01.04.20

I can identify lines of symmetry in 2-D shapes.

What is symmetry?

When something is symmetrical one side is a mirror image of the other side. A *line of symmetry* is the line you can draw to show that both sides are the same.

When you need to draw the other side of a symmetrical shape you can use a mirror to help you.

If something is not symmetrical it is known as *asymmetrical*.

Some shapes are symmetrical and some shapes are not.

Watch this video to help you understand further about symmetry.

https://www.bbc.co.uk/bitesize/topics/zrhp34j/articles/z8t72p3

A 2D shape is symmetrical if a line can be drawn through it so that either side of the line looks exactly the same.

The line is called a line of symmetry.

This is sometimes called a 'mirror line' or 'mirror symmetry', because if you put a mirror on the line, the reflection would show the whole shape.

- An isosceles triangle has 1 line of symmetry.
- A square has 4 lines of symmetry.
- A circle has unlimited lines of symmetry!

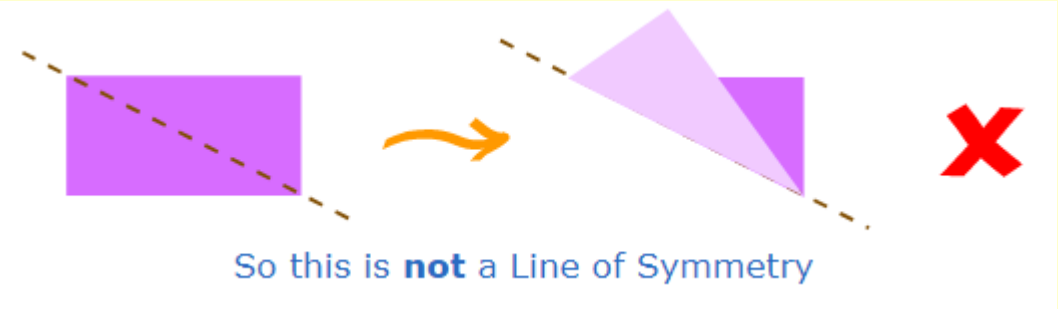
Examples of symmetry in real life

Folding Test

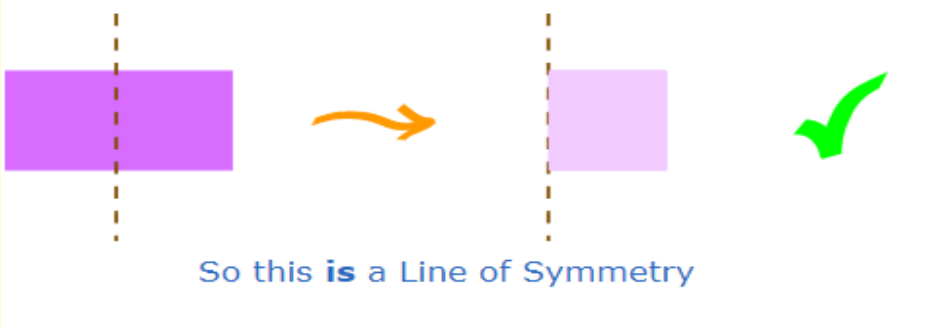
You can find if a shape has a Line of Symmetry by **folding it**.

When the folded part sits perfectly on top (all edges matching), then the fold line is a Line of Symmetry.

Here I have folded a rectangle one way, and **it didn't work**.

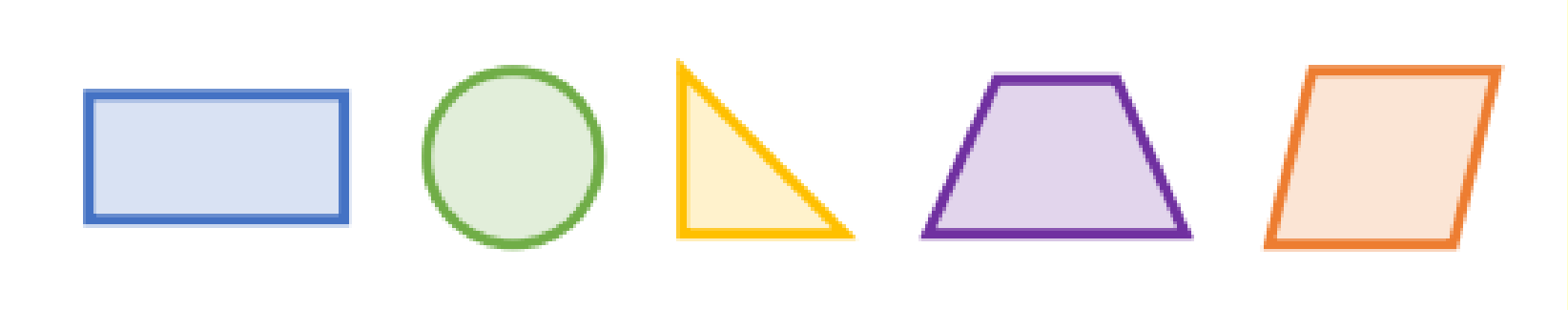


But when I try it this way, it **does work** (the folded part sits perfectly on top, all edges matching):



Activities

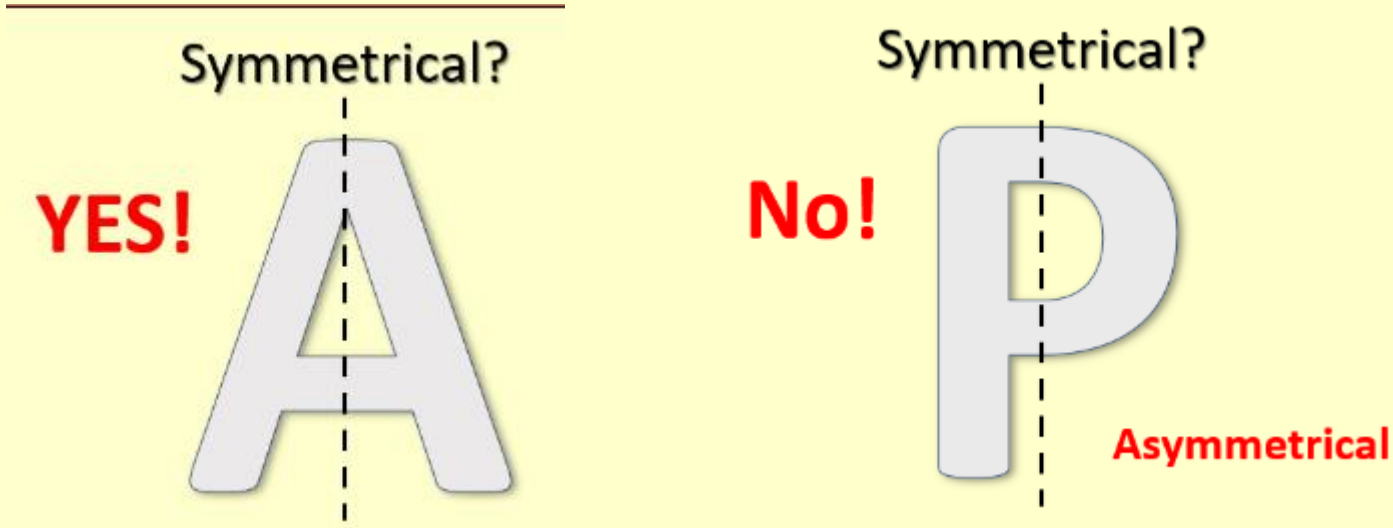
1. Using folding of paper – you may need to draw the shape, cut it out then fold find the lines of symmetry in these shapes.



2. Sort these shapes into this grid:

	1 line of symmetry	More than 1 line of symmetry
Up to 4 sides		
More than 4 sides		

3. Which capital letters have *only* one line of symmetry?



4. How many lines of symmetry do the letters in your name have?

5. Find some examples of symmetry around your house. Take photos of these.

Challenge:

1. Draw some 2-D shapes that have:

- no lines of symmetry
- 1 line of symmetry
- 2 lines of symmetry

2. Tom says, 'In each of these shapes the red line is a line of symmetry.'
Do you agree?

Explain your reasoning.