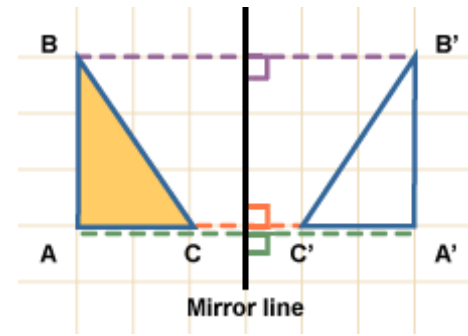


Transformations Year 7

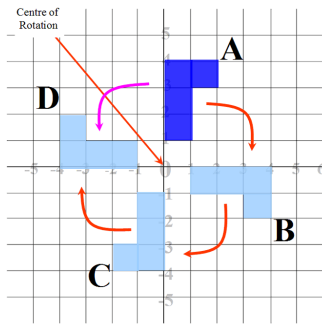
Congruent - Shapes that are exactly the same size. They can be flipped or rotated but must be exactly the same size.

Similar - Shapes are similar if all the sides of one shape have been multiplied by the same value to give the dimensions of the other shape.

Reflection - A shape is mirrored or flipped



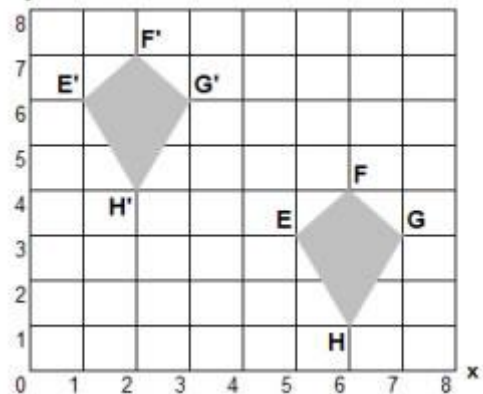
Rotation - A shape is turned around a point either clockwise or anticlockwise



Translation - A shape stays in the same orientation but is moved from one position from another. You can move it using a column vector.

$\begin{pmatrix} 3 \\ 4 \end{pmatrix}$ The top number tells you how far left or right to move. The bottom number tells you how far up or down you need to move.

If the number is negative you move left or down $\begin{pmatrix} -3 \\ -4 \end{pmatrix}$

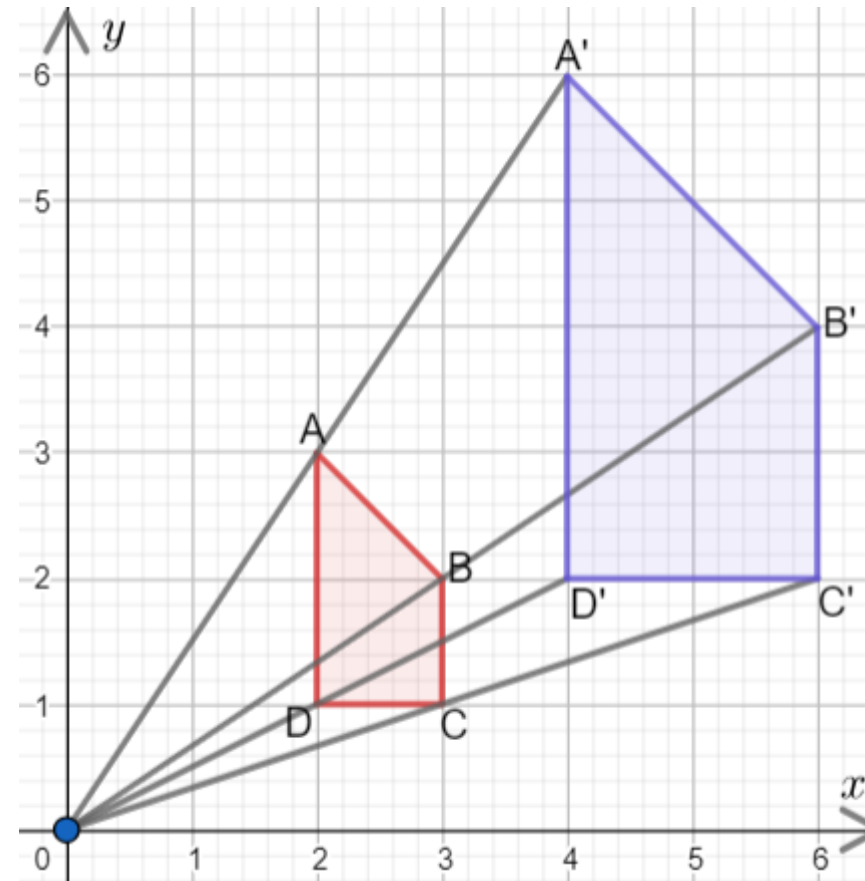


So EFHG has been translated to E'F'H'G' by $\begin{pmatrix} -4 \\ 3 \end{pmatrix}$

Enlargement

Centre of enlargement - The point where each shape is enlarged from

Scale factor - How much the shape has been enlarged by e.g. scale factor 2 means every distance and length is multiplied by 2.



Enlarged from the origin, (0, 0) by scale factor 2.

So point D was 2 right and 1 up from the origin. It is now 4 right and 2 up as all lengths have been multiplied by 2