



Position and direction

What do I need to be able to do?

By the end of this unit you should be able to

- Describe full positions on a full coordinate grid
- Draw and translate simple shapes on a grid
- Draw and reflect simple shapes on a grid

Keywords

Quadrant - One of the four sections of a coordinate grid, separated by the x and y axes

X-Axis - The horizontal line on a graph that runs left to right

Y-Axis - The vertical line on a graph that runs up and down

Reflection - Flipping a shape over a mirror line so it creates a mirror image

Translation - Sliding a shape from one position to another without turning or flipping it

Coordinate - A pair of numbers, written as (x, y), that gives the exact address or location of a point on a grid

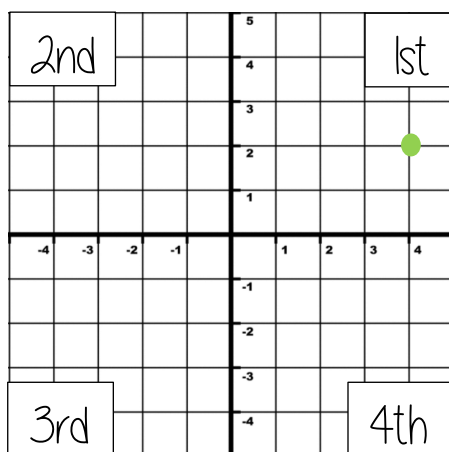
Coordinate Positions

A coordinate grid is split into four quadrants (1st, 2nd, 3rd and 4th)

When reading a coordinate, start with the x-axis, then move to the y-axis. The green dot would be denoted at (4, 2)

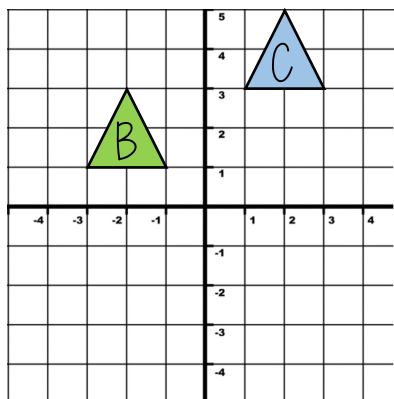
Coordinates are written inside of brackets:

(X, Y)



Translation

Identify each point (vertex) of the shape, then move (translate) it that many



Translate the Shape 4 to the right and 2 up
Shape B → C

Reflection

When reflecting a shape, it's like looking in the mirror. The question will denote which line to reflect it in. If the question says reflect it in line $x = 1$, that means that where X is 1, you must draw a 'mirror' line (in blue).

The following equilateral triangle has been reflected on line $x = 1$.

Similarly to translation, the shape hasn't increased or decreased, only 'moved'.

