

Check out

You should now be able to ...

✓ Reflect, rotate and translate 2D shapes.	6	1 - 3
✓ Enlarge a 2D shape using a given centre of enlargement.	6	4 - 5
✓ Use maps and scale drawings.	6	6
✓ Use bearings to specify direction.	6	7

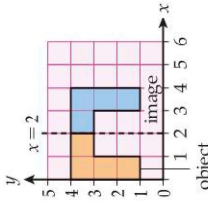
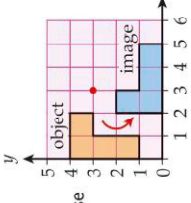
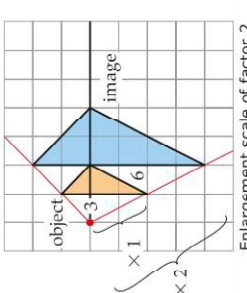
Test it

Questions

6	1 - 3
6	4 - 5
6	6
6	7

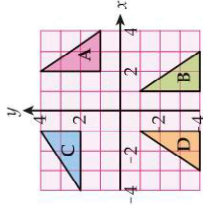
Language Meaning

Example

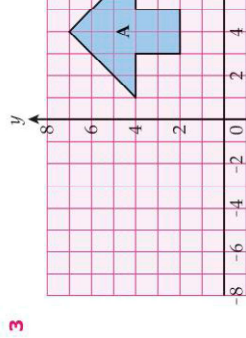
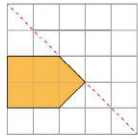
Object	The 2D shape to be transformed.
Image	The 2D shape after transformation.
Reflection	The object is flipped over a given mirror line. 
Rotation	The object is turned through a given angle and direction about a fixed point. 
Translation	The object is slid across the plane using a vector. 
Enlargement	A transformation that can change the size of the image.
Centre of enlargement	Point used to set the position of the image in an enlargement.
Scale (factor)	The number of times lengths are enlarged.

1 Describe fully the transformation that moves A to B.

- a triangle A to B
- b triangle A to C
- c triangle B to D.



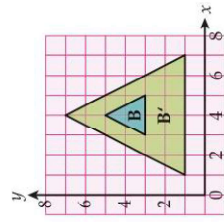
2 Copy the shape on squared paper. Reflect the shape in the mirror line.



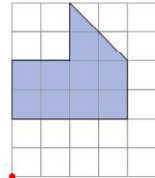
3

3 d Describe fully the single transformation that moves A to D.

4 B is enlarged to give B'. Calculate the scale factor and find the coordinates of the centre of enlargement.



5 Copy the shape onto squared grid paper and enlarge it by scale factor $\frac{1}{2}$ using the dot as the centre of enlargement.

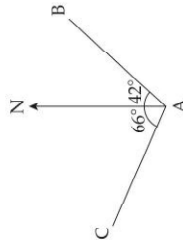


6 John starts at A, walks due north for 5 m then west for 9 m and arrives at B.

a Draw a scale drawing of his journey using a scale of 1:300

b How far is John from his starting point?

- 7 Calculate the bearing of
 - a B from A
 - b A from B
 - c C from A
 - d A from C.



Copy the diagram and extend it downwards to -8.

- a Rotate the shape 90° clockwise about (0,0) and label the image B.
- b Reflect B in the line $x = 0$ and label the image C.
- c Translate C by $\begin{pmatrix} 8 \text{ up} \\ 0 \text{ across} \end{pmatrix}$ and label the image D.

What next?

Your knowledge of this topic is still developing. To improve look at Formative test: 3B-9; MyMaths: 1086, 1099, 1103, 1113, 1115, 1117, 1125 and 1127

You are gaining a secure knowledge of this topic. To improve look at InvisiPen: 362, 363, 364, 366, 368, 372 and 374

You have mastered this topic. Well done, you are ready to progress!

Score

0 - 2	
3 - 5	
6	