

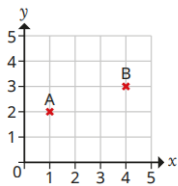
## Year 4 Maths: Geometry -Position and direction.

### What should I already know?

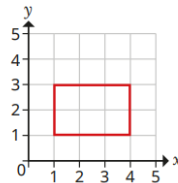
- Use vocabulary to describe position, direction and movement.
- Distinguish between rotation as a turn and identify clockwise and anticlockwise.
- Identify quarter, half and three quarter turns and links these to right angles.
- Identify shapes in patterns and sequences linked to turns.

### Key Knowledge

#### Describe position using co-ordinates in the first quadrant:



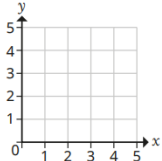
A = (1, 2)  
B = (4, 3)



Label each vertex with a letter and write the co-ordinates.

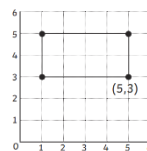
Read co-ordinates as (x axis, y axis)

#### Plot co-ordinates: plot (4,1)



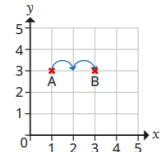
1. Find 4 on the x-axis and draw a vertical line.
2. Find 1 on the y-axis and draw a horizontal line.
3. Where the two lines meet, draw a cross.

#### Plot points and create given polygons:

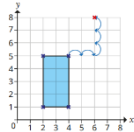


Plot (5,3); (1,3); (1,5); (5,5)  
Join each point to create a polygon.

#### Translate points and polygons:

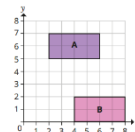


Translate A 2 squares to the **right** (B).



Translate the polygon labelling each point A, B, C, D

#### Describe translations:



Choose one point on shape A and describe how it has moved: 2 points **right** and 5 points **down**.

### Key Vocabulary and definitions

<b>Axis/Axes</b>	Vertical (y) and horizontal (x) lines drawn to make a quadrant.
<b>Quadrant</b>	A region enclosed by the x-axis and y-axis.
<b>Co-ordinate</b>	Numbers which specify a point (x,y) on a map or grid.
<b>Scale</b>	The units which the scale is divided.
<b>Plot</b>	To draw on a map or graph
<b>Polygon</b>	A 2-D shape with straight sides that are fully closed.
<b>Translation</b>	Moves every point in a shape by the same distance in the same direction without rotating or resizing.
<b>x-axis</b>	The horizontal line drawn on an axis.
<b>y-axis</b>	The vertical line drawn on an axis.
<b>Vertex</b>	The corner of a shape where 2 lines meet.
<b>Vertices</b>	More than one vertex.

