

## Maths 08/06/2020

This week we are continuing our focus on co-ordinates. We will be looking at moving (translating) and reflecting points and shapes. Just like last week, we will firstly look at this in the 1<sup>st</sup> quadrant then move on to trying it in all 4 quadrants.

Below I have included an order for the suggested work on co-ordinates.

1a, Under the Sea writing co-ordinates 1 quadrant (refresh from last week).

1b, Translating space co-ordinates 1 quadrant

Translating means 'moving' so you will need to follow the instructions to move the co-ordinate point to a new position.

2, Translating shapes 1 quadrant

3, Translation of sea creatures in 4 quadrants. There are answers for this uploaded too.

4, Translating shapes in 4 quadrants- worded questions

5, Reflection of co-ordinates

On the page below, I have included a help sheet. On the page after that, I have included some ideas of how else to work on co-ordinates.

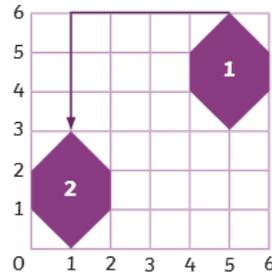
# Help sheet

## Translation

A shape is translated when it is moved without being rotated or resized. Every point of the shape moves the same distance and in the same direction.

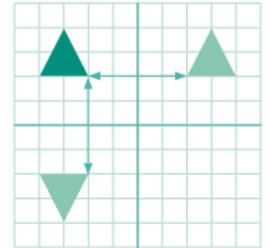


Shape 1 has been translated 4 units left and 3 units down.



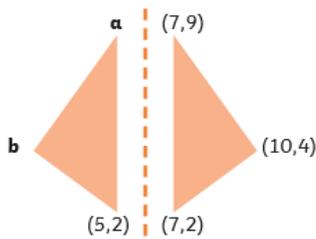
## Reflections

A shape is reflected when it is flipped over a line which acts as a mirror. Every point on the original shape is the same distance from the mirror line as the same point on the reflected shape. The original triangle has been reflected in the x-axis and in the y-axis.



## Missing Coordinates

Shapes can be shown on unmarked grids.



Point a is in the same position along the x-axis as (5,2) and in the same position on the y-axis as (7,9).

**Point a** (5,9)

Point b is in the same position on the y-axis as (10,4). Both triangles will have the same width. The width of the right-hand triangle is 3. This means that the width of the left-hand triangle is also 3.

**Point b** (2,4)

## Other ideas for co-ordinates

- Divide a room in your house or your garden into a co-ordinate grid. Then have a treasure hunt. Get someone to place clues at different points on the grid.
- Draw a picture on a co-ordinate grid (one on last week's number 5), and write the co-ordinates down for it.
- Play battleships (template on uploads)
- Learn about latitude and longitude. Learn the co-ordinates (grid references) of different countries
- Play some co-ordinate games at <https://www.topmarks.co.uk/Search.aspx?q=coordinates>
- Play alien attack <https://mathsframe.co.uk/en/resources/resource/469/Coordinates-Alien-Attack>