

Transformations

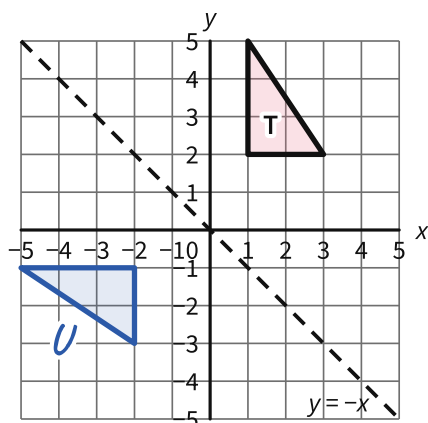
ANSWERS

Ruler | 30 minutes | Total marks: 24

Name

Class

- 1 The line $y = -x$ is shown on the grid.

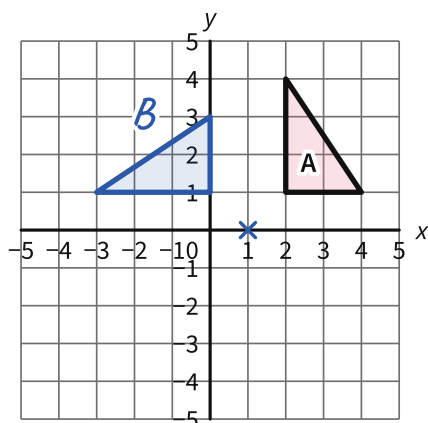


Reflect triangle T in the line $y = -x$

Label the new triangle U.

[2 marks]

2



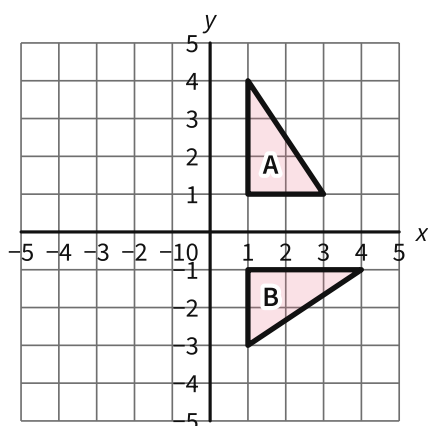
Rotate triangle A by 90° anticlockwise about the point (1, 0)

Label the new triangle B.

Correct turn (1) Correct centre used (1) Correct position (1)

[3 marks]

3

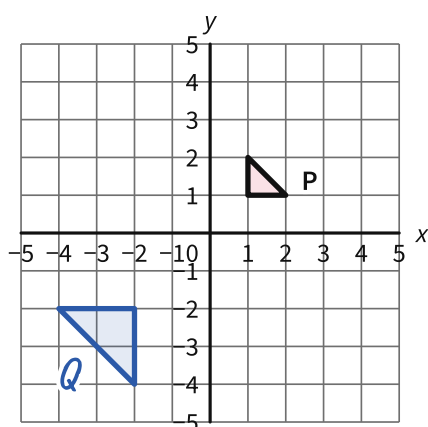


Describe fully the single transformation that maps triangle A onto triangle B.

Rotation (1)
 90° clockwise (1)
about the point $(0, 0)$ (1)

[3 marks]

4



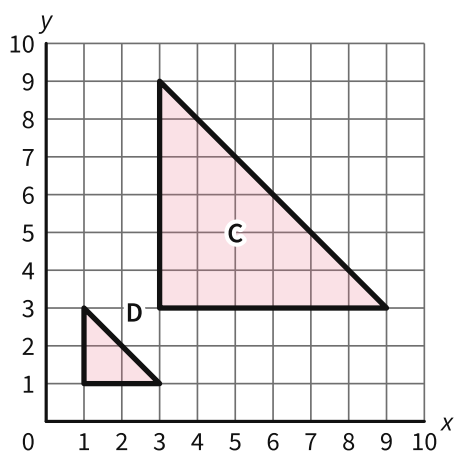
Enlarge triangle P by scale factor -2 , centre $(0, 0)$

Label the new triangle Q.

Sides twice as long (1) *On the opposite side of the centre (1)* *Correct position (1)*

[3 marks]

5

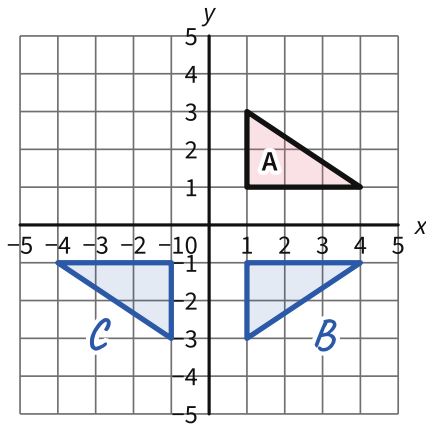


Describe fully the single transformation that maps triangle C onto triangle D.

Enlargement (1)
scale factor $\frac{1}{3}$ (1)
centre $(0, 0)$ (1)

[3 marks]

6



Triangle A is reflected in the x -axis to give triangle B.

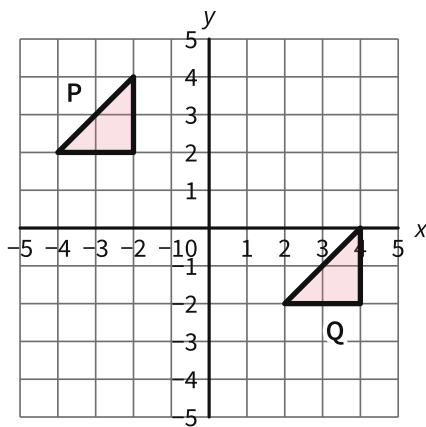
Triangle B is then reflected in the y -axis to give triangle C.

Describe fully the single transformation that maps triangle A onto triangle C.

*Rotation of 180° (1)(1)
about the point $(0, 0)$ (1)*

[3 marks]

7



Describe fully the single transformation that maps triangle P onto triangle Q.

Translation (1) by the vector $\begin{pmatrix} 6 \\ -4 \end{pmatrix}$ (1)

[2 marks]

8

A shape is enlarged by scale factor 3

(a) Which of these stays the same?

the angles the side lengths the area

Answer the angles (1) [1 mark]

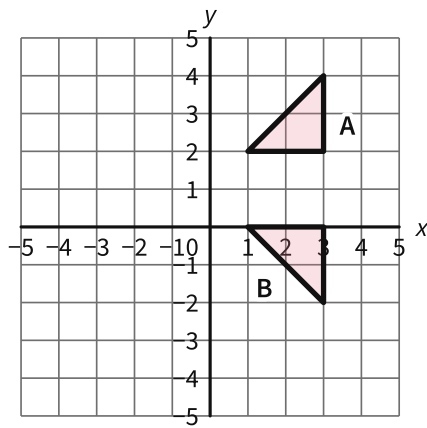
(b) The area of the original shape is 5 cm^2

Work out the area of the enlarged shape.

$$5 \times 3^2 \text{ (1)}$$

Answer 45 (1) cm^2 [2 marks]

9



Triangle A is reflected onto triangle B.

Write down the equation of the mirror line.

Answer $y = -x$ (1)(1)

[2 marks]

Question	Topic	RAG
1	I can reflect a shape in the line $y = -x$	
2	I can rotate a shape about any point	
3	I can describe a rotation fully	
4	I can enlarge a shape by a negative scale factor	
5	I can describe an enlargement with a fractional scale factor	
6	I can describe a combination of transformations as one	
7	I can describe a translation using a vector	
8	I know what an enlargement changes	
9	I can find the equation of a mirror line	