Difficulty: 3/4 Interest: 4/4

Consider all of the ways to take a square piece of paper and make two "precise" creases—that is, we can make a crease between two distinguished points, we can crease the paper such that any two distinguished points touch, and we can take an angle and bisect it.

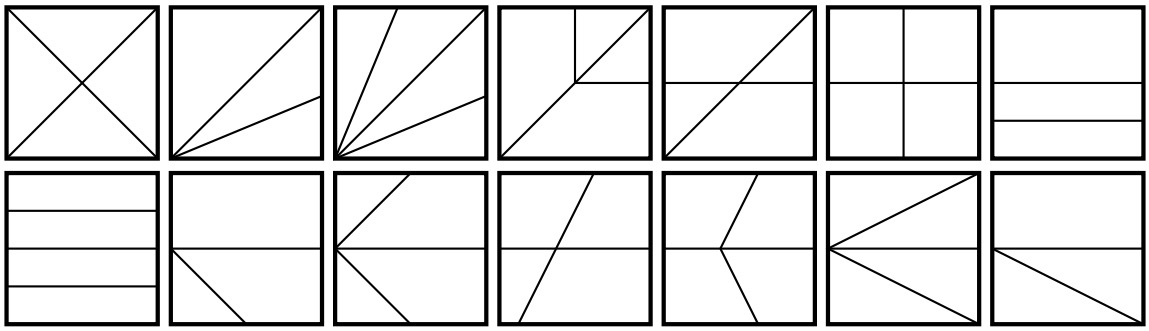

Figure 1: Fourteen (all?) two-crease patterns.

Question. How many such crease patterns exist on n creases?

Related.

1. If we "overlap" all diagrams, how many distinct lines?
2. What if we start with a rectangle? Equilateral triangle?
3. What if n is the number of folds, and unfolding counts as a fold?
4. What if we restrict the possible folds—for example, disallow folding a crease between two distinguished points?

References.

`https://en.wikipedia.org/wiki/Crease_pattern`