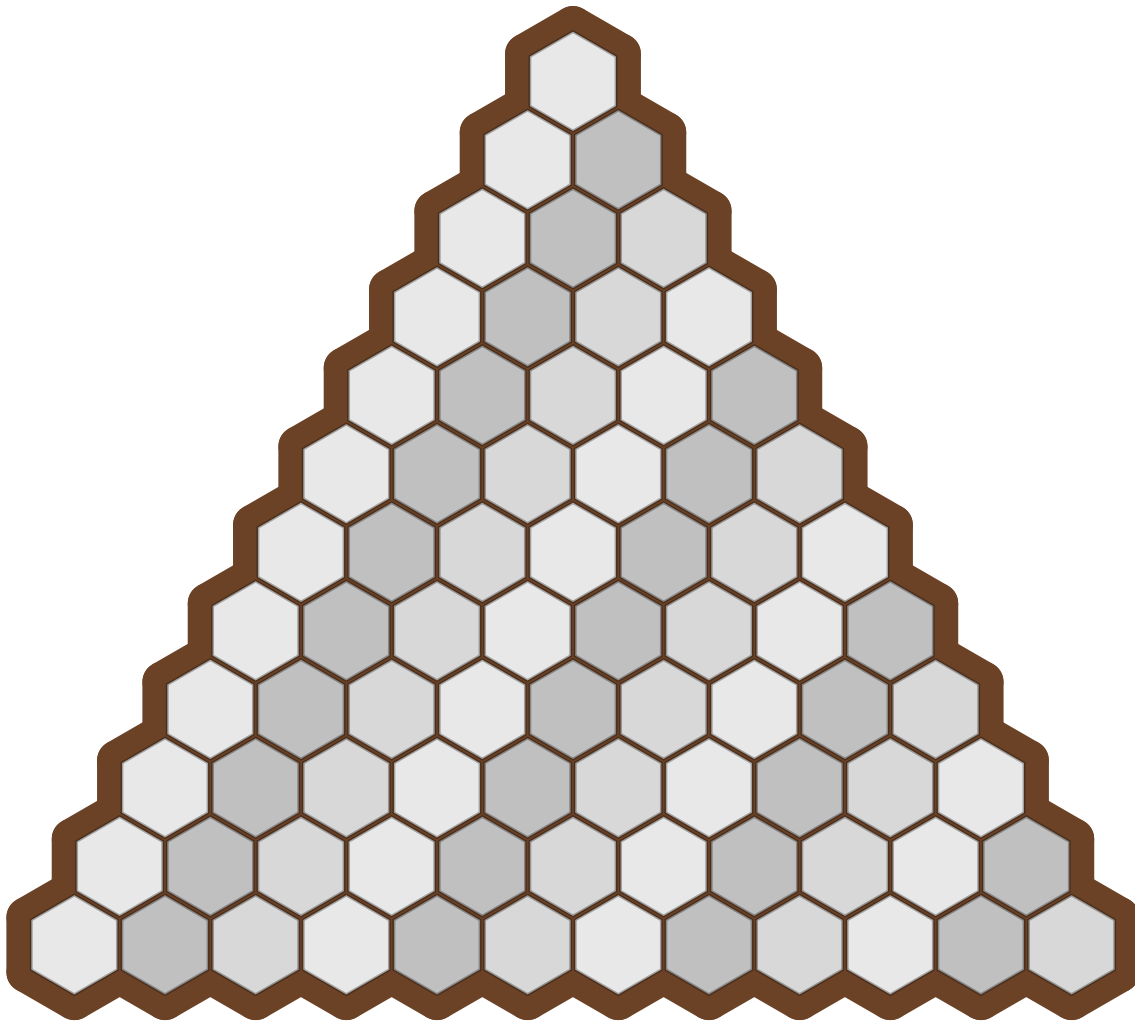


HEX · VARIANT 6 OF 8

Y

triangular hex
BOARD

2
PLAYERS



Y — starting position

<https://engine.moddable.games/play/?game=hex&variant=y-game>

Invented by Claude Shannon and Craige Schensted in the 1950s. Played on a triangular board of hexagonal cells. Two players alternate placing stones. The first player to form a connected group touching all three edges of the triangle wins.

BOARD

A triangular grid of hexagonal cells. Standard sizes range from side-length 9 to 15. Each edge of the triangle is one “side” — there are three sides total.

Corner cells touch two edges simultaneously.

SETUP

The board starts empty. Black plays first.

RULES

- 1 Players alternate placing one stone of their colour on any empty cell
- 2 Stones never move or are captured once placed
- 3 The first player to form a single connected group of their stones that touches all three edges wins
- 4 The swap rule applies: after Black's first move, White may choose to swap colours instead of placing a stone

KEY DIFFERENCES FROM HEX

CONCEPT	HEX	Y
Board shape	Rhombus/parallelogram	Equilateral triangle
Edges	4 (2 per player)	3 (shared)
Win condition	Connect YOUR 2 opposite edges	Connect ALL 3 edges
Corner ownership	Corners belong to one player's edges	Corners touch 2 edges (valuable)
Draw possibility	Impossible (Hex property)	Impossible (same topological guarantee)

WHY THIS TESTS THE ENGINE

Y generalises the connection-win mechanic from “2 edges, each owned by a player” to “3 edges, first to touch all three”. The engine’s `hasPath()` traversal needs to detect multi-target connectivity — not just “does a path exist from edge A to edge B” but “does a single group touch edges A AND B AND C”.

The topology must support a triangular hex grid (not just hexagonal or rhombus). The win-detection rule must be parametric over edge count, not hardcoded to 2.