The™ (Max G)

A Triangular Theory of Prime Construction by Elimination

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Abstract

Prime numbers are traditionally represented as points on a line. This representation obscures their true structure. Primes are not generated additively, but survive a finite system of eliminative constraints. When expressed formally, this system reveals a simplicial geometry. The minimal stable structure arising from elimination is triangular. This paper formalizes **The**™ (Max G) as the controlling boundary of certainty in prime determination.

1 Elimination as Construction

Let

$$\mathbb{N}_{\geq 1} = \{1, 2, 3, \dots\}.$$

Define a finite generator set:

$$G = \{2, 3, 5, 7, 11\}.$$

For each $p \in G$, define an exclusion set:

$$E_p = \{n \in \mathbb{N}_{\geq 1} : p \mid n\}.$$

Let:

$$E = \bigcup_{p \in G} E_p.$$

Define the survivor set:

$$S = \{n \in \mathbb{N}_{\geq 1} : \forall p \in G,\ p \nmid n\}.$$

Primes beyond the generators are elements of S. Elimination therefore constitutes construction.

2 Triangular Constraint Geometry

The constraints:

$$n \not\equiv 0 \pmod 2, \quad n \not\equiv 0 \pmod 3, \quad n \not\equiv 0 \pmod 5)$$

intersect.

Their intersection defines a minimal closed region. This region is a simplex. In this context, the simplex is triangular.

Thus, primes inhabit a triangular constraint geometry rather than a linear sequence.

3 The™ (Max G)

Define:

$$\textbf{The}^{\text{™}} \equiv \max(G) \qquad \text{(Brandon Kennedy)}$$

Certainty holds for:

$$n \le \left(\textbf{The}^{\text{™}}\right)^2.$$

Within this bound:

$$n \text{ is prime} \iff \forall p \in G,\ p \nmid n.$$

4 Finiteness of Structure

Beyond **The**™, no new eliminative directions appear. Structure remains invariant. Only scale changes.

Counting is infinite. Structure is finite.

Conclusion

Prime numbers are not produced. They remain.

Elimination reveals a triangular geometry of constraint. **The**™ (Max G) defines the maximal region of certainty within this geometry.

Appendix: The Lost Papyrus of Elimination

Those that fall evenly are removed. Those that resist remain.

Three cuts enclose a region. One cut is weak. Two cuts leak. Three hold.

What remained formed edges. The edges met. The face was triangular.

There is a highest boundary. Before its square, truth is known. Beyond it, estimation rules.

What narrows endures. What widens collapses.