PYRAMID PARTITION

by Mark Steere
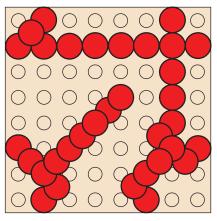

Figure 1

INTRODUCTION

Pyramid Partition is a two-player pyramid game. It's played on a square board of any size with a square pattern of dimples in which balls can be placed, each ball in contact with its neighboring balls. The two players, Red and Blue, take turns placing their own balls on or over the board, one ball per turn, starting with Red. Mark Steere designed Pyramid Partition in May 2024.

Pyramid Partition is essentially a three dimensional adaptation of Poly-Y (Charles Titus and Ea Ea, 1970). It's played both on the surface and **IN THE INTERIOR** of a pyramid. A sophisticated program is required to view and place balls in the interior.

TWO VERSIONS - STACKING AND FREE FLOATING

The board starts out empty. In the stacking version, balls can only be placed on the board, or if four balls occupy a 2x2 area in a level plane, a fifth ball can be stacked on top of them. In the free floating version, players can place a "floating" ball within the pyramid shape - not necessarily stacked on lower balls.

ISOLATED CORNER POINT

The "points" of a maximum sized pyramid are the locations where balls are located or could be placed. The exterior points include five walls and five corner points. A "partition" is a mono-colored sheet of balls which intersects the three walls adjacent to a corner point, isolating the corner point. (A partition could also be formed simply by placing a ball on a corner point.)

OBJECT OF THE GAME

An "anchored partition" is a mono-colored group of stones which includes a partition (which isolates a corner point) and a point on a wall not adjacent the isolated corner point. To win, you must form at least three anchored partitions. (The anchored partition groups may be merged, forming larger groups).

EXAMPLE (FREE FLOATING VERSION)

In **Figure 1**, Red has won by forming three anchored partitions, isolating the top left, bottom left, and bottom right corners. The other two corners are not isolated. Not all of the balls are visible in this top view diagram. Obscured balls extend the three partitions down to the board. Blue stones have been omitted for clarity.

DESIGN NOTES

Pyramid Partition is a fundamental connection game. That is, in a maximum sized, filled pyramid, one and only one of the players will fulfill the winning condition. Pyramid Partition is also the only known fully three dimensional, fundamental connection game. Michael Amundsen and Luis Bolaños Mures found errors in the original rules.

AUTHOR'S NOTE

Feel free to publish this rule sheet and to program the game of Pyramid Partition. No licensing fee or royalties are expected. However, please don't change the name or the rules, and please attribute the game to me, Mark Steere. My other games can be found at marksteeregames.com.