

Doug's Tablecloth

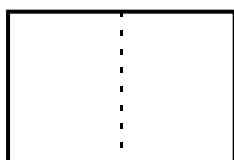
Investigation Guide

You need to close your eyes in parts of this investigation.
One person can read the instructions while the other has their eyes closed.

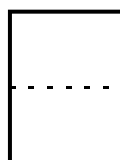
- Close your eyes and *imagine* folding a piece of paper in half.
 - Eyes still closed, *imagine* opening the paper again. Now it has **two parts**.
 - Imagine* closing it again and folding it in half once more so that the second fold runs the same way as the first.
 - Imagine* unfolding it all the way. How many **parts** will it have this time?
- Imagine* you keep on folding the same way and unfolding to check the **parts**.
 - Imagine* your answers each time and record them in a table like this in your journal.

Number of Folds	1	2	3	4	10
Imagined Number of Parts					

- Check your answers by actually folding a piece of paper.
- If I tell you any number of folds can you tell me the number of parts?
- Investigate what happens to the parts when each fold is *across the centre* of the previous fold.



First Fold



Second Fold

- If I tell you any number of folds can you tell me the number of parts?
- Repeat questions 1 to 6, but this time imagine, count and check **creases**, not parts.
 - Your second table will look like this:

Number of Folds	1	2	3	4	10
Imagined Number of Creases					

- Guess, then check the number of times you can fold a piece of paper in half.
 - What happens if it is a much bigger piece of paper?