



Consider all of the ways to take a square piece of paper and make two “precise” creases—that is, we can make a perpendicular bisector of the line segment connecting two distinguished points, and we can take any two creases and bisect the angle between them.

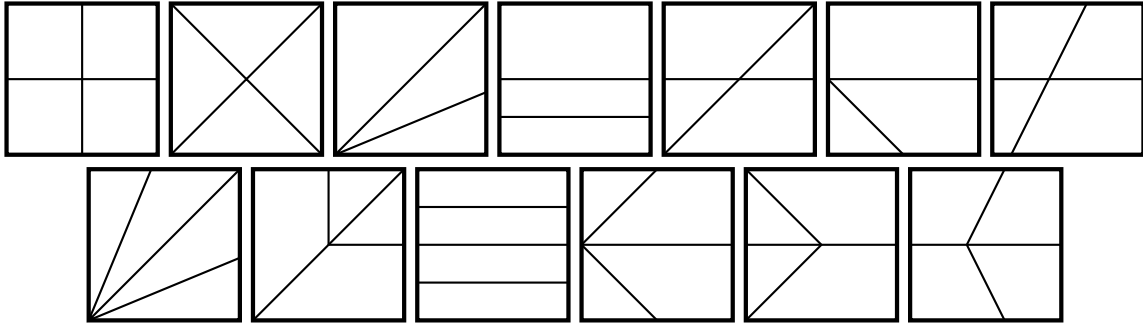


Figure 1: Thirteen (all?) two-fold crease patterns.

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