The Flanked-5 Number System: Reconciling Decimal Milestones within a Symmetric Duodecimal Framework

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Abstract

We present a novel rearrangement of the base-12 (duodecimal) positional numeral system. By inserting two unique digits directly flanking the value 5, we shift the conventional positions of the remaining numbers. This configuration preserves the superior geometric divisibility of the duodecimal framework while anchoring the intuitive milestones of the base-10 system (5 and 10) at the critical 180-degree and 360-degree coordinates of a circular matrix. Furthermore, this structural shift forces all prime numbers greater than 3 to resolve into a perfectly symmetric, four-fold repeating digital root termination, mapping arithmetic progression directly onto geometric harmonic waves.

1. Introduction: The Language Barrier of Base-10

While the decimal system dominates modern global commerce due to human anatomy, it remains an inefficient framework for geometry, physics, and wave mechanics. Base-10 can only be cleanly divided by 2 and 5, leading to infinite repeating fractions when dealing with thirds, quarters, and sixths—the fundamental divisions of a circle.

Conversely, the duodecimal (base-12) system natively accommodates divisions by 2, 3, 4, and 6. However, traditional base-12 notation appends new digits after 9 (typically using symbols like X and E or A and B), which completely severs the intuitive, deeply ingrained cognitive milestones of 5 and 10. This paper introduces a system that marries the two frameworks by treating the base-10 milestones as spatial anchors rather than sequential endpoints.

2. The Flanked-5 Chronological Mapping

We introduce two new notation placeholders, **alpha** and **beta**. Rather than appending them to the end of the single-digit sequence, they are slotted directly around the value 5. The complete single-digit counting sequence for this base-12 framework is established as follows:

1, 2, 3, 4, alpha, 5, beta, 6, 7, 8, 9, 10

Where the symbol **10** represents the completion of the 12-unit cycle (the value 12 in base-10). When mapped directly onto the 12 hours of a standard clock face, this sequence creates a beautiful spatial alignment:

Clock Coordinate	Flanked-5 Value	Traditional Value Equivalent
1 o'clock to 4 o'clock	1, 2, 3, 4	1, 2, 3, 4
5 o'clock	**alpha**	First New Placeholder (Value 5)
6 o'clock (Bottom Anchor)	**5**	Decimal 5 (Value 6)
7 o'clock	**beta**	Second New Placeholder (Value 7)
8 o'clock to 11 o'clock	6, 7, 8, 9	6, 7, 8, 9
12 o'clock (Top Anchor)	**10**	Decimal 10 / Cycle Completion (Value 12)

3. The Geometric Resolution of Primes and the Equator Fold

In any base-12 framework, prime numbers greater than 3 are structurally prevented from falling on positions divisible by 2 or 3. This restricts all primes exclusively to four specific paths on a circular dial: the 1, 5, 7, and 11 o'clock lanes.

Under the Flanked-5 system, the values occupying those exact four lanes resolve into a flawless, repeating 'X' symmetry:

- 1 o'clock contains **1**
- 5 o'clock contains **alpha**
- 7 o'clock contains **beta**
- 11 o'clock contains **9**

Consequently, **every prime number in existence (above 3) is forced to end dynamically in either 1, alpha, beta, or 9.**

If we take this clock face and fold it across its horizontal equator (the 9 o'clock to 3 o'clock axis), a spectacular yin-and-yang reflection is revealed. The 5 o'clock (alpha) lane mirrors perfectly onto the 1 o'clock lane, while the 7 o'clock (beta) lane mirrors onto the 11 o'clock lane. This fold demonstrates that the infinity of primes does not collide or break under this distribution; rather, they scale as balanced, reflective pairs of spatial frequencies across the horizon of the matrix.

4. Physical Implication: The Moebius Twist

This numerical harmony has immediate physical consequences when calculating non-integer ratios like Pi. In standard decimal, Pi (3.14159...) represents an asymmetrical fractional overflow. If we conceptualise a physical loop where the linear, flat boundary requires exactly 3 units, the fractional remainder is not an algebraic anomaly—it is the literal geometric requirement for a 180-degree topological twist. Because the Flanked-5 system aligns the number grid directly with the 30-degree hourly increments of a circle, the fractional remainder of a twisted Moebius circuit maps precisely onto the harmonic nodes of the alpha and beta prime lanes.

5. Conclusion

The Flanked-5 system proves that our current mathematical friction is not a flaw in the fabric of nature, but a flaw in our chosen language. By simply shifting our notation to flank the number 5, arithmetic and geometry fuse into a singular, visual dialect. It provides a clearer lens to study wave mechanics, particle physics, and structural topology from the ground up without the baggage of traditional institutional biases.