



Year 4 – Maths – Geometry: Position and Direction

Key vocabulary

coordinate

quadrant

x-axis

y-axis

translation

vertex

vertices

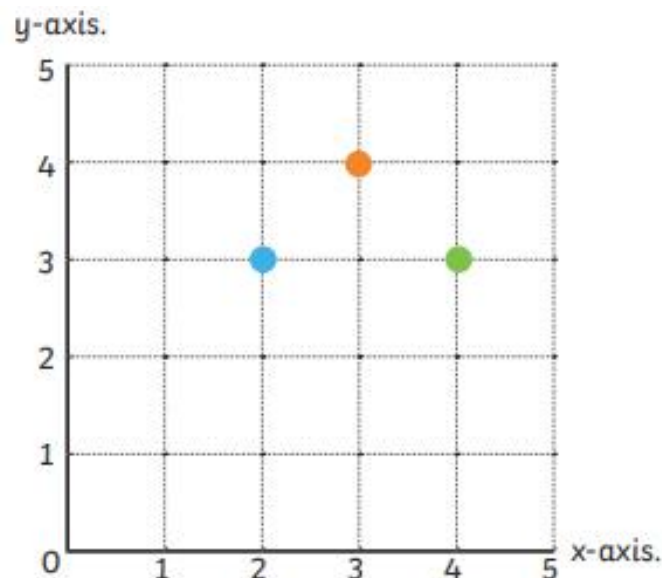
Links to other learning

Year 5 - Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

Key questions

What is the position of the green spot? The orange spot?
Which axis do you refer to first?
Can you translate a shape on a grid and record its new coordinates?

Position in the first quadrant



Coordinates are a useful way to locate a position on a map or grid.

The numbers across the horizontal line of the grid are on the **x-axis**.

The numbers on the vertical line of the grid are on the **y-axis**.

We always read or write the number on the x-axis before the **y-axis**.

The x and y position are written in brackets with a comma.

The coordinate of the blue spot is **(2, 3)**.

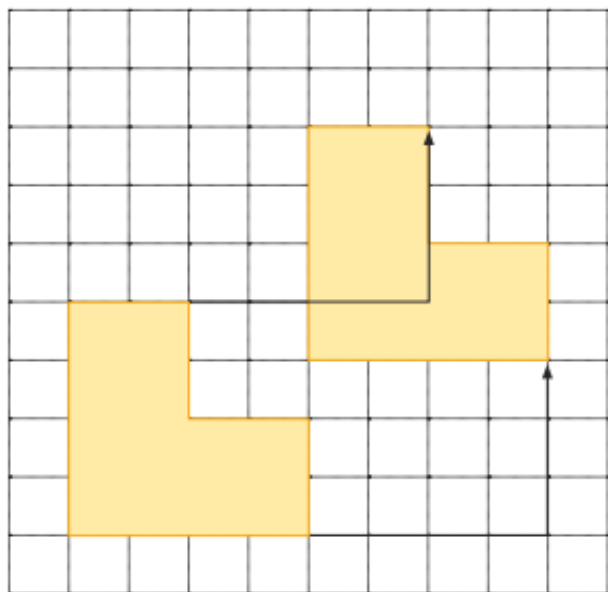
Translation and plotting 2D shapes



Translation

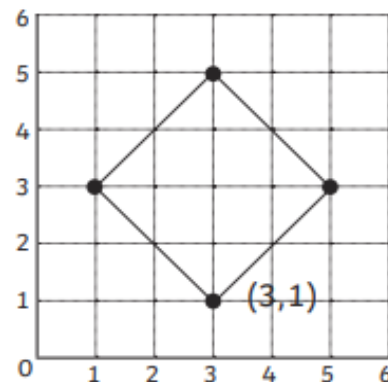
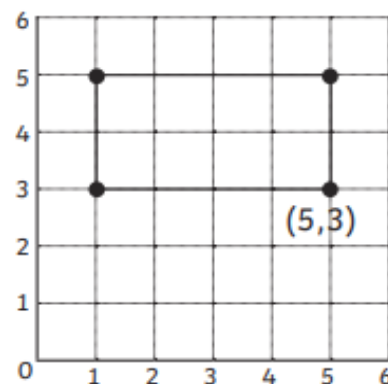
In maths, translation means moving an object on a grid. The object is moved without changing the size, turning or reflecting it.

When translating an object on a grid, it can move up or down, left or right.



Plotting 2D Shapes

Each vertex (corner) of a 2D polygon can be represented as a coordinate on a 2D grid.



Remember:
along the
corridor, up
the stairs.
I.e. move
along the x
axis and
then up the
y axis.