Position and direction

Lesson sequence

- Read and plot coordinates
- Problem solving with coordinates
- Translation
- Translation with coordinates
- Lines of symmetry
- Reflection in horizontal and vertical lines

Vocabulary

- Coordinates
- Translation
- Symmetry
- Horizontal
- Vertical
- Shape
- X axis
- Y axis
- Up/down left/right
- Mirror line/line of reflection
- Parallel
- Axes
- Reflect
- Vertices
- Sides

Sticky learning

New Knowledge

- *To know that a diagonal is line joining two non-adjacent vertices or corners of a polygon*
- *To know that a shape has not changed if it has been reflected or translated*
- *Reflect different shapes and patterns on a line of symmetry*

New Skills

- *To identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language*
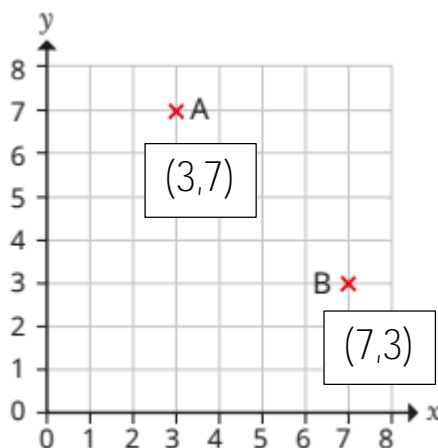
Concept Links/Prior Knowledge

- *To read, write and use pairs of coordinates*
- *Know that translating a shape means moving it on a grid*
- *Know that coordinates go up from the origin (0,0)*
- *know that you read coordinates on the x-axis followed by the y-axis*
- *Identify lines of symmetry in 2-D shapes presented in different orientations*
- *Recognise line symmetry in a variety of diagrams*
- *To describe movements between positions as translations of a given unit to the left/right and up/down*
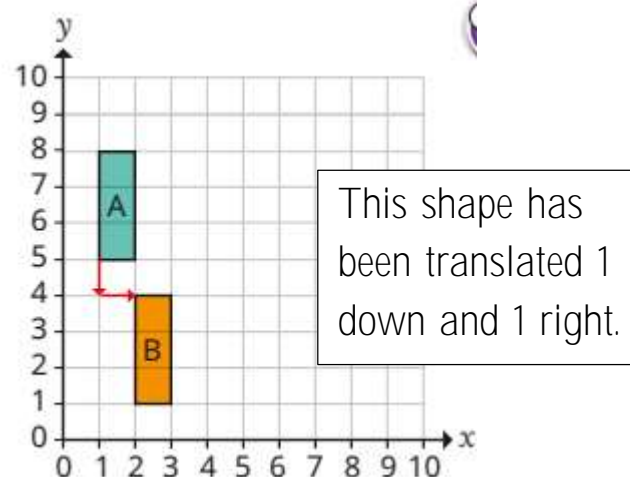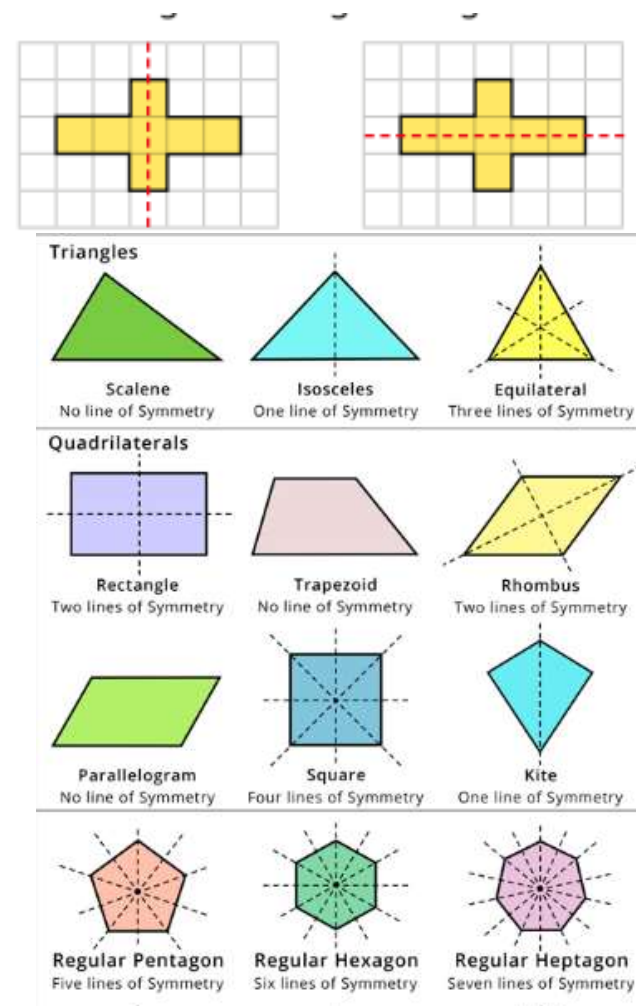
Pictorial representations

Plotting coordinates

(3,7)

(7,3)

Translation

This shape has been translated 1 down and 1 right.

Lines of symmetry

Triangles

Scalene
No line of Symmetry

Isosceles
One line of Symmetry

Equilateral
Three lines of Symmetry

Quadrilaterals

Rectangle
Two lines of Symmetry

Trapezoid
No line of Symmetry

Rhombus
Two lines of Symmetry

Parallelogram
No line of Symmetry

Square
Four lines of Symmetry

Kite
One line of Symmetry

Regular Pentagon
Five lines of Symmetry

Regular Hexagon
Six lines of Symmetry

Regular Heptagon
Seven lines of Symmetry

Reflection

line of reflection

← Line of reflection

Pre-image

Image