

Transformations- Mixed- Transformations

Mark Scheme

Level	GCSE
Subject	Maths
Exam Board	Edexcel GCSE
Topic	Transformations- Mixed-Transformations
Grade Level	Grade 3
Booklet	Mark Scheme

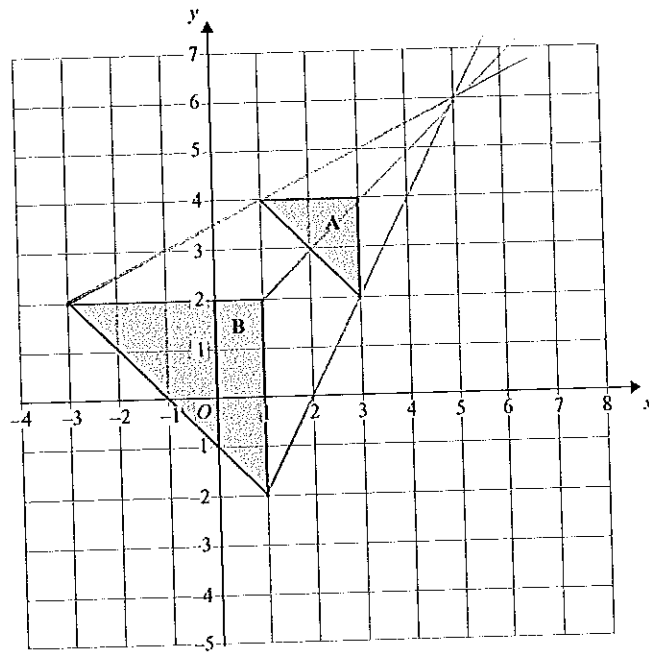
Time Allowed: 35 minutes

Score: /29

Percentage: /100

Grade Boundaries:

1.

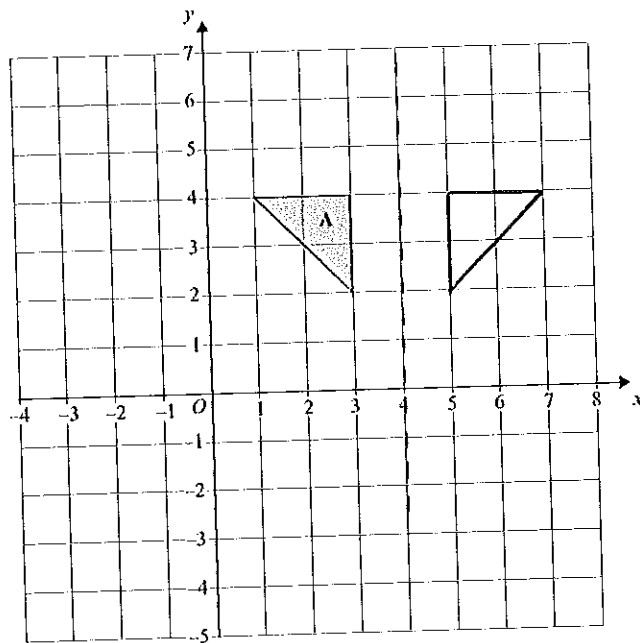


Triangle A and triangle B are drawn on the grid.

- (a) Describe fully the single transformation which maps triangle A onto triangle B.

.....enlargement..... scale factor 2.....
centre (5, 6).....

(3)

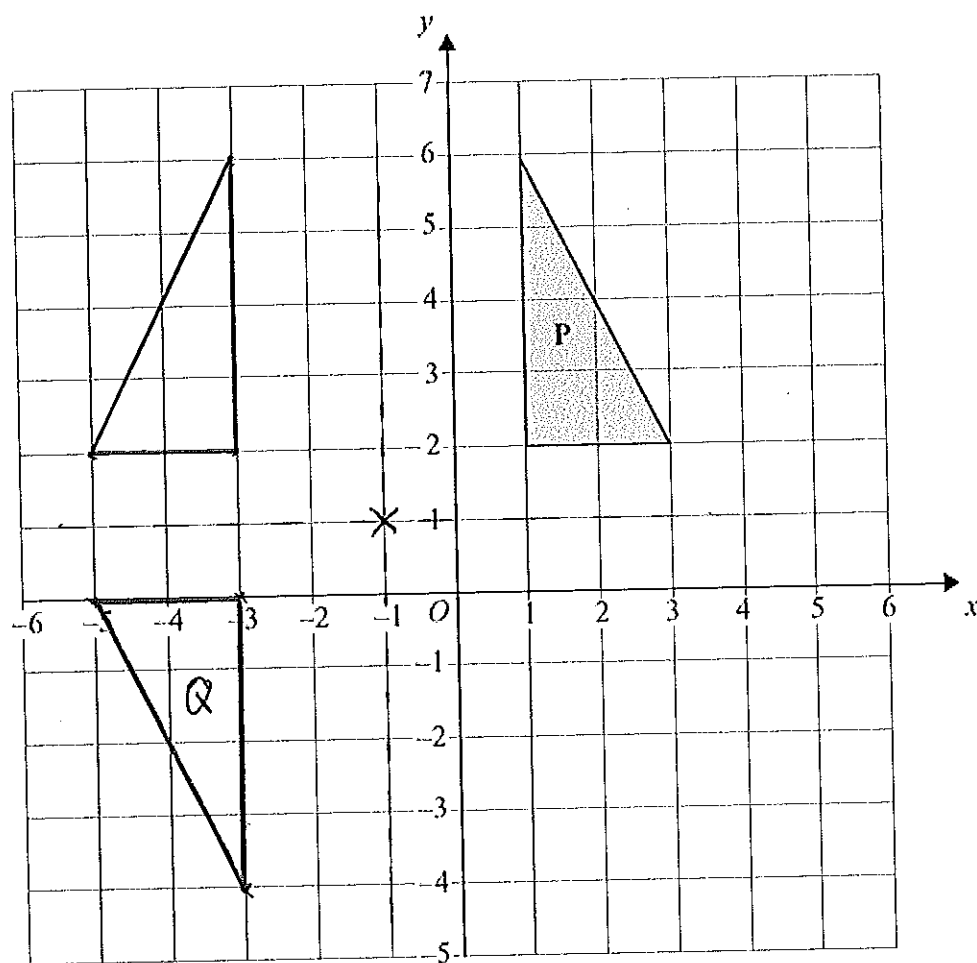


- (b) Reflect triangle A in the line $x = 4$

(2)

(5 marks)

2.



Triangle P is drawn on a coordinate grid.

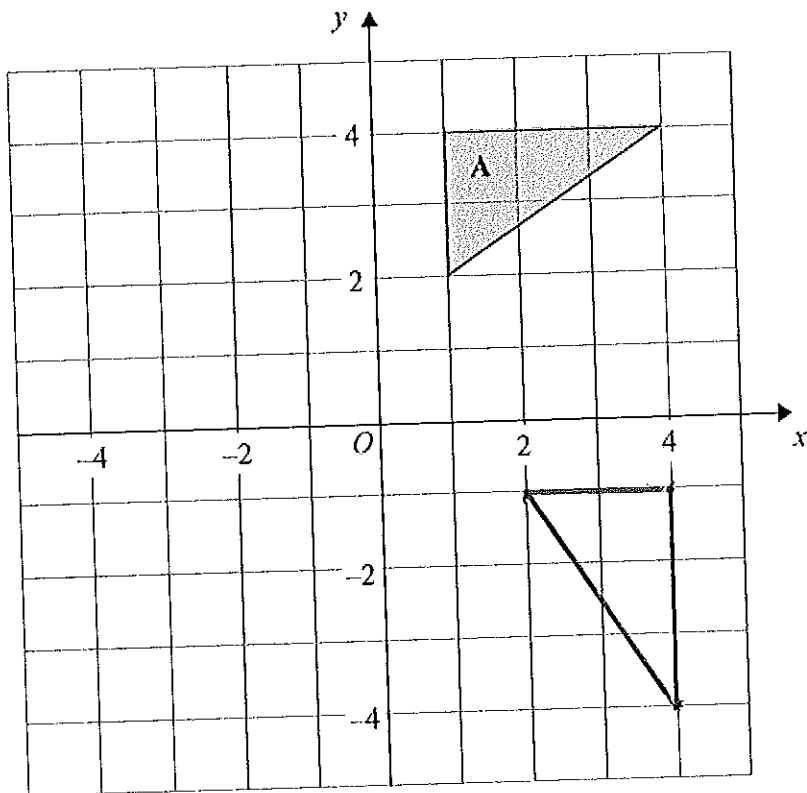
The triangle P is reflected in the line $x = -1$ and then reflected in the line $y = 1$ to give triangle Q.

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

Rotation, 180° , centre $(-1, 1)$

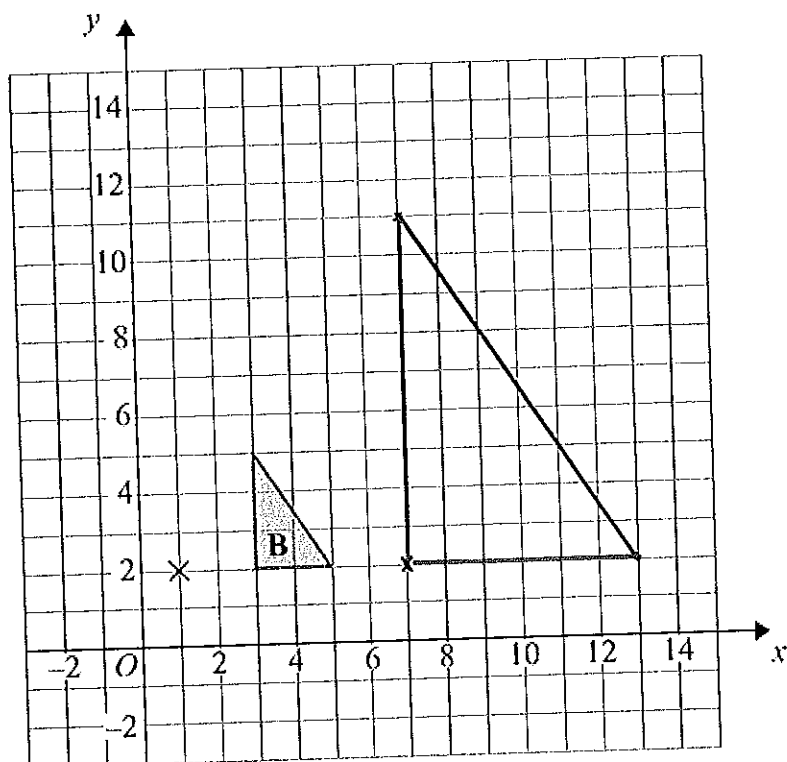
(3 marks)

3.



(a) Rotate triangle A 90° clockwise, centre O .

(2)

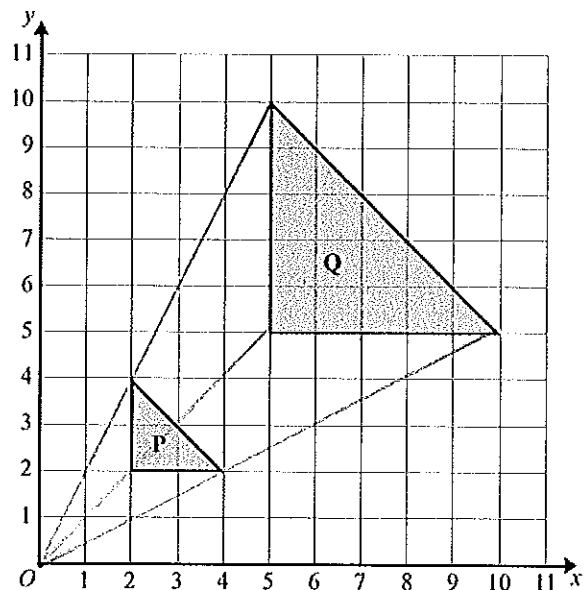


(b) Enlarge triangle B by scale factor 3, centre $(1, 2)$.

(3)

(5 marks)

4.

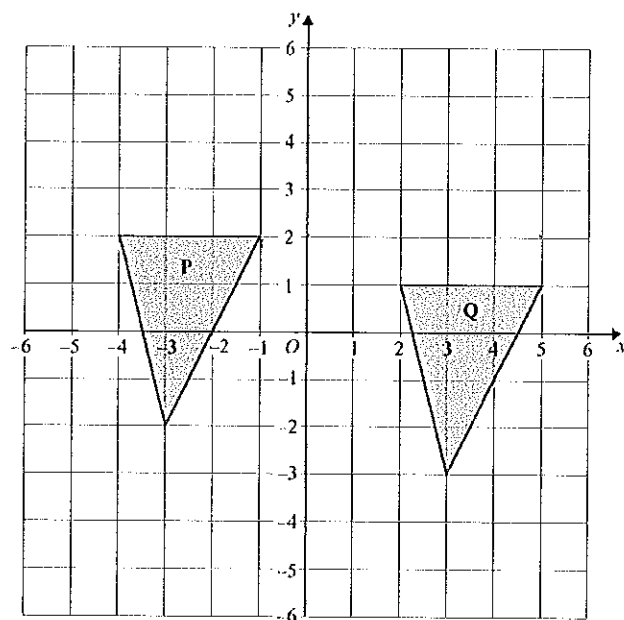


Describe fully the single transformation that maps shape P onto shape Q.

..... enlargement, ^{scale factor} 2.5, ~~centre~~ (0,0)

(3 marks)

5.

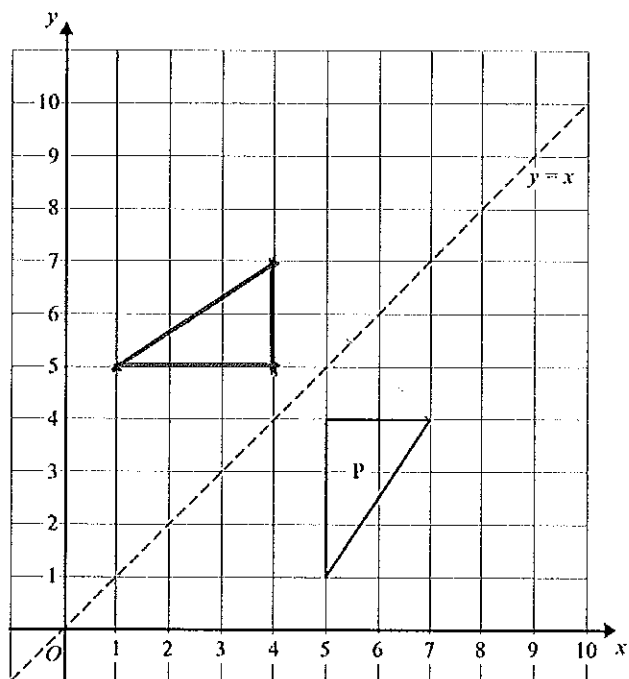


Describe fully the single transformation that maps triangle P onto triangle Q.

..... translation by the vector $\begin{pmatrix} 6 \\ -1 \end{pmatrix}$

(3 marks)

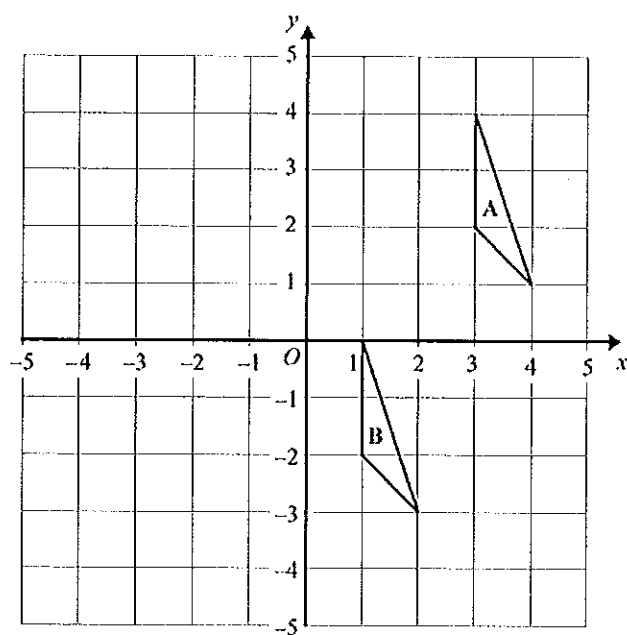
6. (a)



Reflect shape P in the line $y = x$

(2)

(b)



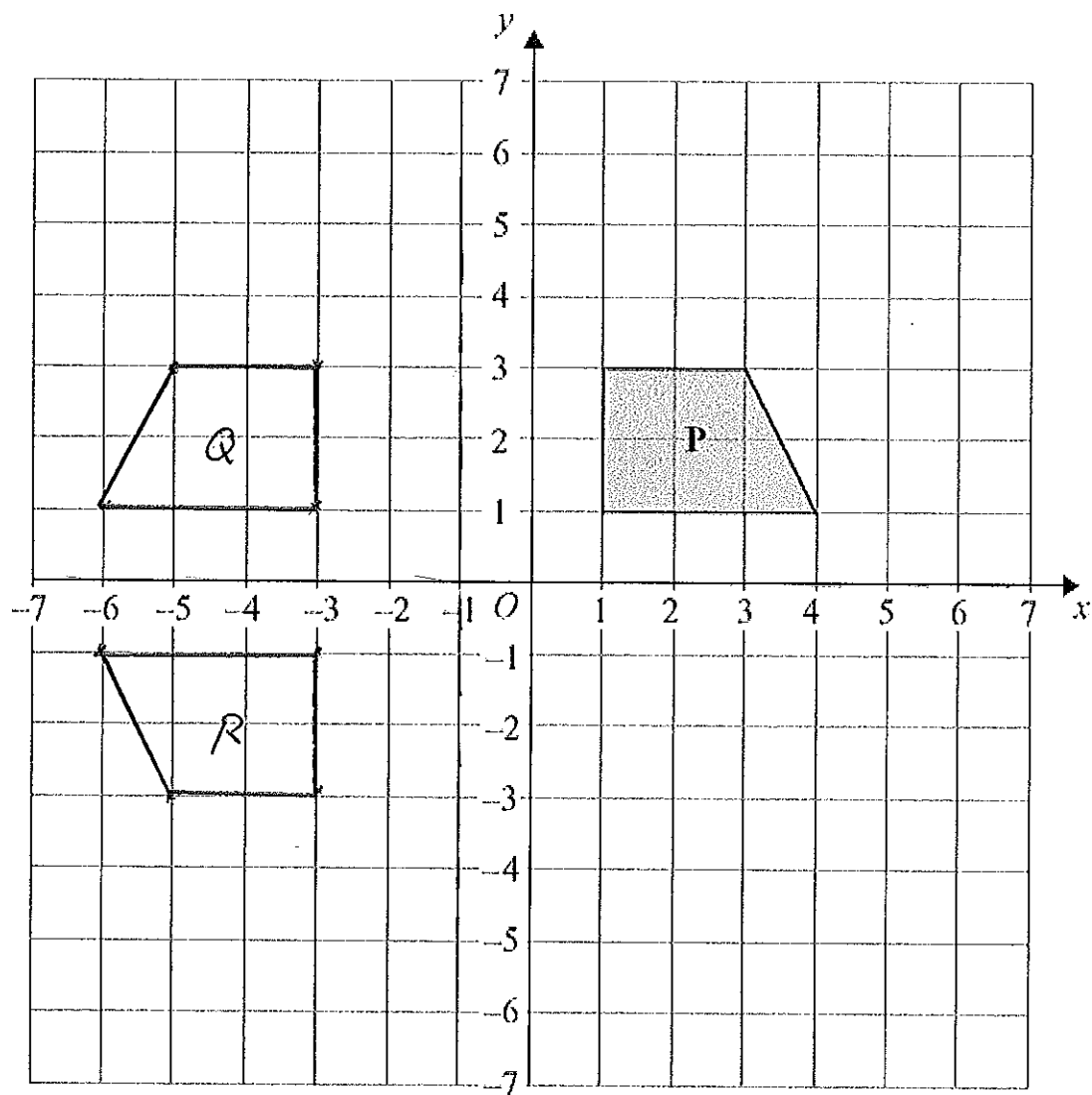
Describe fully the single transformation that maps triangle A onto triangle B.

translation by vector $\begin{pmatrix} -2 \\ -4 \end{pmatrix}$

(2)

(4 marks)

7.



Shape P is reflected in the line $x = -1$ to give shape Q.

Shape Q is reflected in the line $y = 0$ to give shape R.

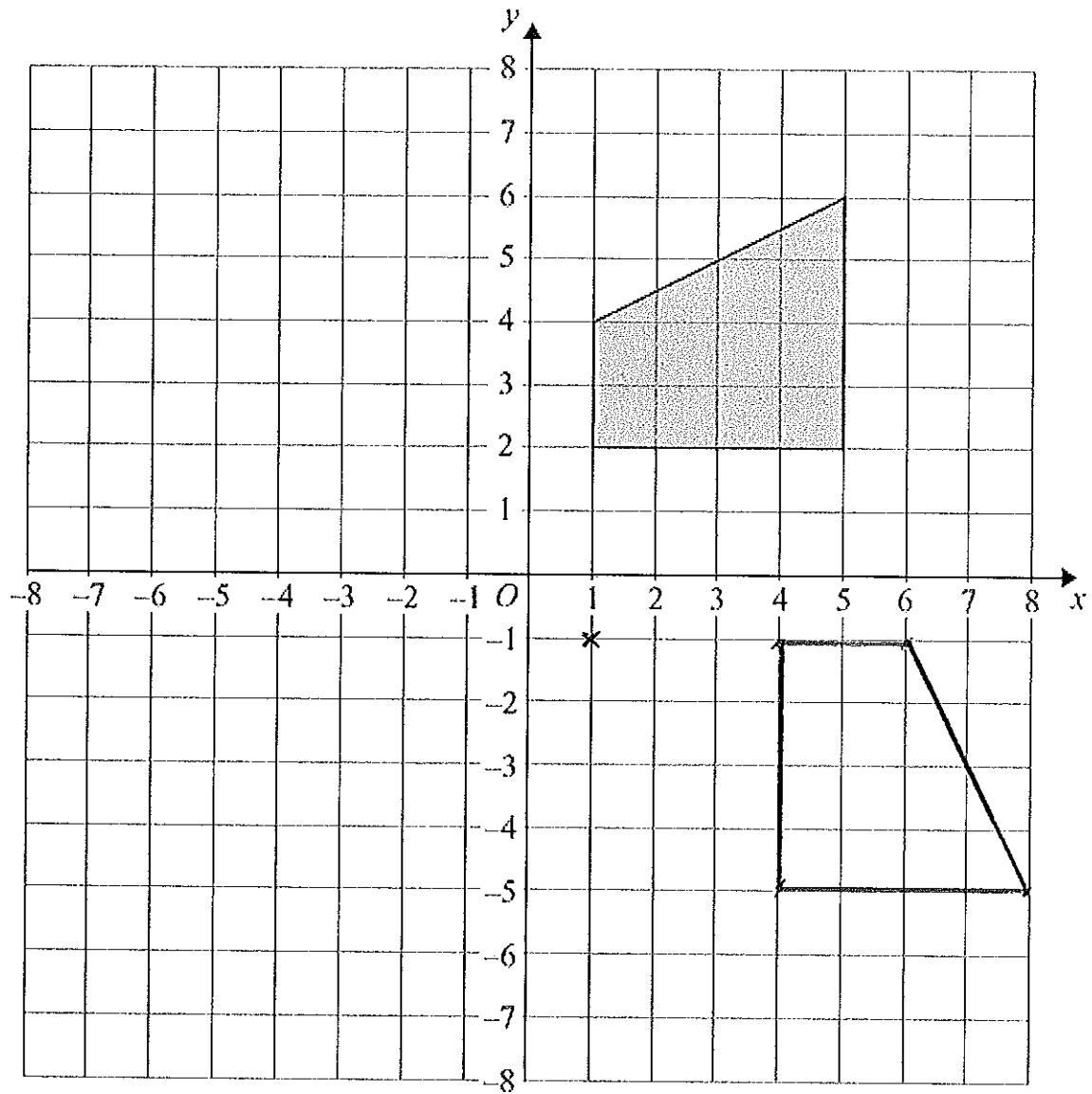
Describe fully the **single** transformation that maps shape P onto shape R.

..... Rotation, 180° , centre $(-1, 0)$

.....

(3 marks)

8.



Rotate the shaded shape 90° clockwise about the point (1, -1).

(3 marks)