

Doug's Tablecloth

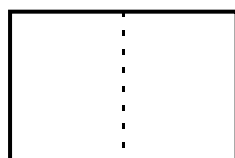
Investigation Guide

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

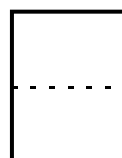
1. Close your eyes and *imagine* folding a piece of paper in half.
 - Eyes still closed, *imagine* opening the paper again. Now it has **two parts**.
 - *Imagine* closing it again and folding it in half once more so that the second fold runs the same way as the first.
 - *Imagine* unfolding it all the way. How many **parts** will it have this time?
2. *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					

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



First Fold



Second Fold

6. If I tell you any number of folds can you tell me the number of parts?
7. 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					

8. 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?