

Folding paper

Fold in half

Take a piece of paper and fold it in half twice.

How many different ways are there of doing it?

How many different ways are there of folding a piece of paper in half n times?

Fold in half and cut the corners off

Take a piece of paper and fold it in half twice, always folding the longest side.

Then, cut off each of the 4 corners.

When you unfold it, there's a hole in the middle.

How many holes when you fold 3 times? 4? n ?

Ridges and valleys

Take a long piece of paper, and fold the right edge onto the left. Repeat this, never turning the paper.

When you unfold it, you get a sequence of ridges (1s) and valleys (0s).

What sequence do you get after 2 folds? 3? n ?

