A problem based on a conversation with Alec Jones. Consider a variation on the "concavity classes" of polygons as described by OEIS sequence A227910. Say that two n-gons are in the same concavity class if one can be continuously deformed into the other (or a mirror image of the other) while (1) remaining an n-gon the entire time, and (2) preserving the number of sides of the convex hull.

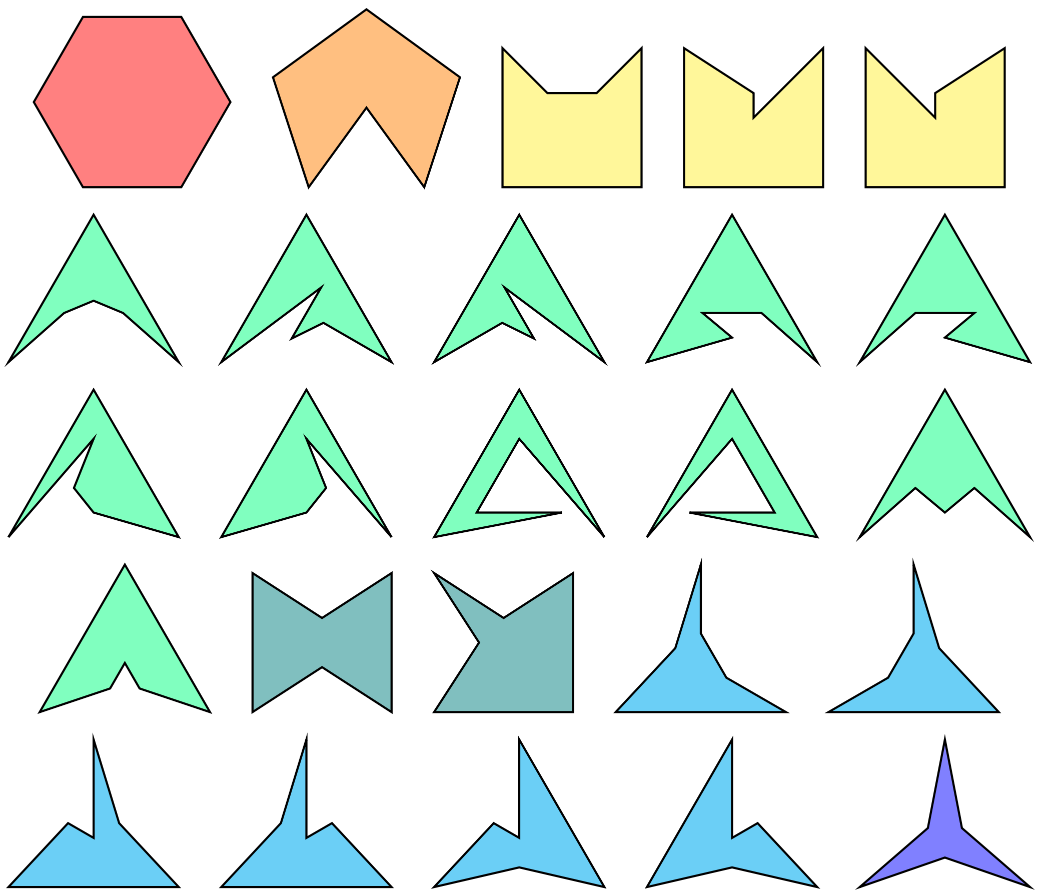

Figure 1: The $a(6) = 25$ concavity classes on the hexagons. There are $a(3) = 1$ triangles, $a(4) = 2$ quadrilaterals, and $a(5) = 6$ pentagons.

Question. How many convexity classes are there of an arbitrary n-gon?

Related.

1. What is the smallest square lattice that contains at least one representative of each concavity class of the n-gon for some fixed n? (That is, the polygons must have integer coordinates.)
2. (Is this the correct definition?)

References.

`https://oeis.org/A227910`