

Reflective symmetry, reflection and translation

As outcomes, Year 5 pupils should, for example:

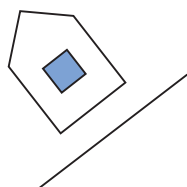
Use, read and write, spelling correctly, the vocabulary from the previous year, and extend to:
axis of symmetry, reflective symmetry...

Recognise the number of axes of reflective symmetry in regular polygons. For example:

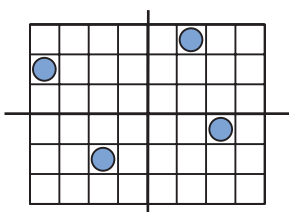
- Draw regular and irregular polygons on squared paper and cut them out. Test for symmetry using a mirror and by folding. Say which fold symmetrically more than once.
- Investigate the lines of symmetry in regular polygons.

Know that the number of lines of symmetry in a regular polygon is equal to the number of sides, so a square has four lines of symmetry and an equilateral triangle has three.

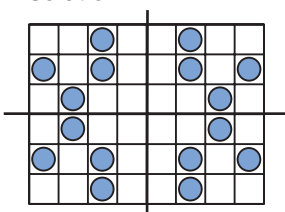
Sketch the reflection of a simple shape in a mirror line parallel to one edge, where the edges of the shape are not all parallel or perpendicular to the mirror line.



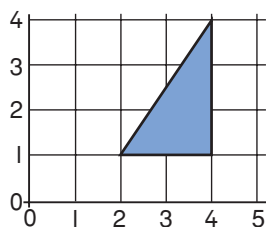
Complete symmetrical patterns on squared paper with two lines of symmetry at right angles. For example, complete this pattern:



solution:



Sketch the position of a simple shape after it has been translated, say, 2 units to the left.

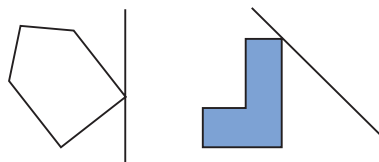


Use a computer program to create a 'tile' and use it by alternately translating the tile and its reflection along a line. Predict and discuss the patterns made.

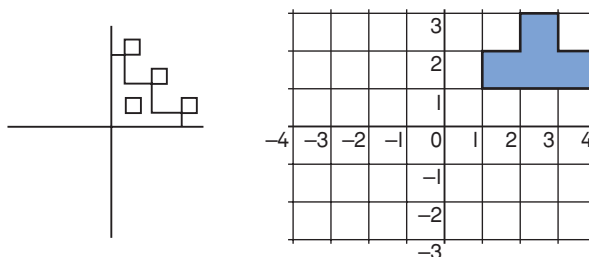
As outcomes, Year 6 pupils should, for example:

Use, read and write, spelling correctly, the vocabulary from the previous year.

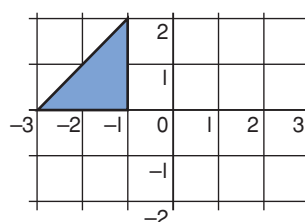
Sketch the reflection of a simple shape in a mirror line touching it at one point, where the edges of the shape are not necessarily parallel or perpendicular to the mirror line.



Sketch the reflection of a simple shape in two mirror lines at right angles, where the sides of the shape are parallel or perpendicular to the mirror line.



Sketch the position of a simple shape after it has been translated, say, 3 units to the right, then 2 units down.



Use a computer program to transform shapes. Predict and discuss the patterns made.