

Tremendous tiles

Children explore creating patterns of tiles with three asymmetrical blocks. They look for and identify lines of symmetry, creating patterns with at least two lines of reflective symmetry.

Skills practised:

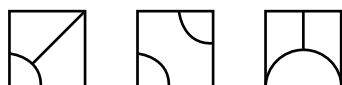
- Recognising line symmetry
- Creating patterns with two lines of symmetry

Conjecture: *It is possible to use the asymmetrical tiles to create patterns with one or two lines of symmetry.*

What to do:

Children work individually or in pairs.

You will need copies of the tiles below to give children several small copies, and lots of 4cm by 4cm squares cut from cm squared paper.



1. Look at the tiles illustrated above.
2. Pick your favourite and cut it out.
3. Take a 4cm by 4cm square.
4. Create a pattern using your tile on the 4 x 4 square. You are going to draw your tile pattern in each individual square, using it either as it is, or rotated through 90, 180 or 270 degrees, e.g.



Y3 Your aim is to create a pattern on the large square with one line of symmetry.

Y4 Your aim is to create a pattern on the large square with two lines of symmetry.

If you rotate your tile through three right angles, what do you notice about the result in relation to its original position?

5. Y3 Can you create a pattern with two lines of symmetry?
Y4 How many patterns can you find with two lines of symmetry?

Aims:

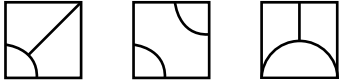
- To use asymmetrical tiles to create patterns with line symmetry
- To use mathematical reasoning to explore symmetrical patterns

Minimum number of calculations expected

N/A

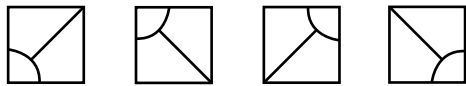
Tremendous tiles

1. Look at the tiles below.



2. Pick your favourite and cut it out.

3. Create a pattern using your tile on a 4 x 4 square. Draw your tile pattern in each individual square, using it either as it is, or rotated through 90, 180 or 270 degrees.



4. Y3. Create a pattern on the large square with one line of symmetry.

Y4. Create a pattern on the large square with two lines of symmetry.

If you rotate your tile through three right angles, what do you notice about the result in relation to its original position?

5. Y3. Can you create a pattern with two lines of symmetry?

Y4. How many patterns can you find with two lines of symmetry?

