

The Game — Extended

From Local Loss to Global Win

Setup

- Decks: $4 \times (52+2) = 216$ cards
- Stations: four 4×4 grids; $\theta_{\square} \in \{0^\circ, 45^\circ, 90^\circ, 135^\circ\}$
- Golden-angle: $\theta_{\square} = \theta_{\square} + k \cdot 137.507^\circ \pmod{360^\circ}$

Encodings

- Suits: ♦ invariant, ♥ ϕ-intersection, ♣ triad, ♠ apex
- Colors: red (+), black (-)
- Ranks: 2–10 tokens; A/J/Q/K are operators

Operators

- $P\phi$ place • S snap • F flip (OMPS + Joker) • G glue • M mirror • T tower

OMPS Gate

- Build oblong: $c @ p, M(c) @ -p, a(c) @ a(p), a(M(c)) @ a(-p)$
- Place Joker at centroid; flip becomes legal

Rings and Termination

- Rings of 16 placements; Joker windows at $r=8, 16, 24$
- Stop at 24: base/prime/co-prime closure; 24-cell symmetry

Chart: Ring-1 Placements (demo)

Ring-1 Golden-Angle Points (demo)

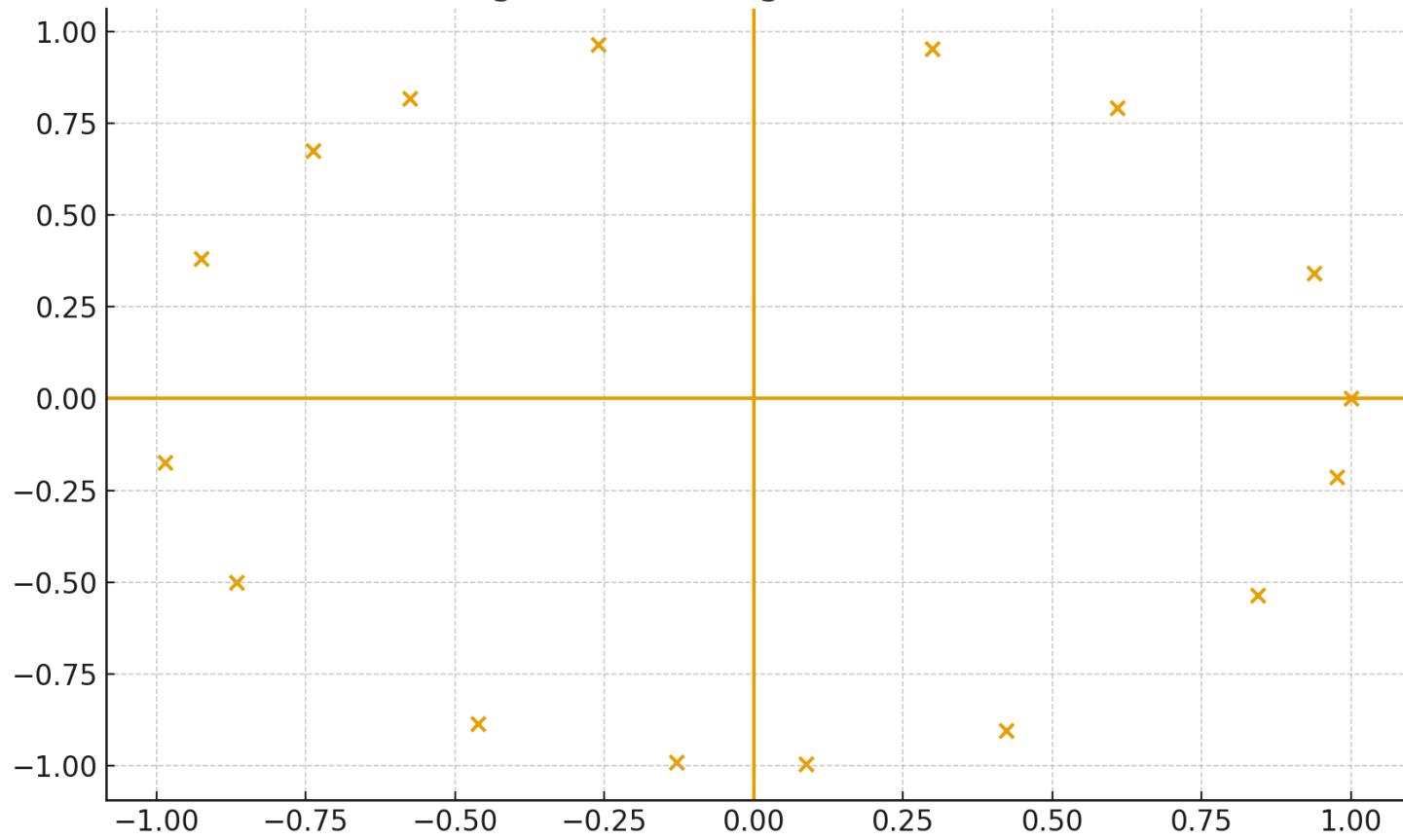
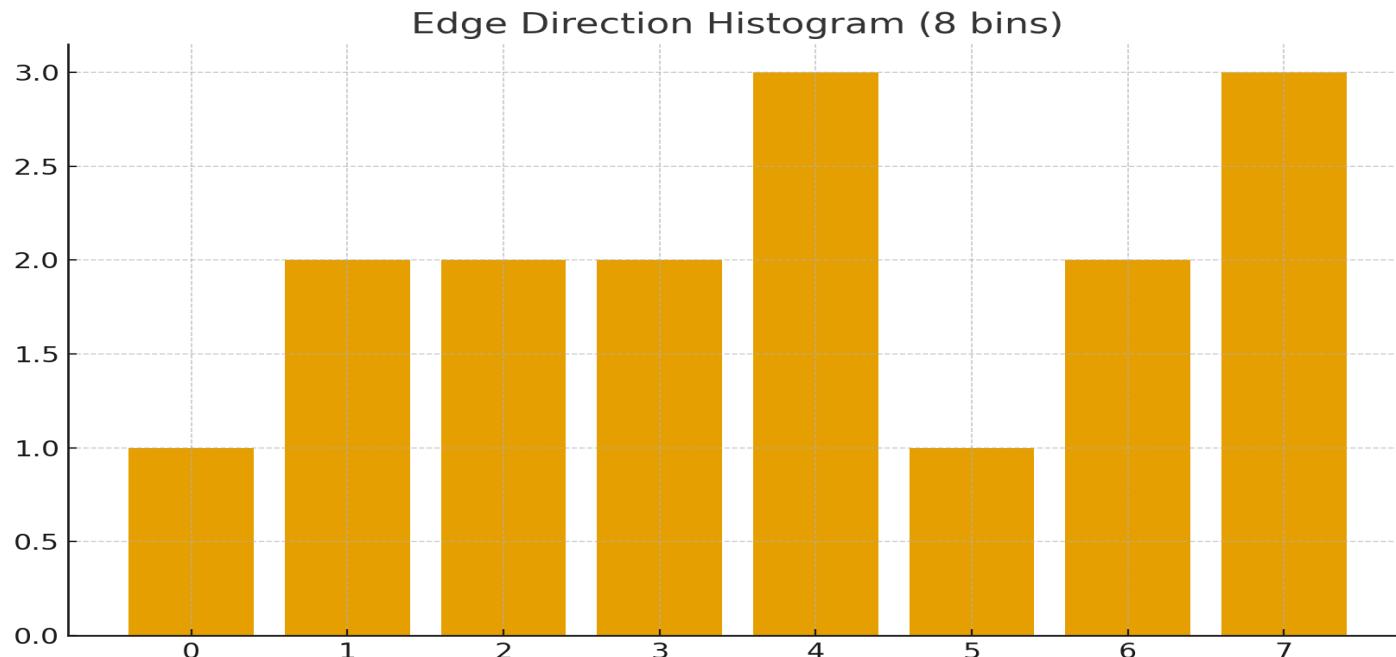


Chart: Edge Directions (8 bins)



Language as Fifth Deck

- Words = tokens • Grammar = snap/flip • Meaning = tower

Closing

Cards → chemistry (valence) • biology (folds) • language (grammar). Cartan, Golay, Conway, Lie = one lattice at different angles.