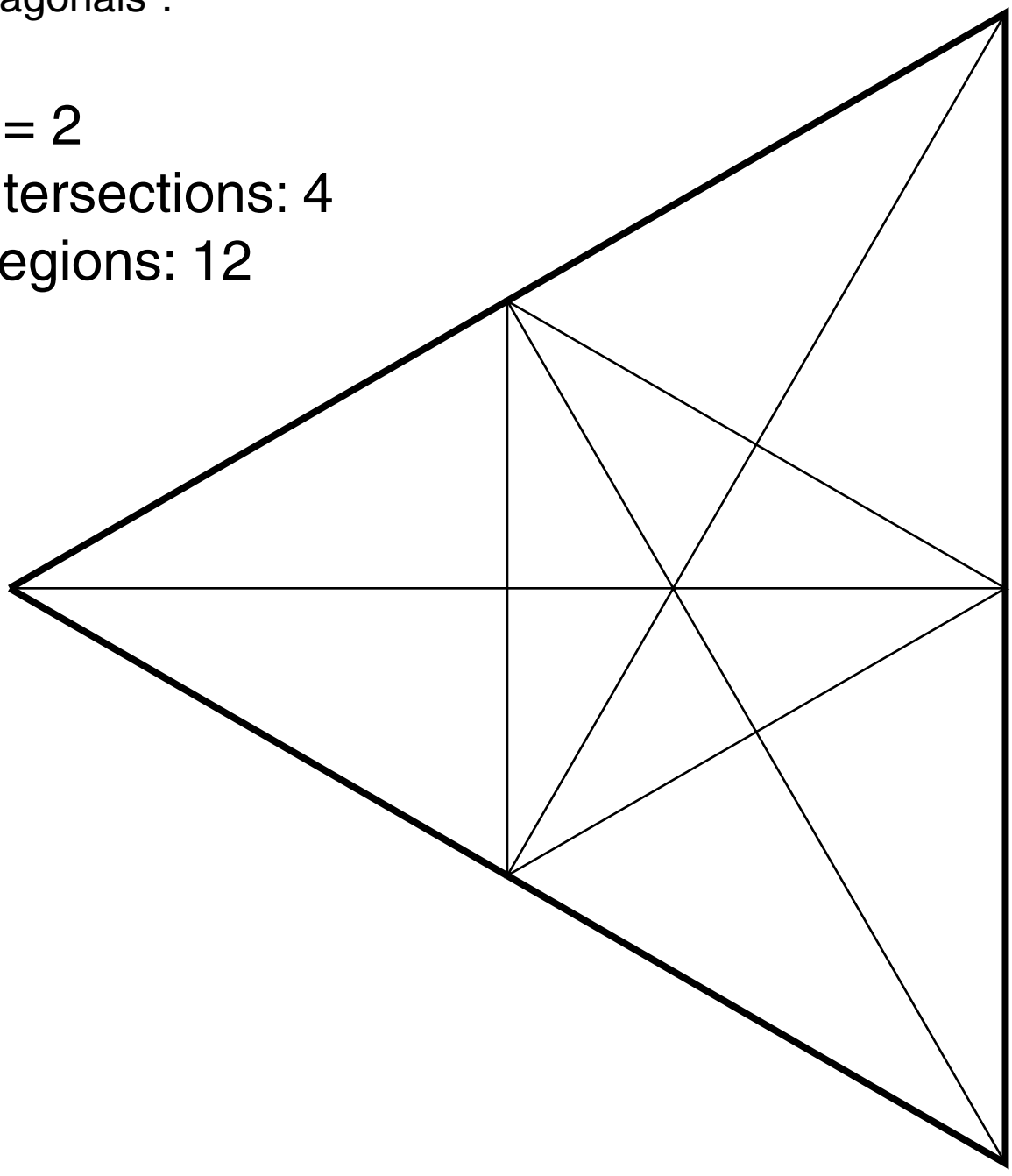
Intersections of "diagonals" in a triangle, connecting all edges and all points dividing the sides into n equal parts.

A092866(n) gives the number of distinct interior intersection points, counting coincident intersections only once.

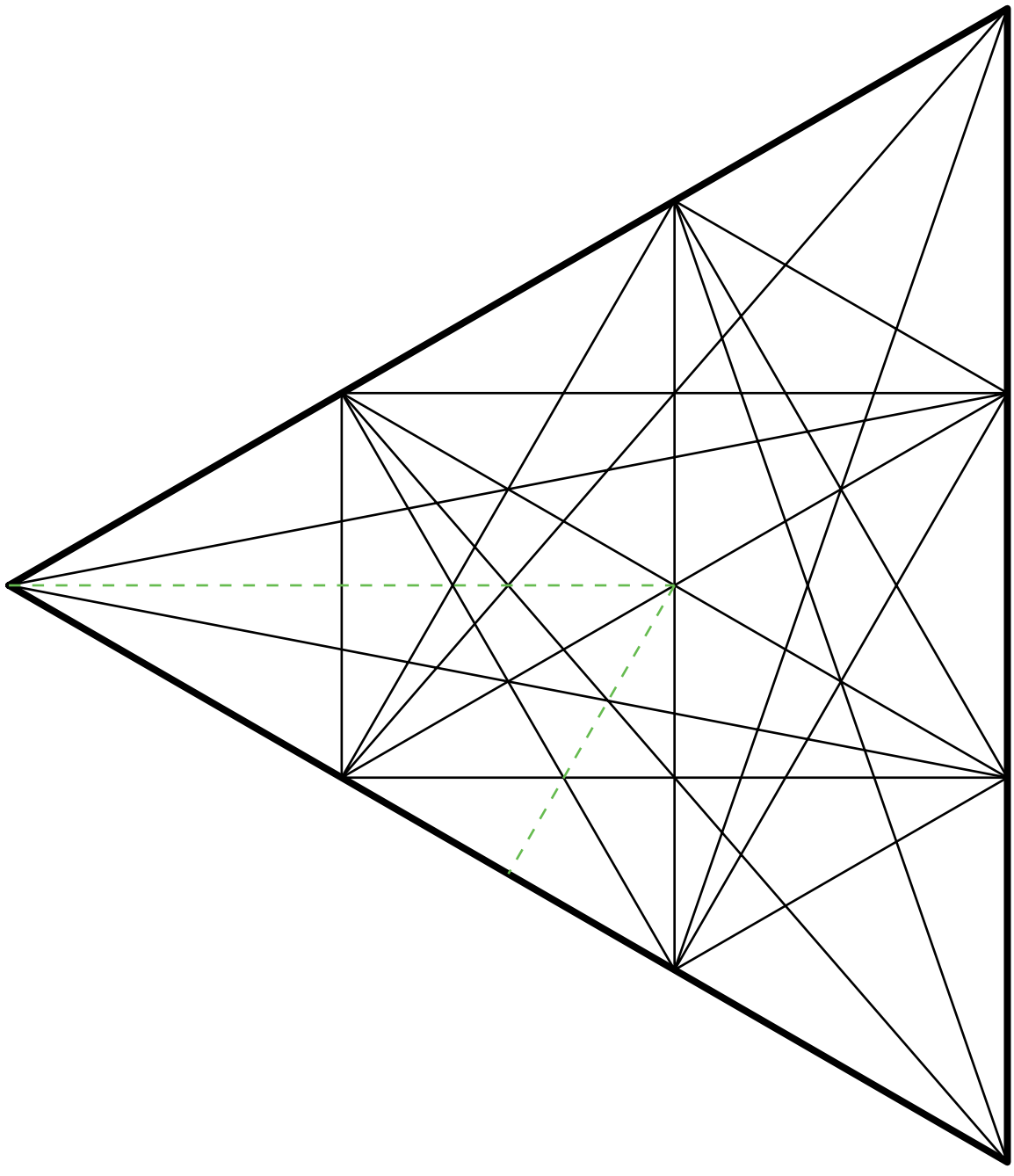
A092867(n) gives the number of regions formed by the "diagonals".

n = 2
Intersections: 4
Regions: 12

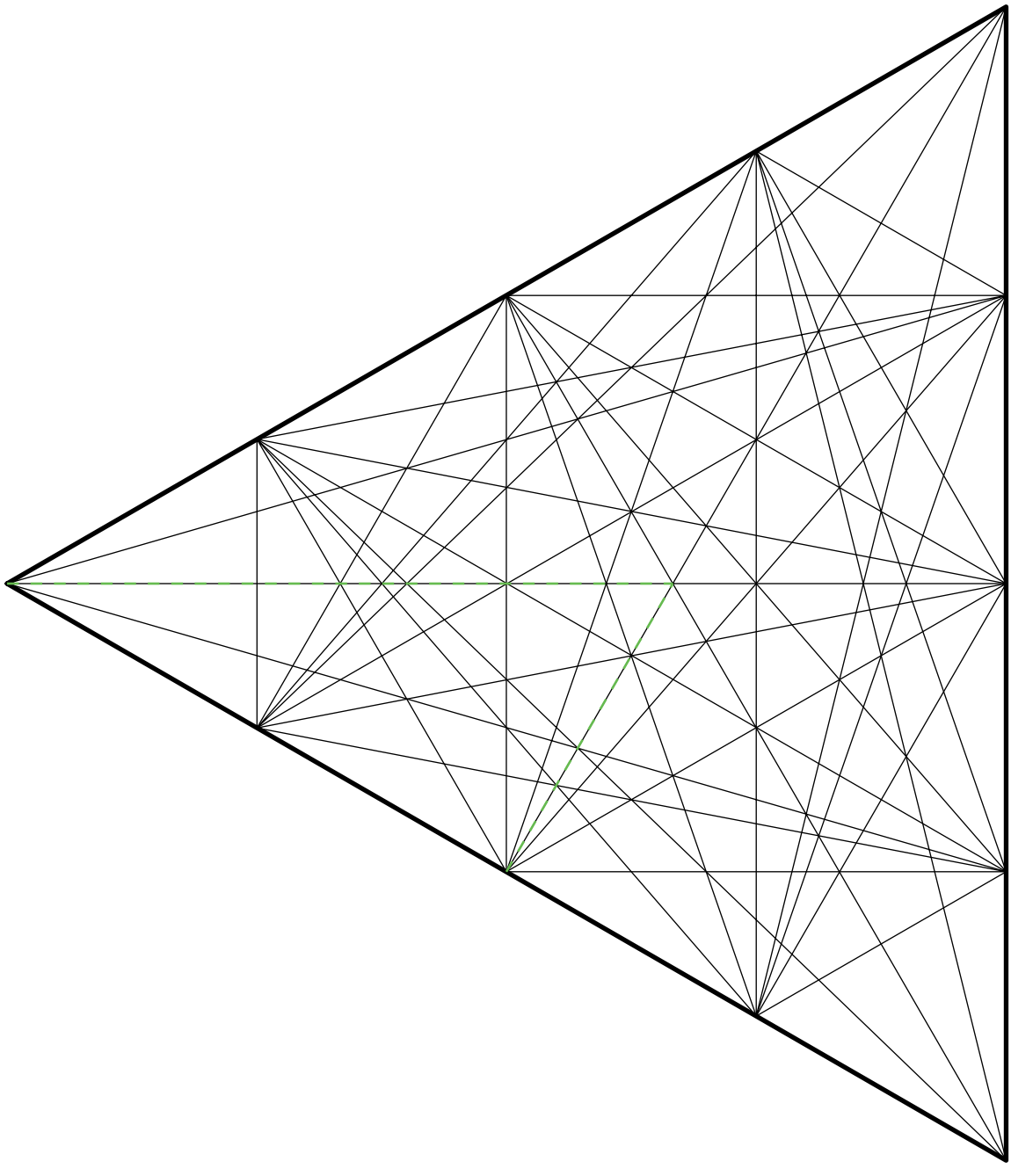


Hugo Pfoertner http://www.pfoertner.org/ Mar 7, 2004

n = 3
Intersections: 49 (= 6*6 + 4*3 + 1)
Regions: 75 (= 9*6 + 7*3)



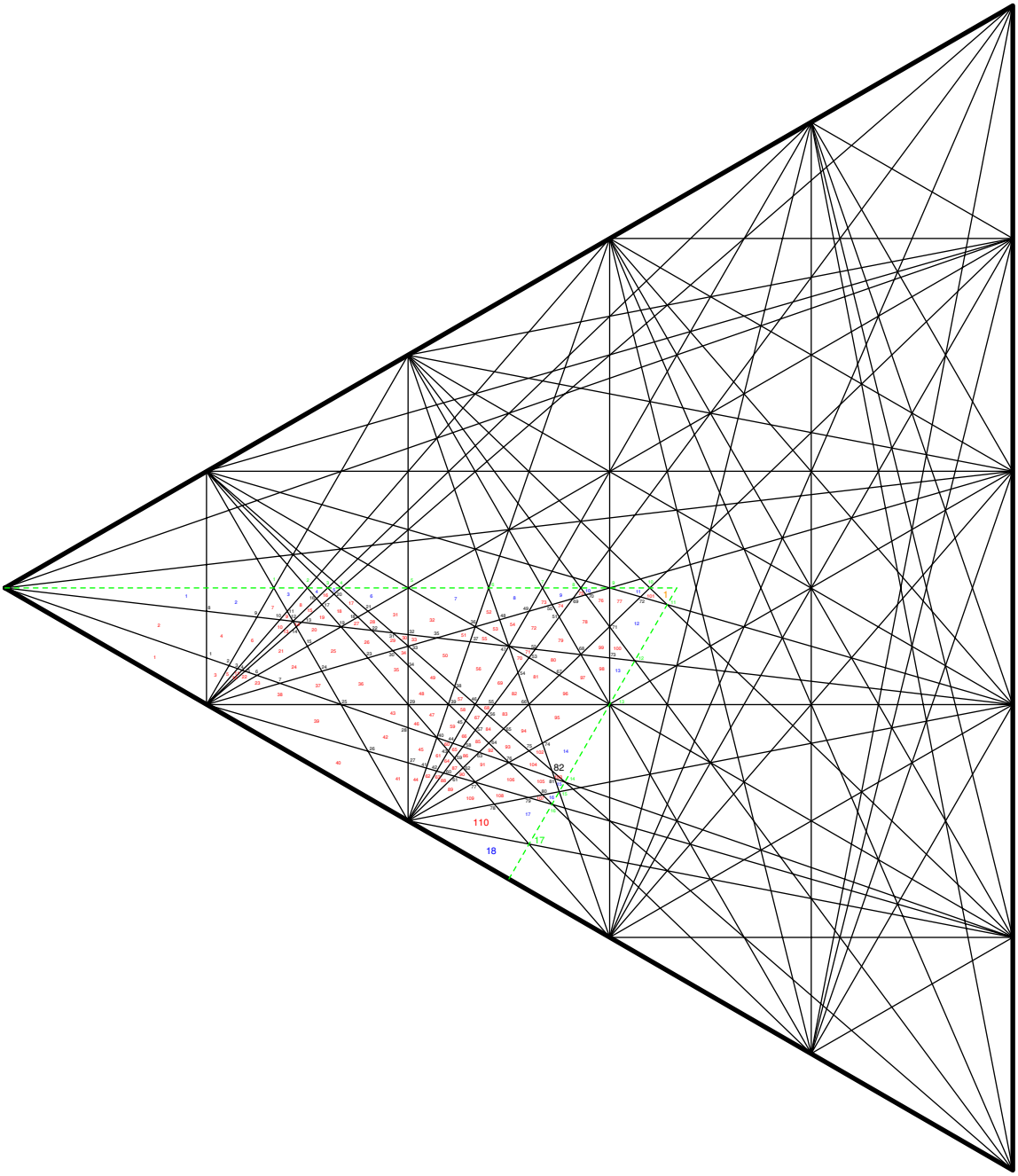
n = 4
Intersections: 154 (= 21*6 + 9*3 + 1)
Regions: 252 (= 42*6)



n = 5

Intersections: 543 (= 82*6 + 17*3)

Regions: 715 (= 110*6 + 18*3 + 1)



n = 6
Intersections: ?
Regions: ?