Maths Lesson 3

**Key question:** How do we know when a shape is symmetrical?

**To identify lines of symmetry in 2D shapes**

A 2D shape is symmetrical if you can draw a line through it and one side is an exact reflection of the other.

Look at the lines of symmetry on these shapes:

![Shapes with lines of symmetry](image)

Top tip

You can test if a shape has a line of symmetry by folding it.

1. Draw it out on a piece of paper.
2. If one half folds over to fit exactly onto the other half, then the fold is a line of symmetry.

Example

Look at this rectangle below.

- Are these lines of symmetry?
- How many lines of symmetry does this rectangle have?
This rectangle has a vertical and horizontal line of symmetry.

Now look at the diagonal lines on the rectangle below.

Are they lines of symmetry?

No, these diagonals are not lines of symmetry.

They divide the rectangle into 2 equal areas, but one half would not fold over onto the other. Try it yourself with a rectangle of paper.

A 2D shape is a flat shape with sides, vertices and sometimes lines of symmetry. If the sides and vertices on a shape are all the same, the shape is regular.

Watch these videos to help you understand more about lines of symmetry

https://www.bbc.co.uk/bitesize/topics/zrhp34j/articles/z8t72p3
https://www.youtube.com/watch?v=YFzktJNmnPU
https://www.bbc.co.uk/bitesize/clips/ztpyr82
Activity

Draw the shape in your books and write the name of each shape, the number of sides and the lines of symmetry. You can use a piece of paper to help identify the lines of symmetry for that shape.

Investigating Lines of Symmetry