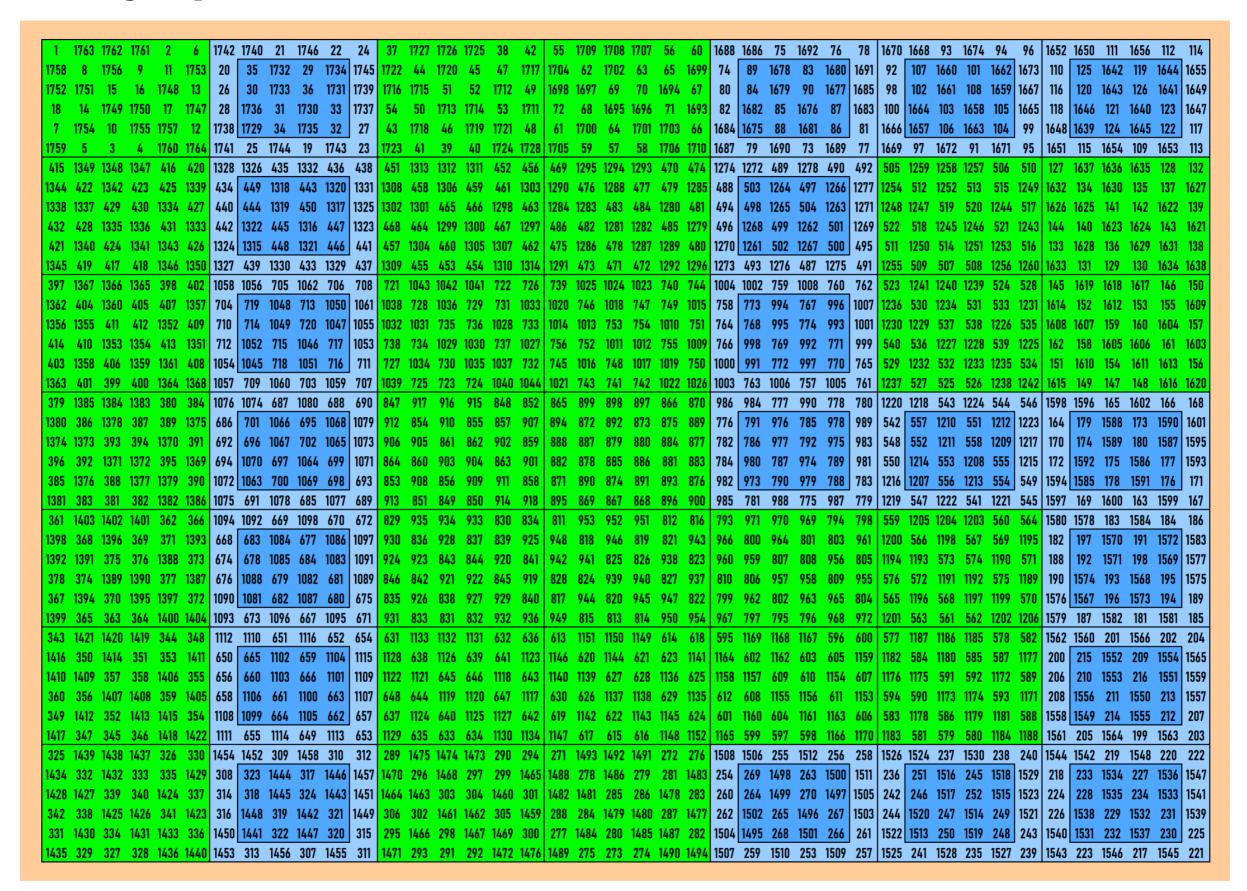
3.2 Magic Squares of Order 42 With Number 05



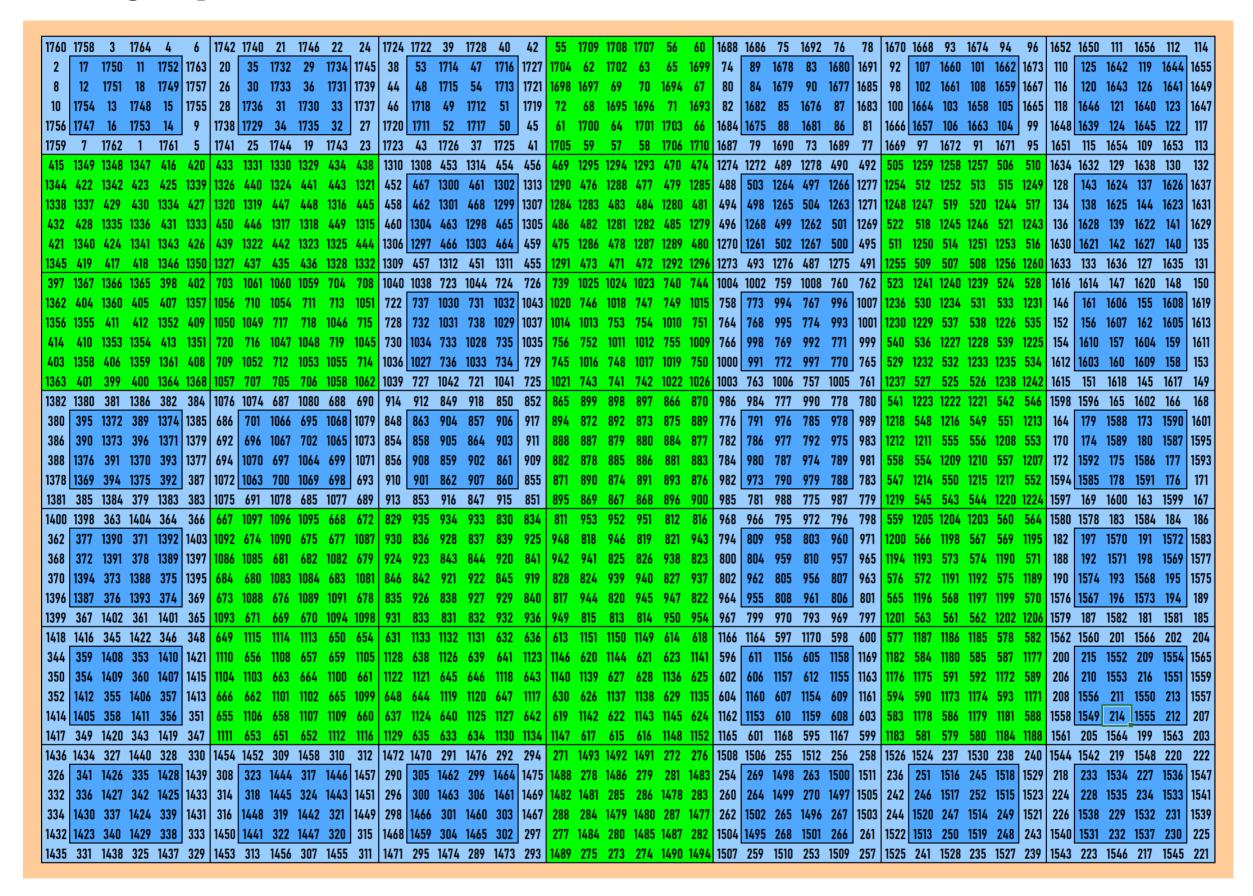
3.3 Magic Squares of Order 42 With Number 10



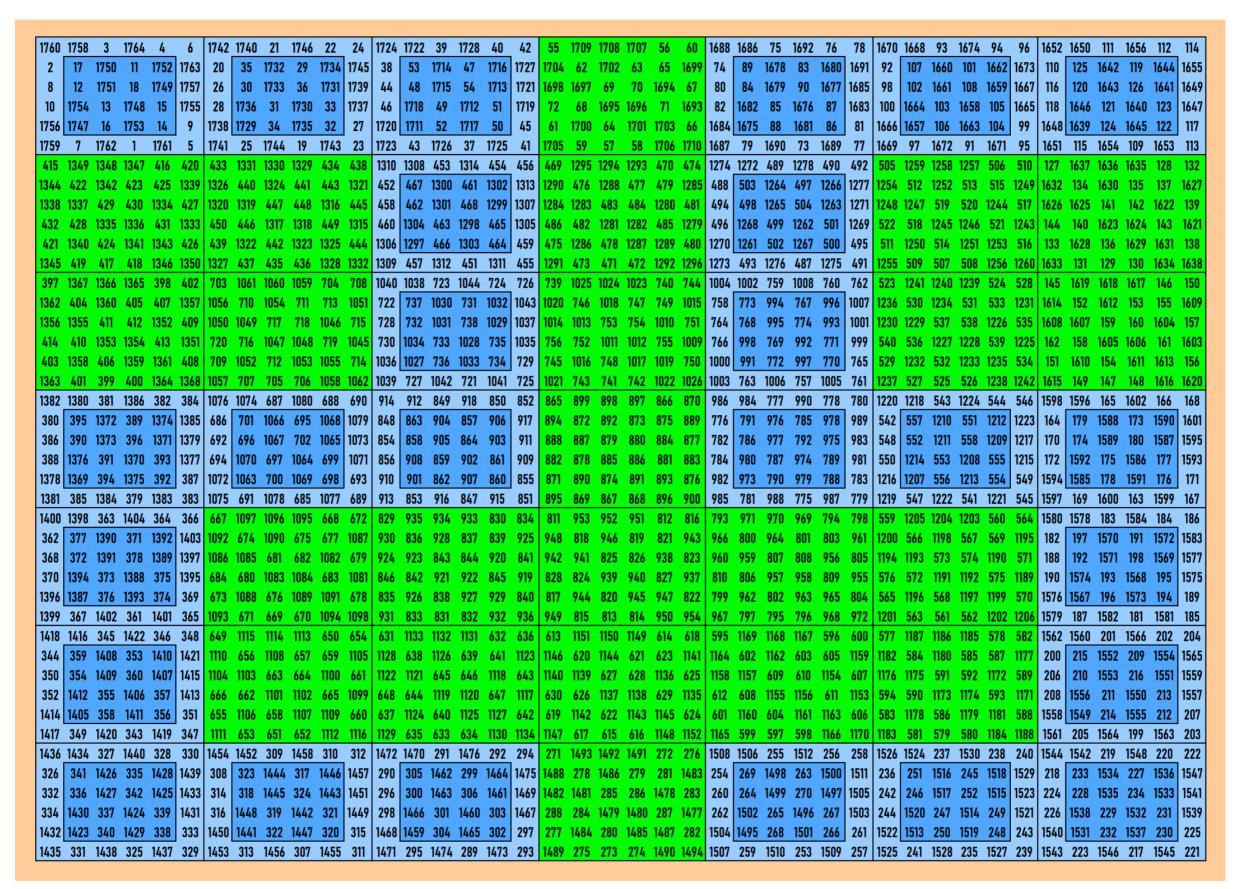
3.4 Magic Squares of Order 42 With Number 15



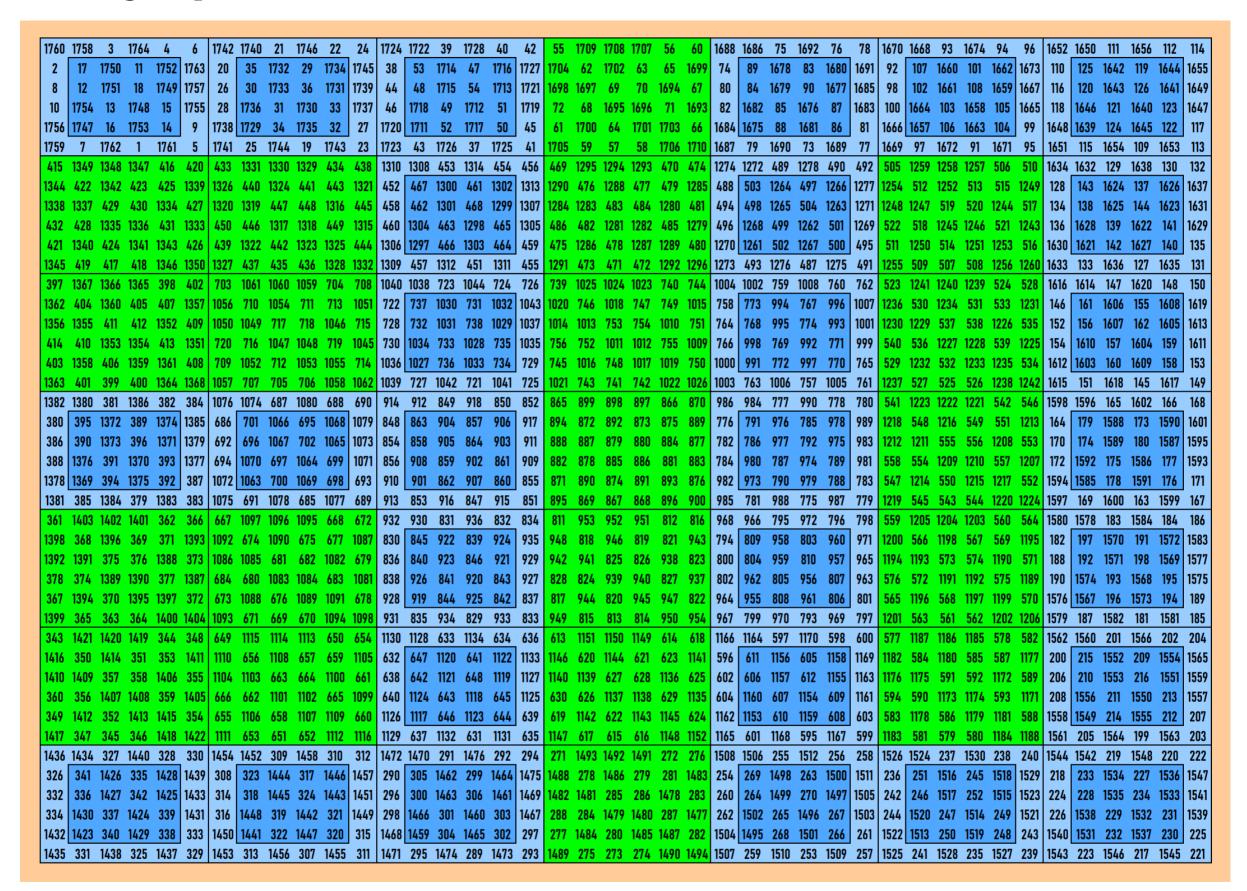
3.5 Magic Squares of Order 42 With Number 20



3.6 Magic Squares of Order 42 With Number 25



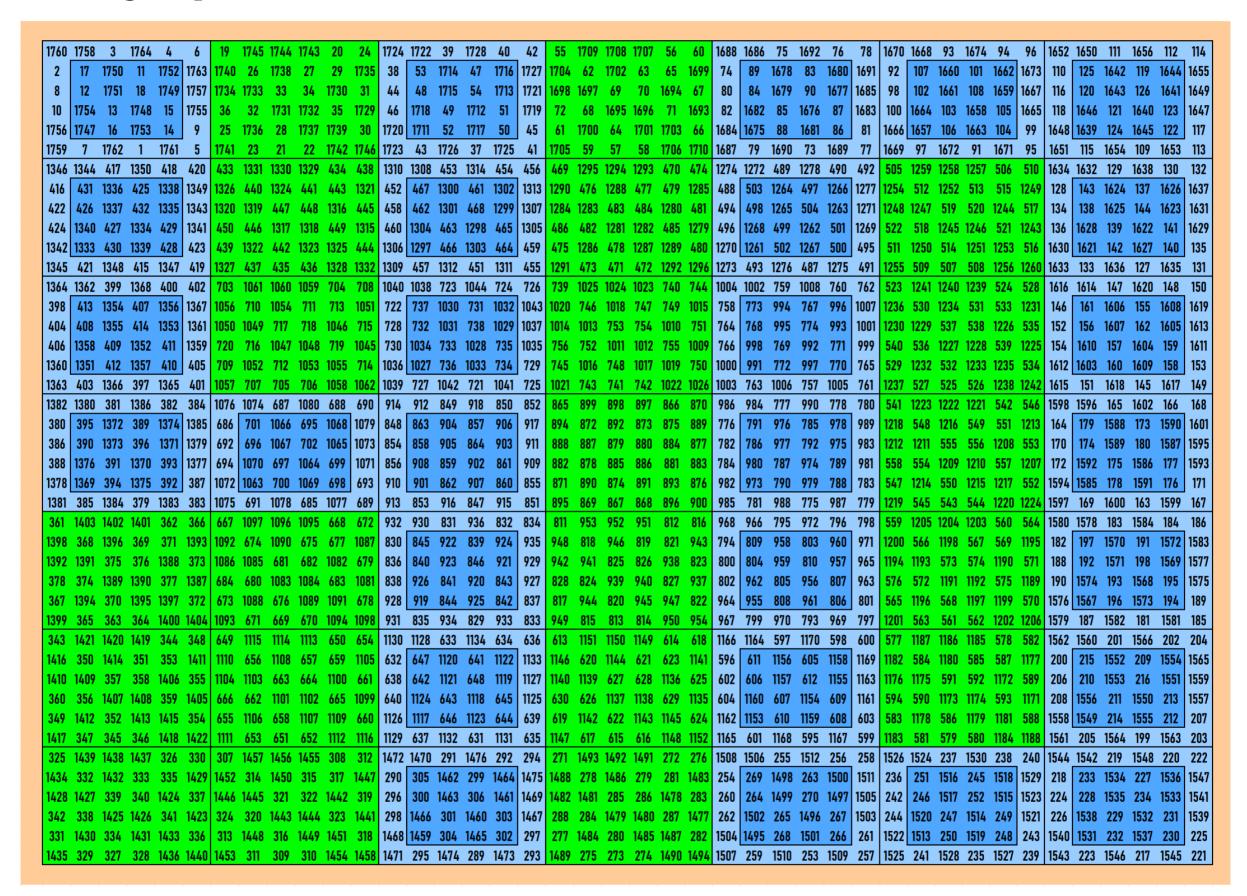
3.7 Magic Squares of Order 42 With Number 30



3.8 Magic Squares of Order 42 With Number 35

176												1																													112	
2																																									1644	
8																																									1641 1	
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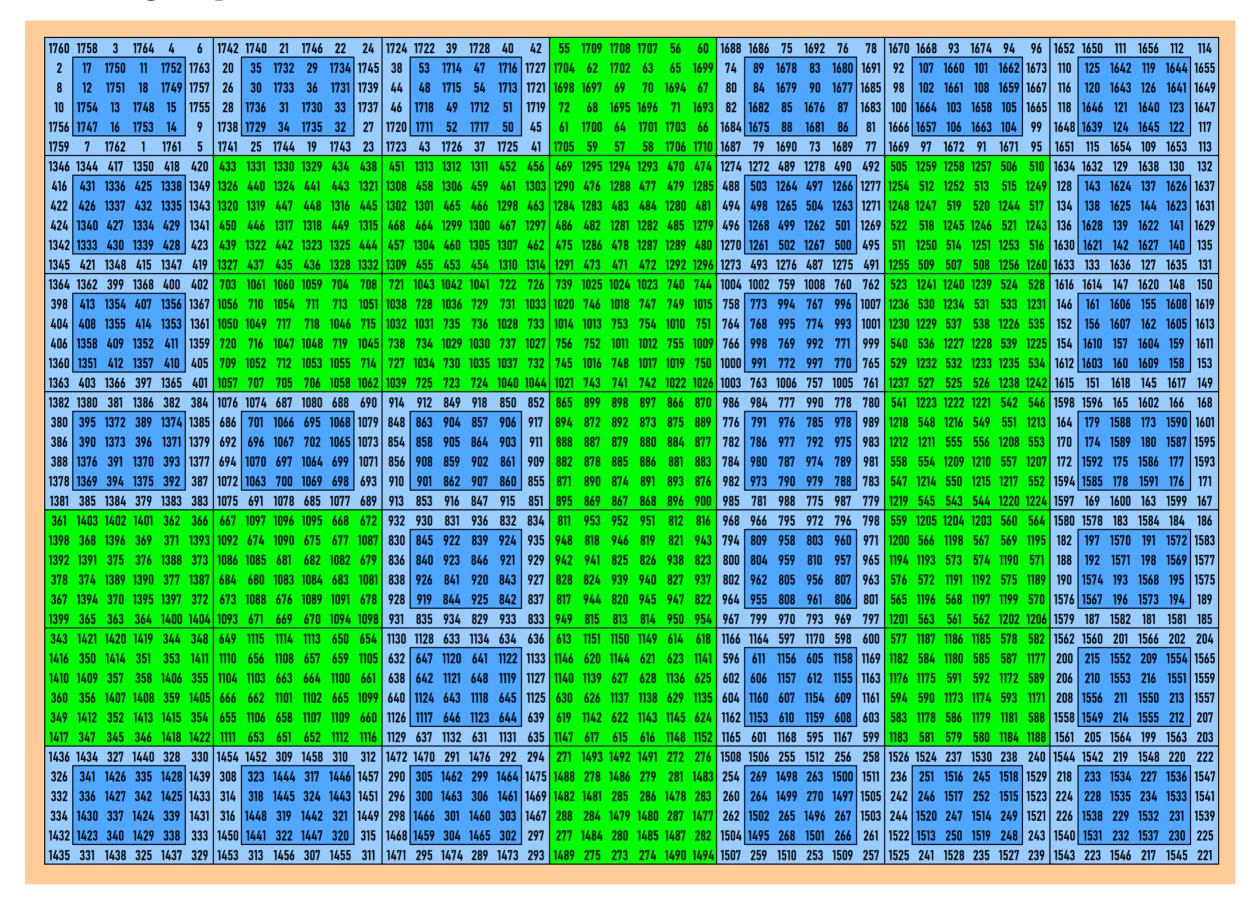
3.9 Magic Squares of Order 42 With Number 40



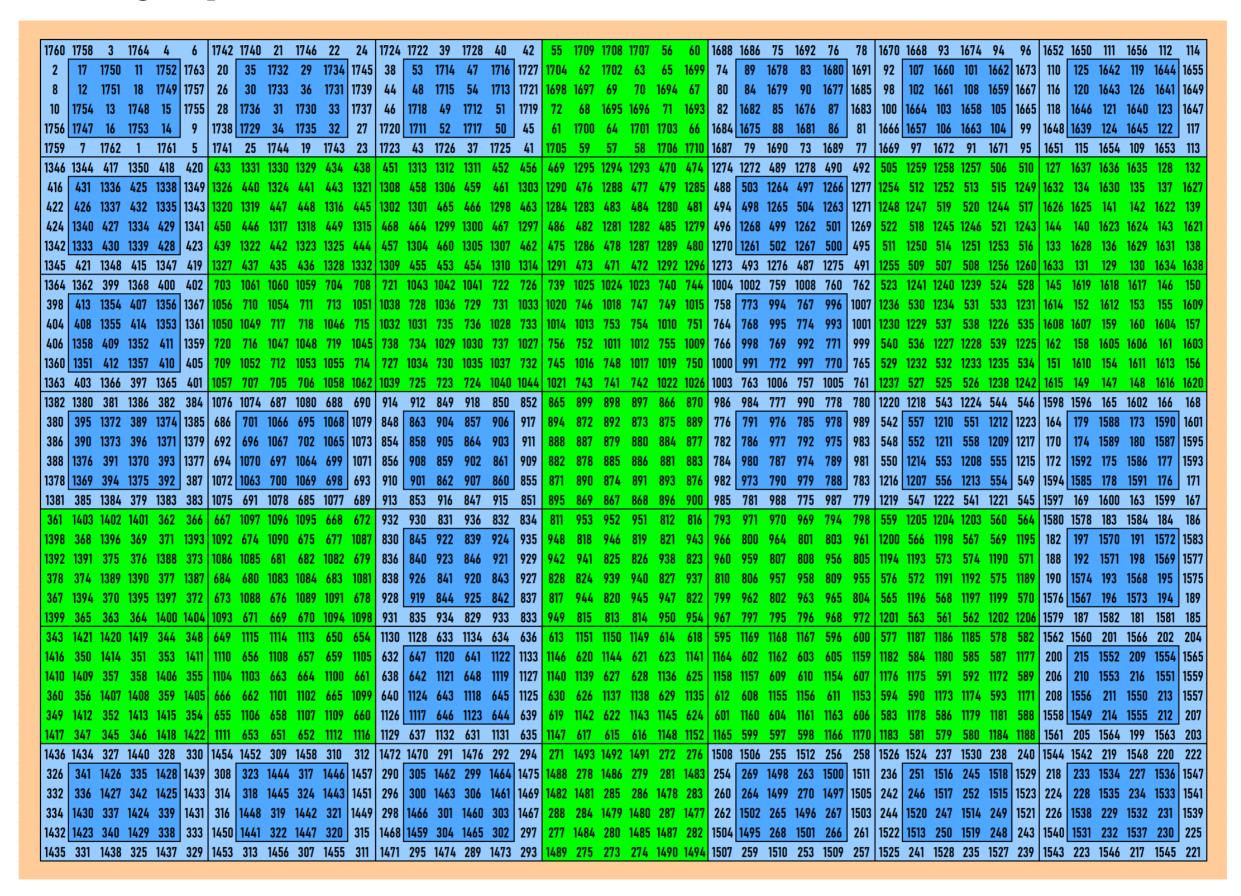
3.10 Magic Squares of Order 42 With Number 45



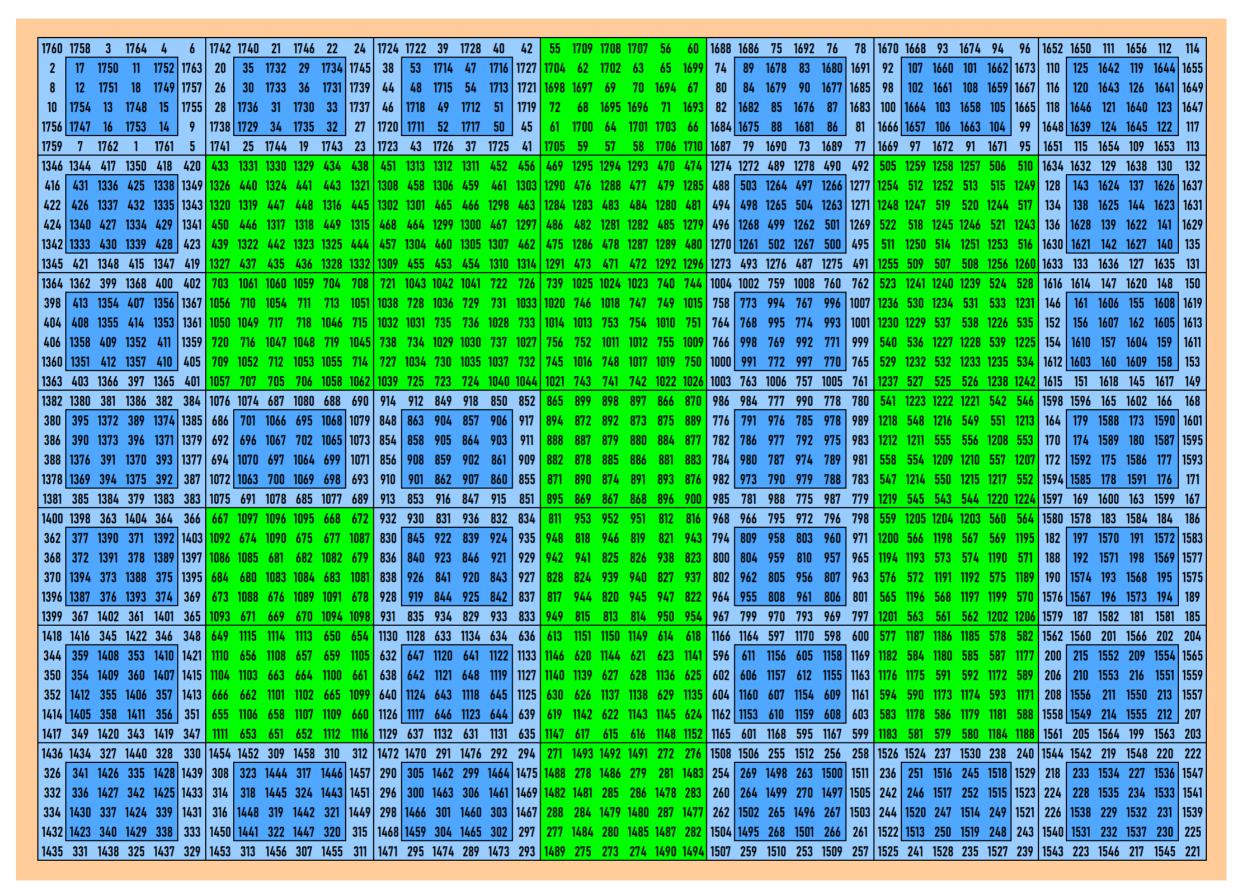
3.11 Magic Squares of Order 42 With Number 50



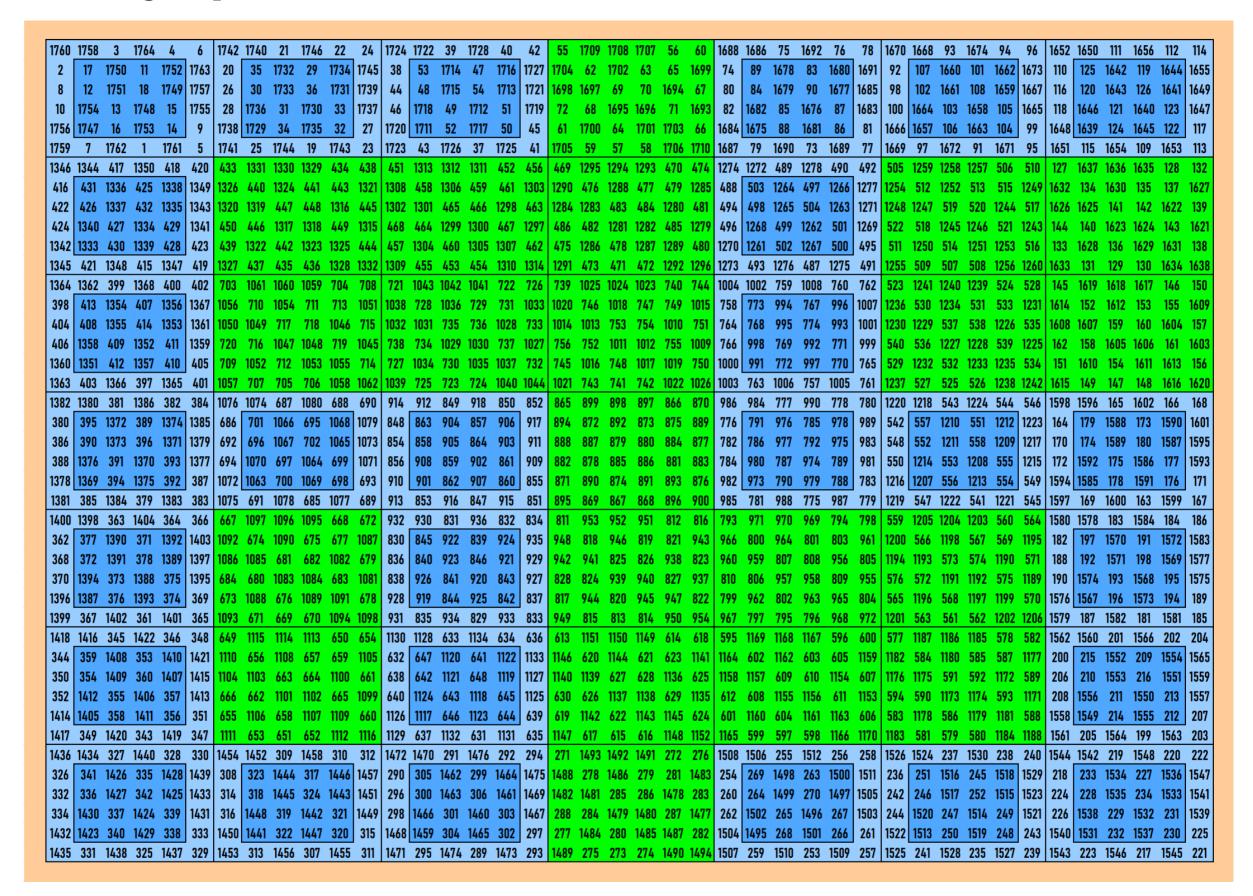
3.12 Magic Squares of Order 42 With Number 55



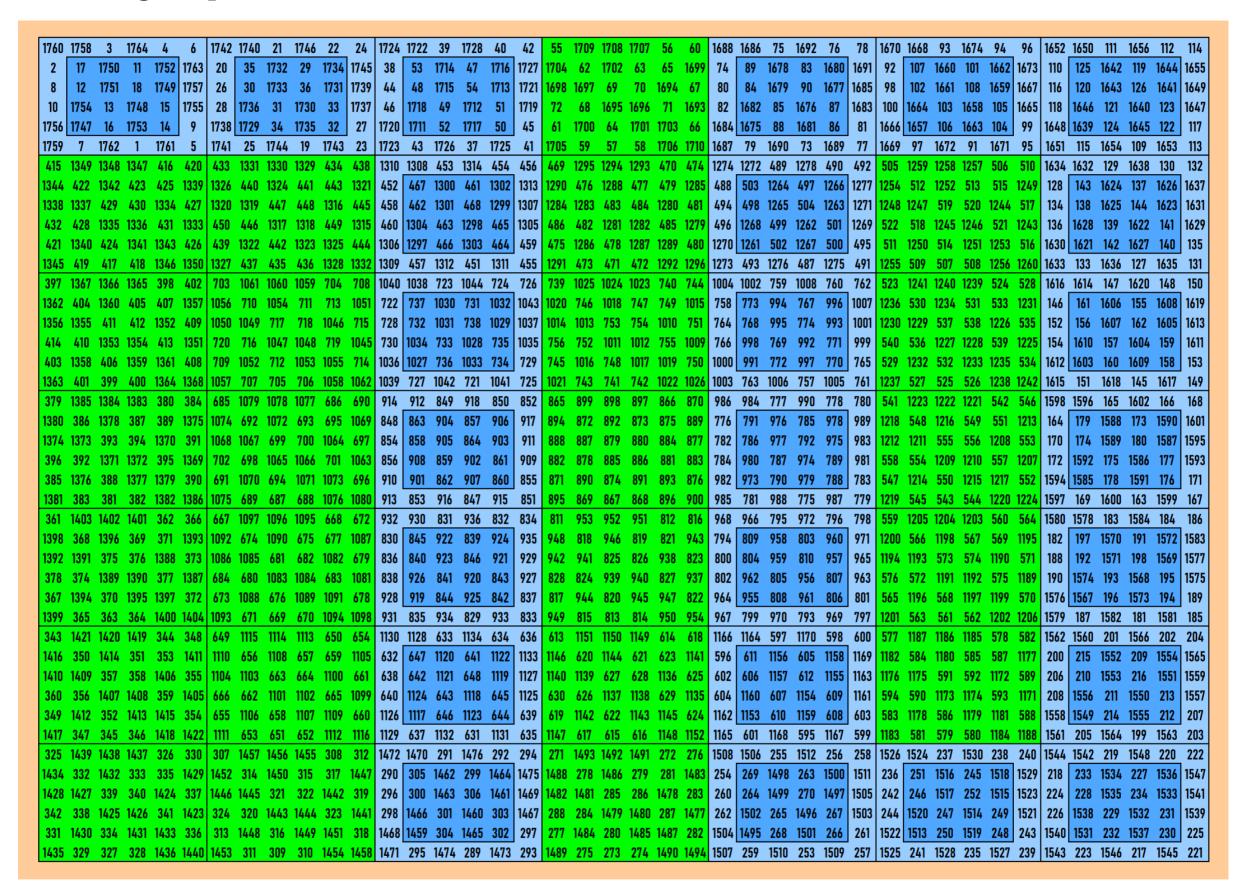
3.13 Magic Squares of Order 42 With Number 60



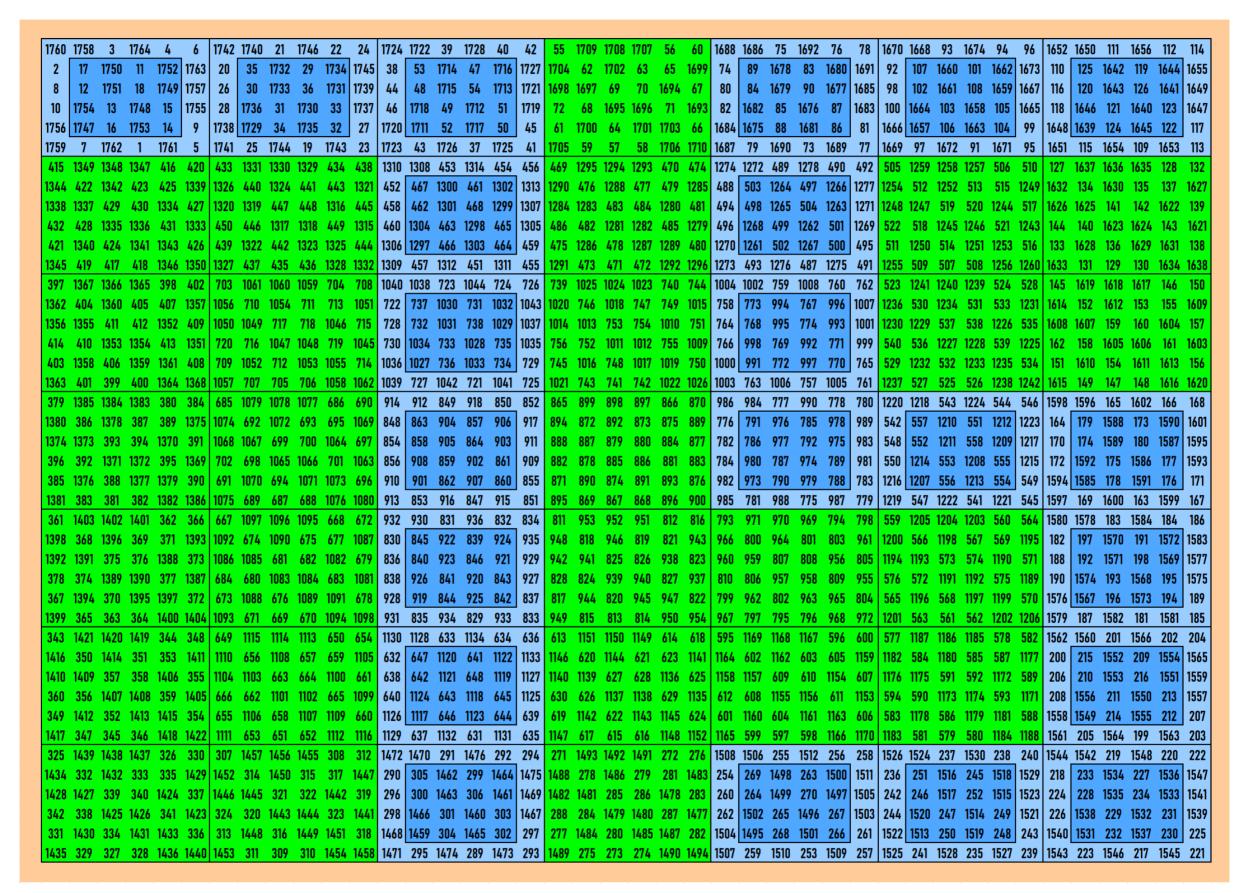
3.14 Magic Squares of Order 42 With Number 65



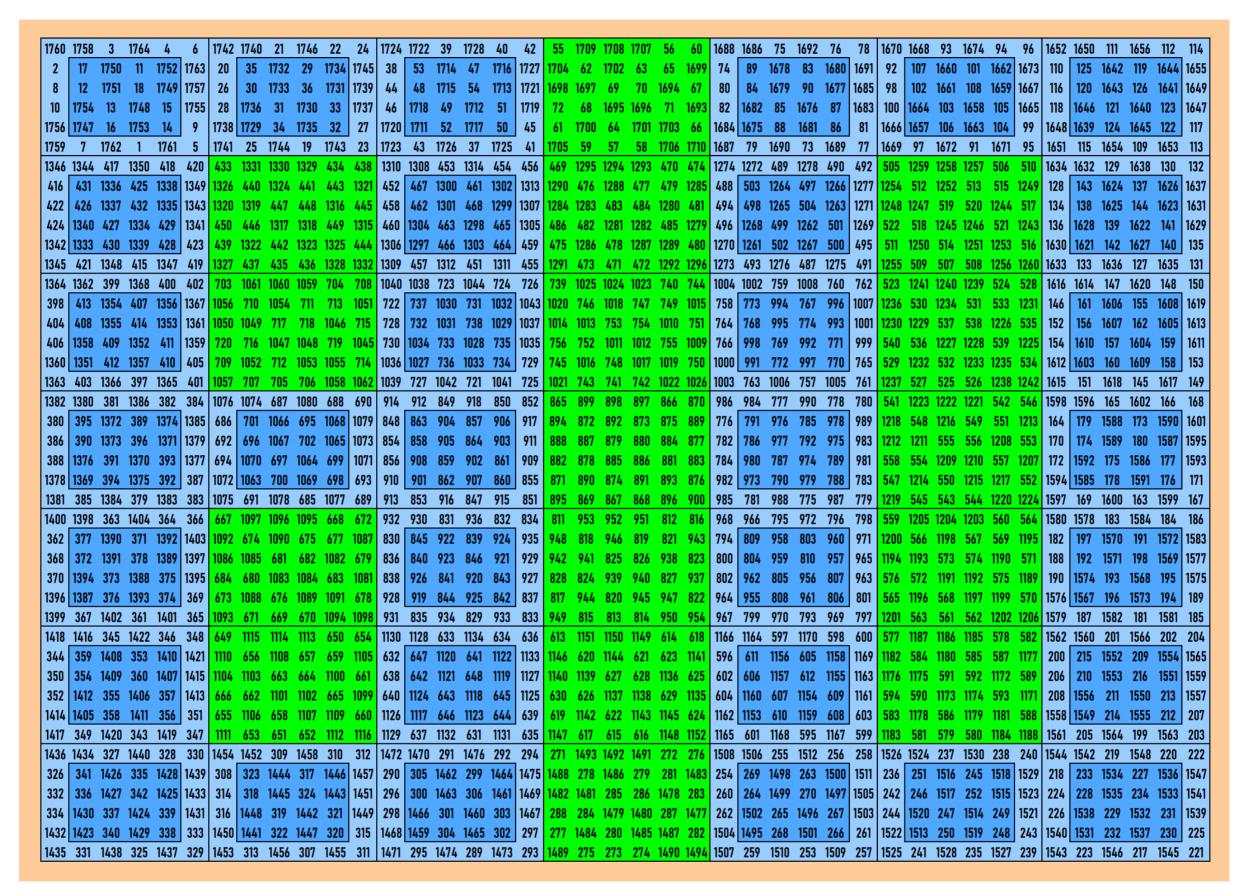
3.15 Magic Squares of Order 42 With Number 70



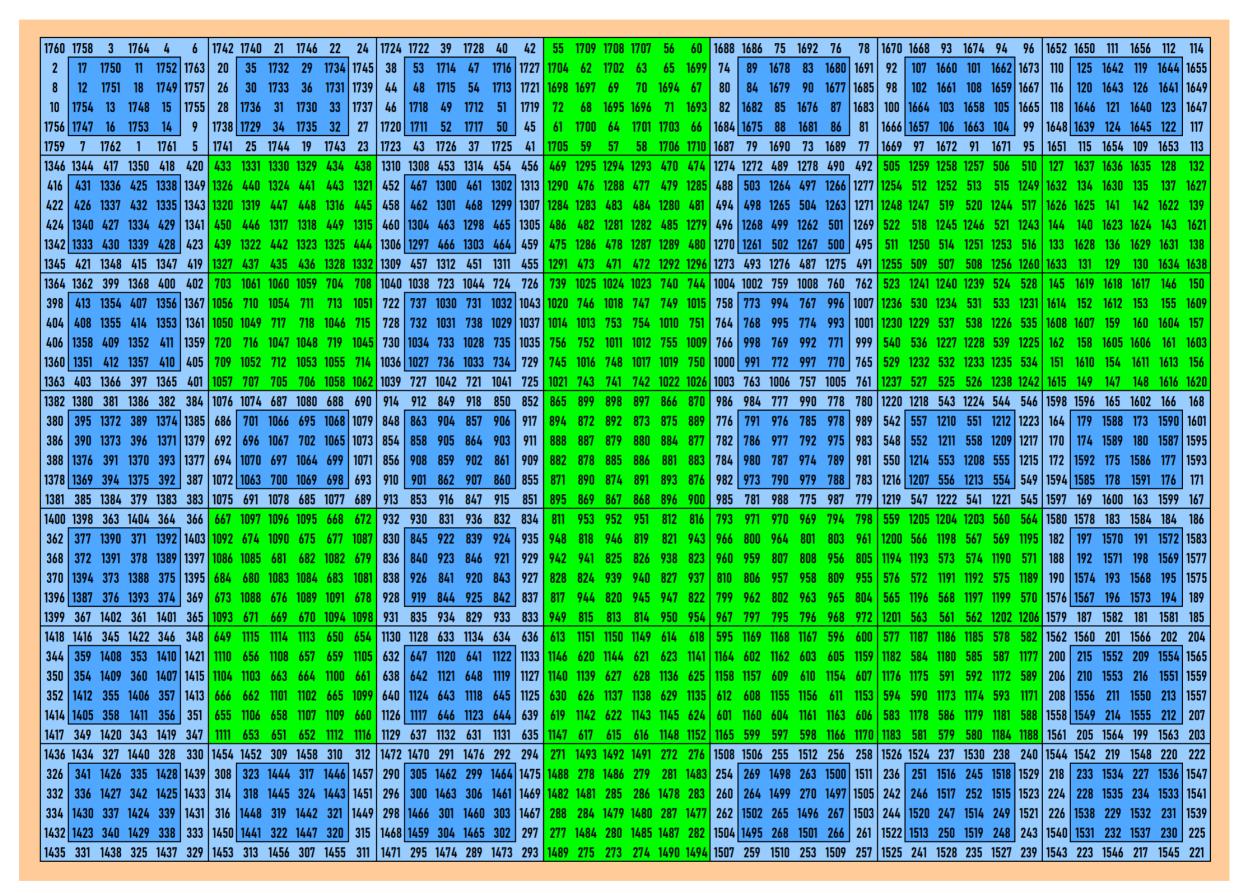
3.16 Magic Squares of Order 42 With Number 75



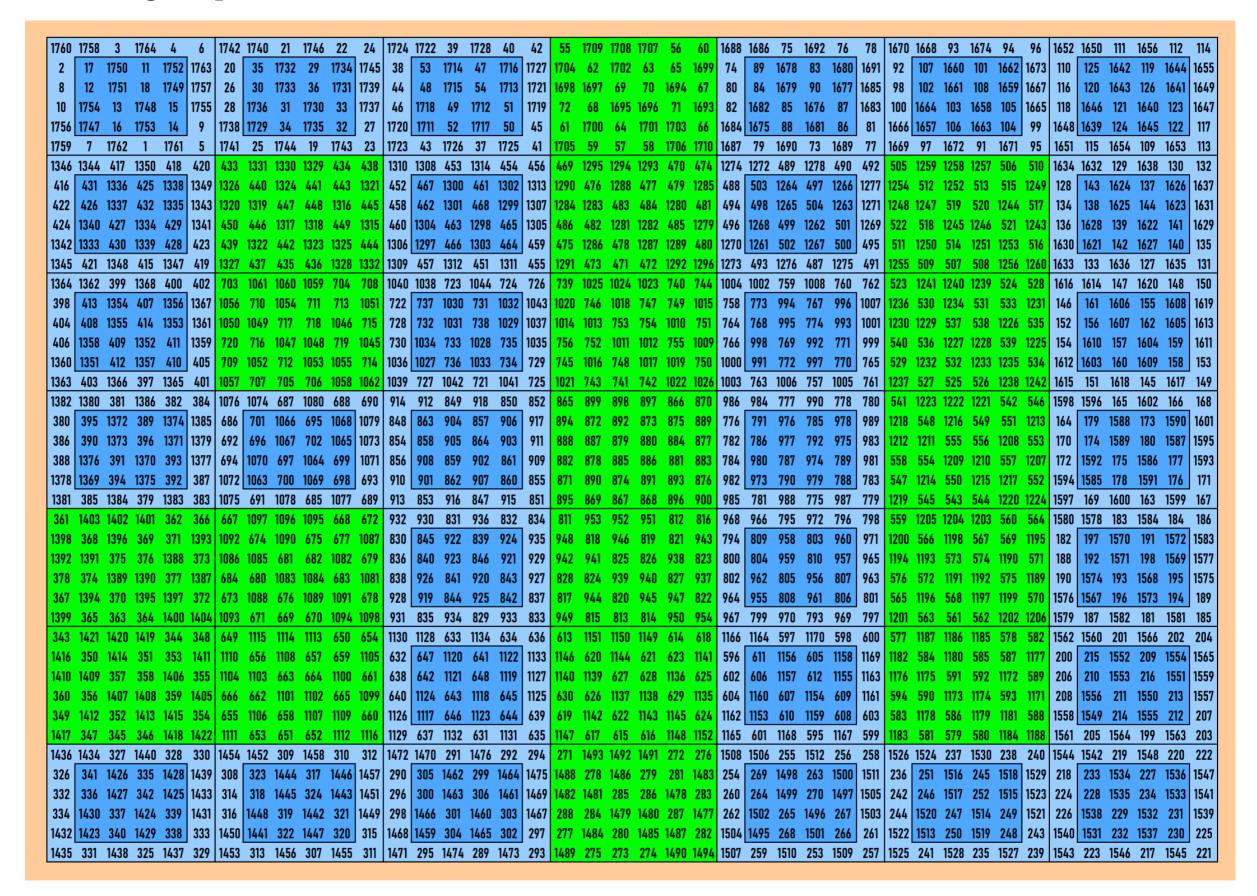
3.17 Magic Squares of Order 42 With Number 80



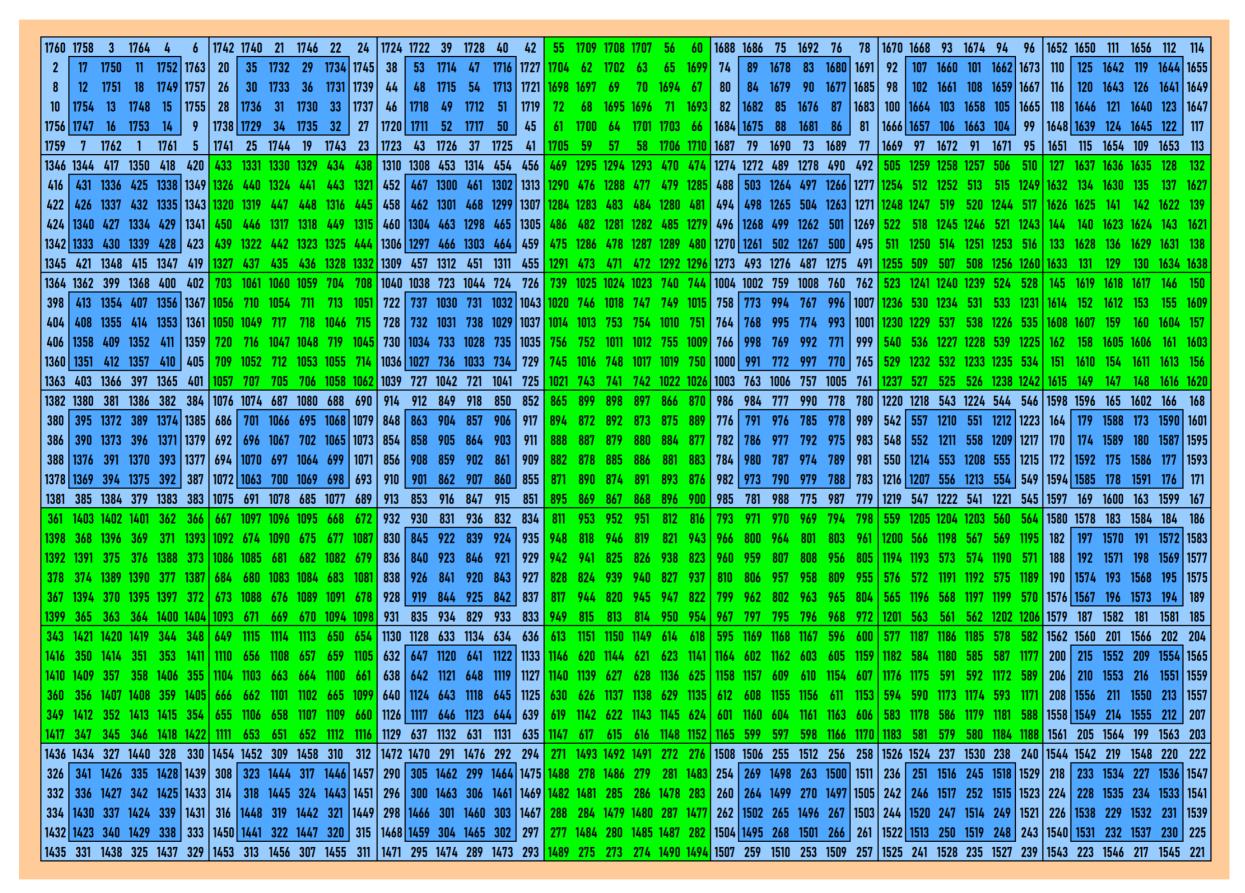
3.18 Magic Squares of Order 42 With Number 85



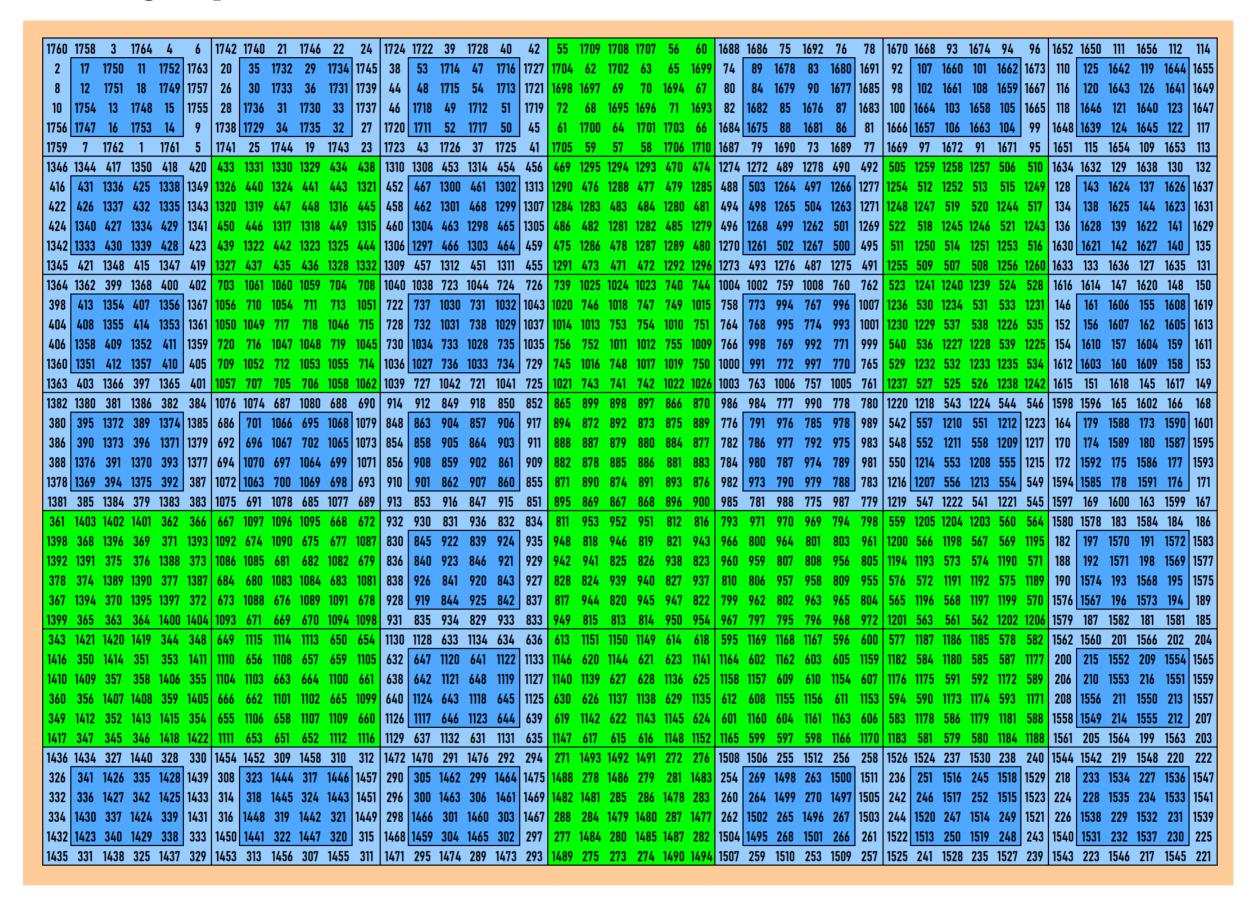
3.19 Magic Squares of Order 42 With Number 90



3.20 Magic Squares of Order 42 With Number 95



3.21 Magic Squares of Order 42 With Number 99



4 Author's Contribution to Magic Squares and Recreation Numbers

For author's contribution to **magic squares** and **recreation numbers** please see the links below:

- Inder J. Taneja, Magic Squares, https://inderjtaneja.com/2019/06/27/publications-magic-squares/
- Inder J. Taneja, Recreation of Numbers, https://inderjtaneja.com/2019/06/27/publications-recreation-of-numbers/

References

- Sites
- [1] **H. White**, Bordered Magic Squares http://budshaw.ca/BorderedMagicSquares.html
- [2] **H. Danielsson**, Bordered Magic Squares https://www.magic-squares.info/methods/bordered.html
- [3] **Inder J. Taneja**, Magic Squares https://inderjtaneja.com/category/magic-squares/
- [4] Inder J. Taneja, Recreating Numbers and Magic Squares https://numbers-magic.com/
 - Block-Wise Magic Squares
- [5] Inder J. Taneja, Block-Wise Constructions of Magic and Bimagic Squares of Orders 8 to 108, May 15, 2019, pp. 1-43, Zenodo, http://doi.org/10.5281/zenodo.2843326.
- [6] Inder J. Taneja, Block-Wise Equal Sums Pandiagonal Magic Squares of Order 4k, Zenodo, January 31, 2019, pp. 1-17, http://doi.org/10.5281/zenodo.2554288.
- [7] **Inder J. Taneja**, Magic Rectangles in Construction of Block-Wise Pandiagonal Magic Squares, **Zenodo**, January 31, 2019, pp. 1-49, http://doi.org/10.5281/zenodo.2554520.
- [8] **Inder J. Taneja**, Block-Wise Equal Sums Magic Squares of Orders 3k and 6k, **Zenodo**, February 1, 2019, pp. 1-55, http://doi.org/10.5281/zenodo.2554895.
- [9] Inder J. Taneja, Block-Wise Unequal Sums Magic Squares, Zenodo, February 1, 2019, pp. 1-52, http://doi.org/10.5281/zenodo.2555260.
- [10] Inder J. Taneja, Block-Wise Magic and Bimagic Squares of Orders 12 to 36, Zenodo, February 1, 2019, pp. 1-53, http://doi.org/10.5281/zenodo.2555343.

[11] **Inder J. Taneja**, Block-Wise Magic and Bimagic Squares of Orders 39 to 45, **Zenodo**, February 2, 2019, pp. 1-73, http://doi.org/10.5281/zenodo.2555889.

Bordered Magic Squares

- [12] **Inder J. Taneja**, Nested Magic Squares With Perfect Square Sums, Pythagorean Triples, and Borders Differences, **Zenodo**, June 14, 2019, pp. 1-59, http://doi.org/10.5281/zenodo.3246586.
- [13] **Inder J. Taneja**, Symmetric Properties of Nested Magic Squares, **Zenodo**, June 29, 2019, pp. 1-55, http://doi.org/10.5281/zenodo.3262170.
- [14] Inder J. Taneja, General Sum Symmetric and Positive Entries Nested Magic Squares, Zenodo, July 04, 2019, pp. 1-55, http://doi.org/10.5281/zenodo.3268877.
- [15] Inder J. Taneja, Bordered Magic Squares With Order Square Magic Sums, Zenodo, January 20, 2020, pp. 1-26, http://doi.org/10.5281/zenodo.3613690.
- [16] **Inder J. Taneja**, Fractional and Decimal Type Bordered Magic Squares With Magic Sum 2020. **Zenodo**, January 20, 2020, pp.1-25. http://doi.org/10.5281/zenodo.3613698.
- [17] **Inder J. Taneja**, Fractional and Decimal Type Bordered Magic Squares With Magic Sum 2021, **Zenodo**, December 16, 2020, pp. 1-33, http://doi.org/10.5281/zenodo.4327333.
- [18] **Inder J. Taneja**, Inder J. Taneja, Block-Wise and Block-Bordered Magic Squares With Magic Sum 2022, **Zenodo**, December 28, 2021, pp. 1-38, https://doi.org/10.5281/zenodo.5807789

• Block-Bordered Magic Squares

- [19] **Inder J. Taneja**, Block-Bordered Magic Squares of Prime and Double Prime Numbers I, **Zenodo**, August 18, 2020, pp. 1-81, http://doi.org/10.5281/zenodo.3990291.
- [20] **Inder J. Taneja**, Block-Bordered Magic Squares of Prime and Double Prime Numbers II, **Zenodo**, August 18, 2020, pp. 1-90, http://doi.org/10.5281/zenodo.3990293.
- [21] **Inder J. Taneja**, Block-Bordered Magic Squares of Prime and Double Prime Numbers III, **Zenodo**, September 01, 2020, pp. 1-93, http://doi.org/10.5281/zenodo.4011213.

• Block-Wise and Block-Bordered Magic Squares

- [22] **Inder J. Taneja**, Block-Wise and Block-Bordered Magic and Bimagic Squares With Magic Sums 21, 21² and 2021. **Zenodo**, December 16, 2020, pp. 1-118, http://doi.org/10.5281/zenodo.4380343.
- [23] **Inder J. Taneja**, Block-Wise and Block-Bordered Magic and Bimagic Squares of Orders 10 to 47. **Zenodo**, January 14, 2021, pp. 1-185, http://doi.org/10.5281/zenodo.4437783.
- [24] Inder J. Taneja, Bordered and Block-Wise Bordered Magic Squares: Odd Order Multiples, Zenodo, Feburary 10, 2021, pp. 1-75, http://doi.org/10.5281/zenodo.4527739
- [25] Inder J. Taneja, Bordered and Block-Wise Bordered Magic Squares: Even Order Multiples, Zenodo, Feburary 10, 2021, pp. 1-96, http://doi.org/10.5281/zenodo.4527746
- [26] Inder J. Taneja, Block-Wise Bordered and Pandiagonal Magic Squares Multiples of 4, Zenodo, August 31, 2021, pp. 1-148, https://doi.org/10.5281/zenodo.5347897.
- [27] **Inder J. Taneja**, Inder J. Taneja, Block-Wise Bordered Magic Squares Multiples of Magic and Bordered Magic Squares of Order 6, **Zenodo**, September 10, pp. 1-99 https://doi.org/10.5281/zenodo.5500134.
- [28] **Inder J. Taneja**, Inder J. Taneja, Block-Wise Bordered Magic Squares Multiples of 8, **Zenodo**, September 17, pp. 1-80, https://doi.org/10.5281/zenodo.5514396.
- [29] Inder J. Taneja, Inder J. Taneja, Block-Wise Bordered Magic Squares Multiples of 10, Zenodo, September 17, pp. 1-170, https://doi.org/10.5281/zenodo.5514398.
- [30] Inder J. Taneja, Inder J. Taneja, Block-Wise Bordered and Pandiagonal Magic Squares Multiples of 12, Zenodo, September 23, pp. 1-170, https://doi.org/10.5281/zenodo.5523608
- [31] Inder J. Taneja, Inder J. Taneja, Block-Wise Bordered Magic Squares Multiples of 14, Zenodo, September 26, pp. 1-198, https://doi.org/10.5281/zenodo.5528867

• Perfect Square Sums and Pythagorean Triples

[32] Inder J. Taneja, Block-Wise and Block-Bordered Magic Squares Generated by Pythagorean Triples: Orders 3 to 47, May 28, 2021, pp. 1-119, **Zenodo**, http://doi.org/10.5281/zenodo.4837454.

- [33] **Inder J. Taneja**, Sequential Pythagorean Triples and Perfect Square Sum Magic Squares, **Zenodo**, June 21, 2021, pp. 1-595, http://doi.org/10.5281/zenodo.5009204.
- [34] Inder J. Taneja, Magic Squares With Perfect Square Sum of Entries: Orders 3 to 31, Zenodo, July 19, pp. 1-181, 2021, http://doi.org/10.5281/zenodo.5115214.
- [35] **Inder J. Taneja**, Minimum Perfect Square Sum Bordered and Block-Wise Bordered Magic Squares: Orders 3 to 31, **Zenodo**, July 20, pp. 1-82, 2021, http://doi.org/10.5281/zenodo.5116408.
 - Creative Magic Squares
- [36] Inder J. Taneja, Creative Magic Squares: Area Representations, Zenodo, June 22, pp. 1-45, 2021, http://doi.org/10.5281/zenodo.5009224.
