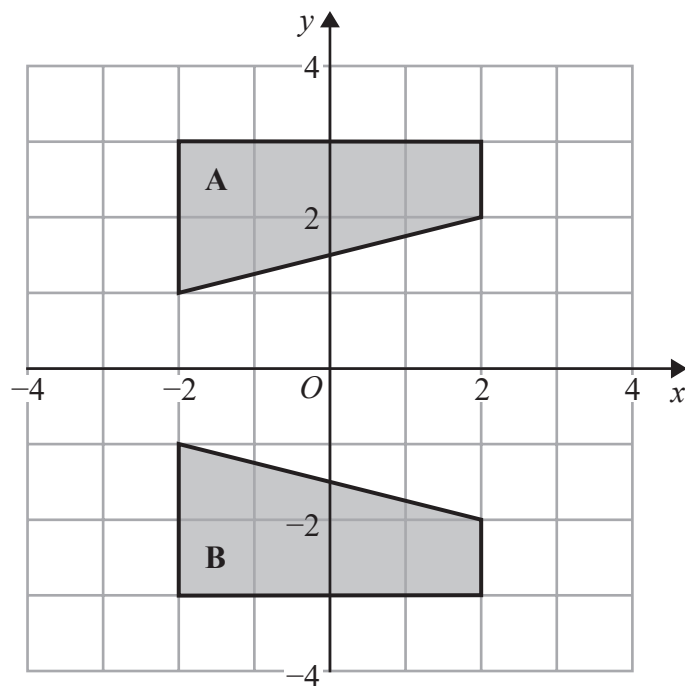


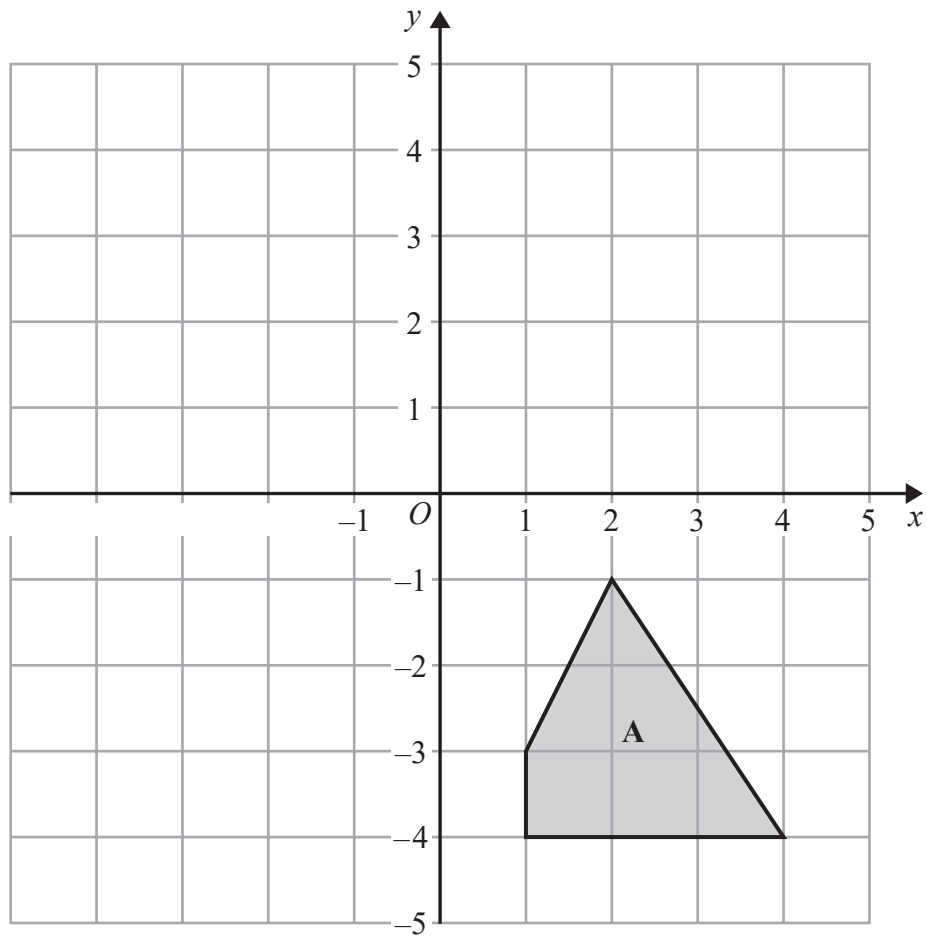
1



Describe fully the single transformation that maps shape **A** onto shape **B**.

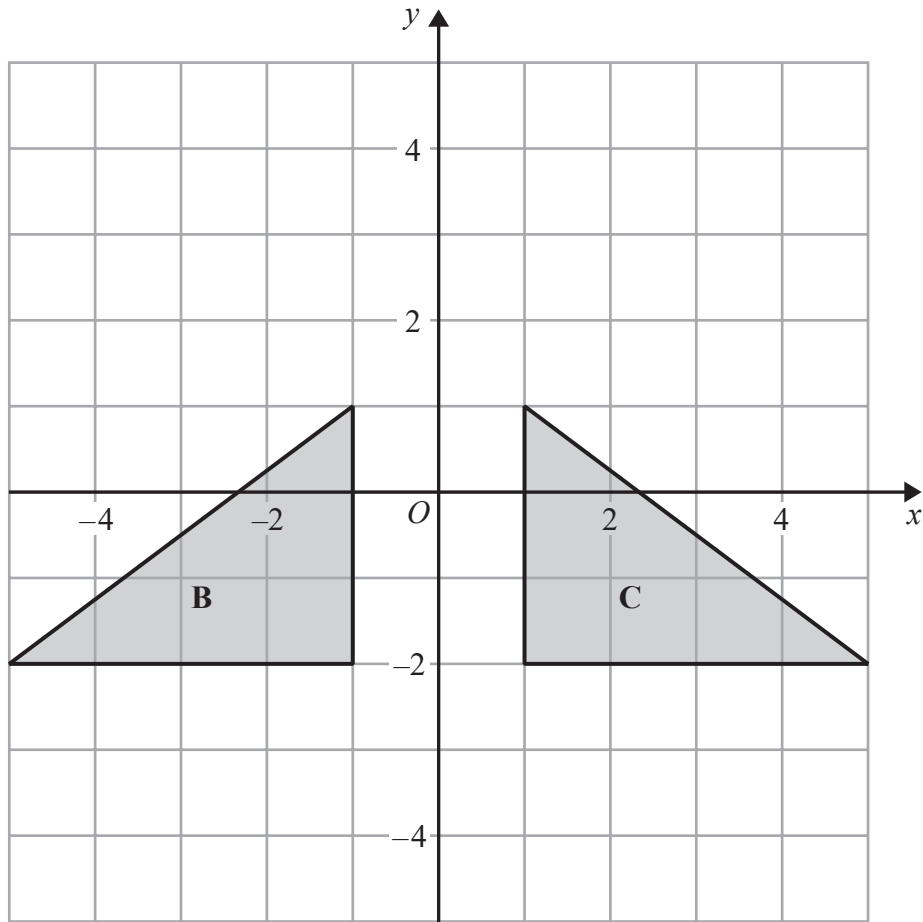
(Total for Question 1 is 2 marks)

2



(a) Rotate shape A 90° clockwise about centre O.

(2)



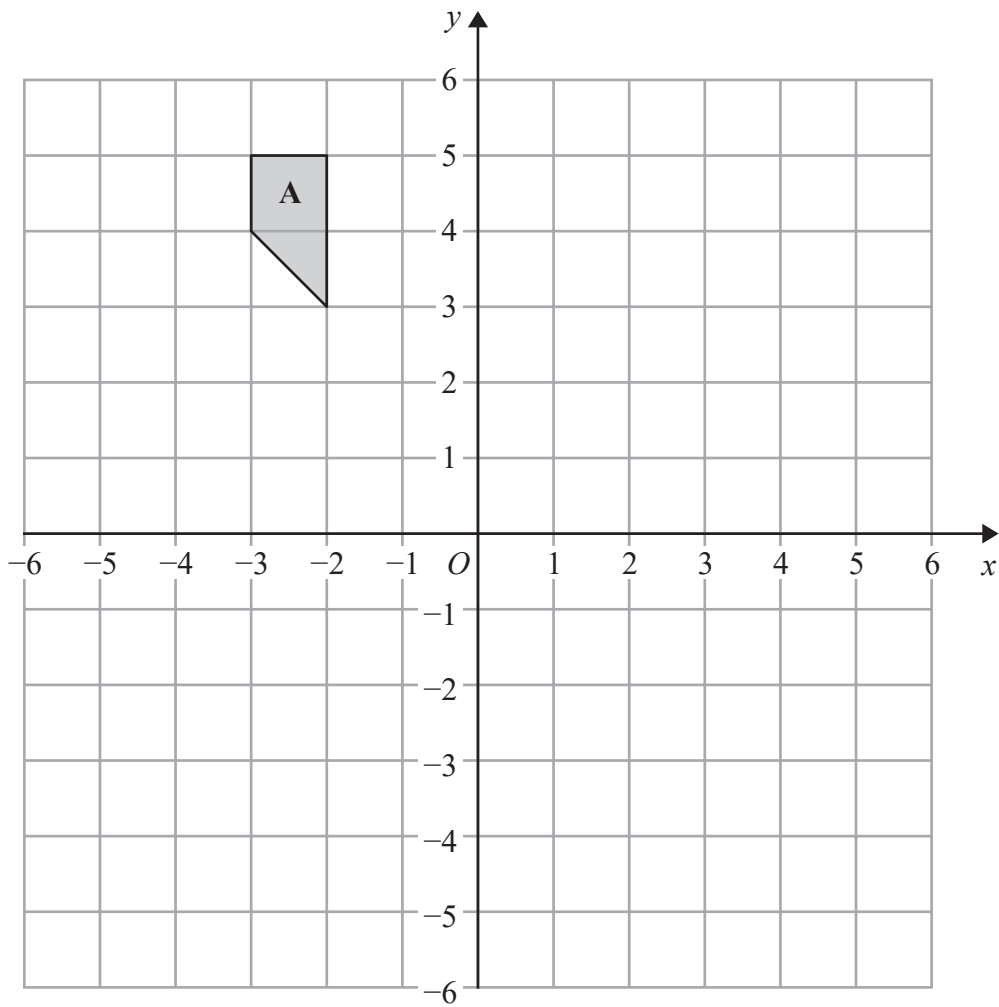
(b) Describe fully the single transformation that maps triangle **B** onto triangle **C**.

.....
.....

(2)

(Total for Question 2 is 4 marks)

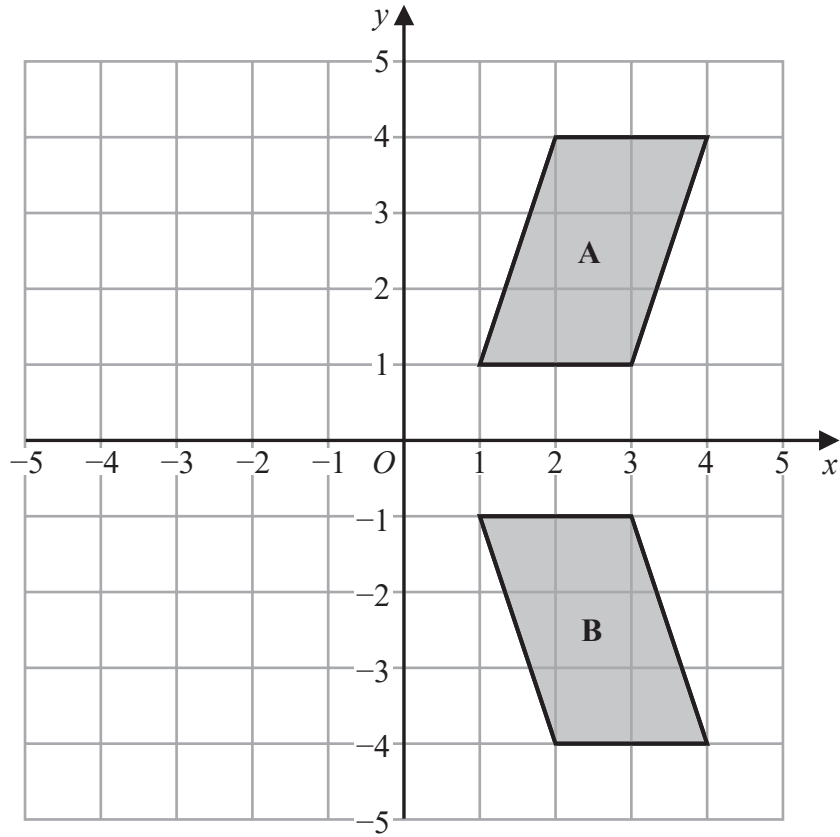
3



Rotate shape A 180° about (1, 0)

(Total for Question 3 is 2 marks)

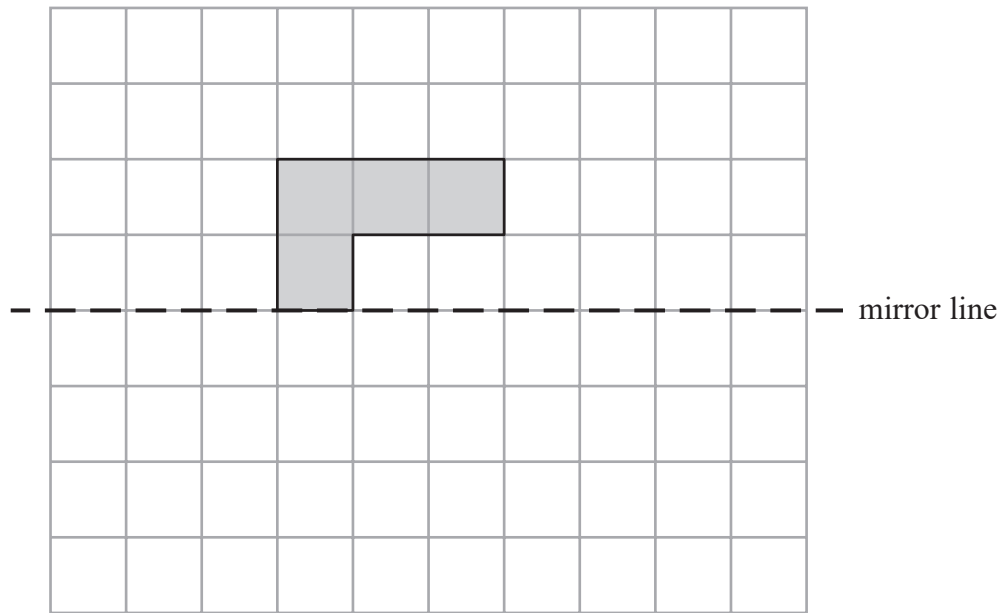
4



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

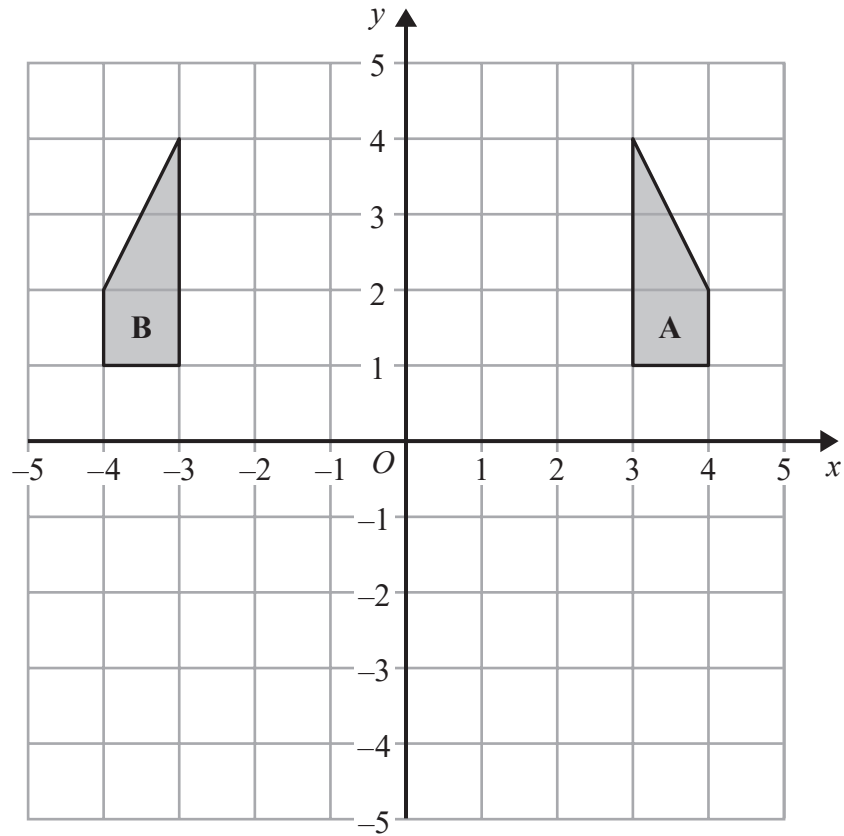
(Total for Question 4 is 2 marks)

5 On the grid, reflect the shaded shape in the mirror line.



(Total for Question 5 is 1 mark)

6



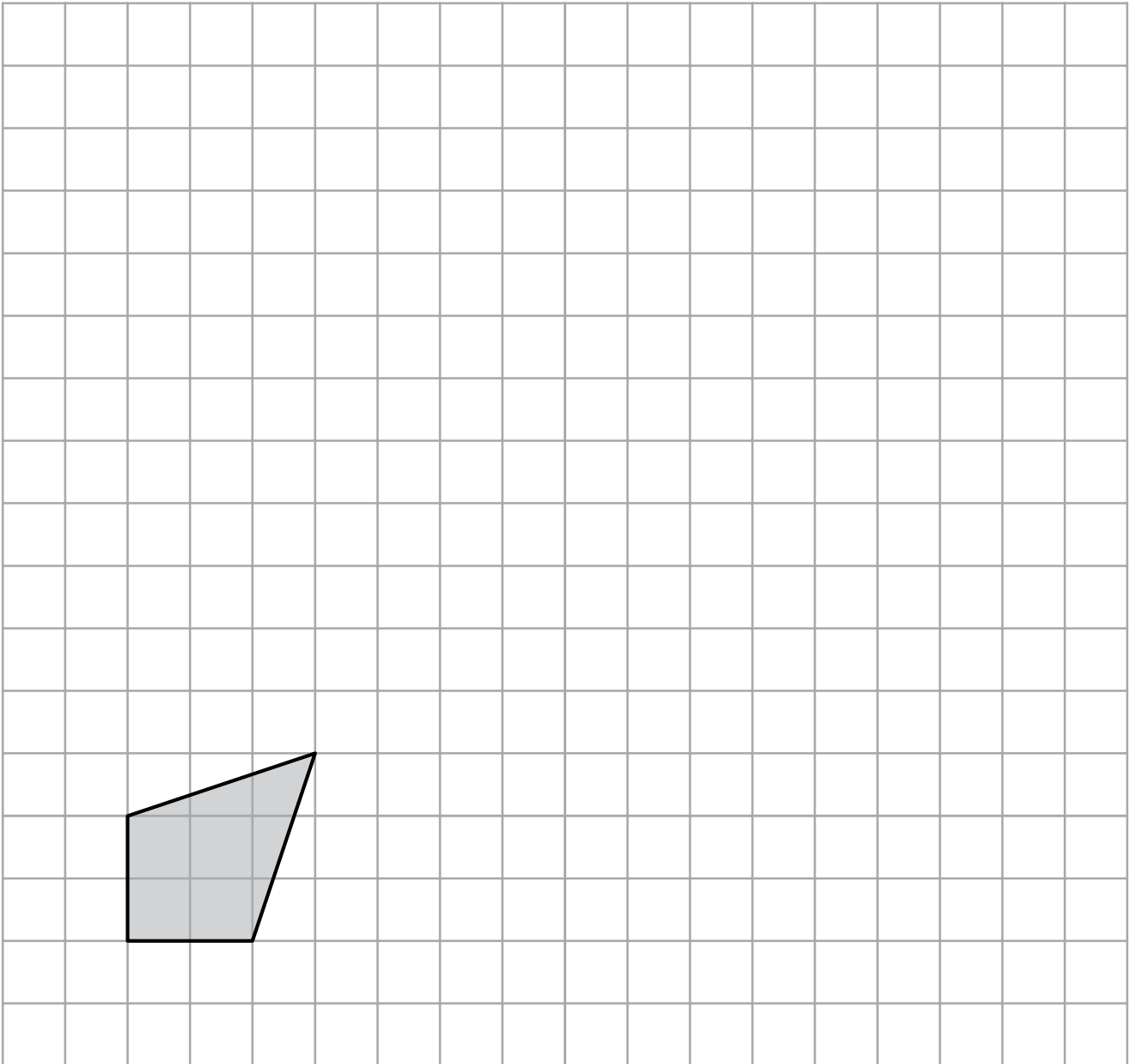
Describe fully the single transformation that maps shape **A** onto shape **B**.

.....

.....

(Total for Question 6 is 2 marks)

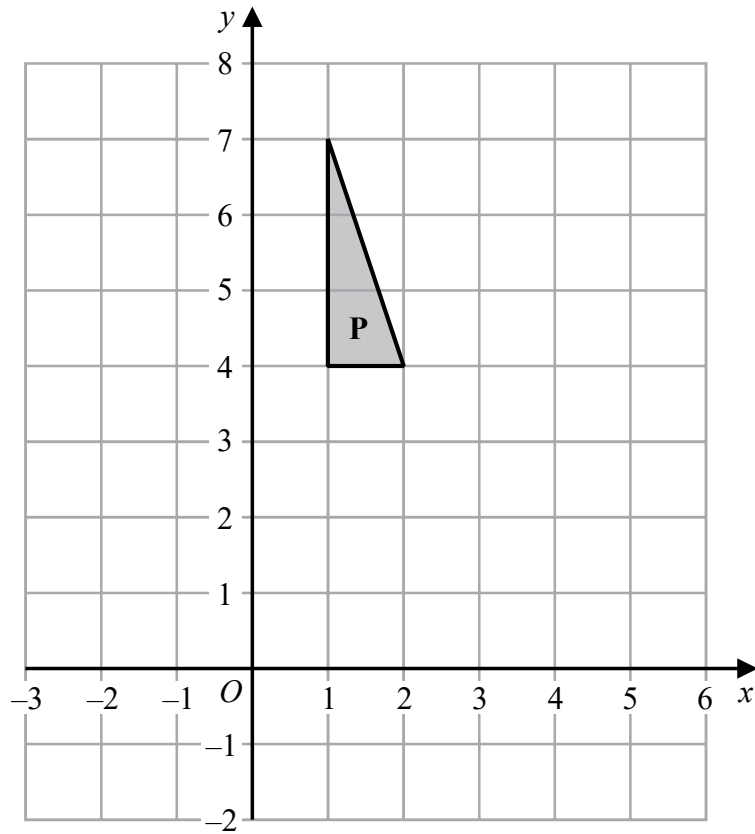
7



On the grid, draw an enlargement of the shaded shape with a scale factor of 3

(Total for Question 7 is 2 marks)

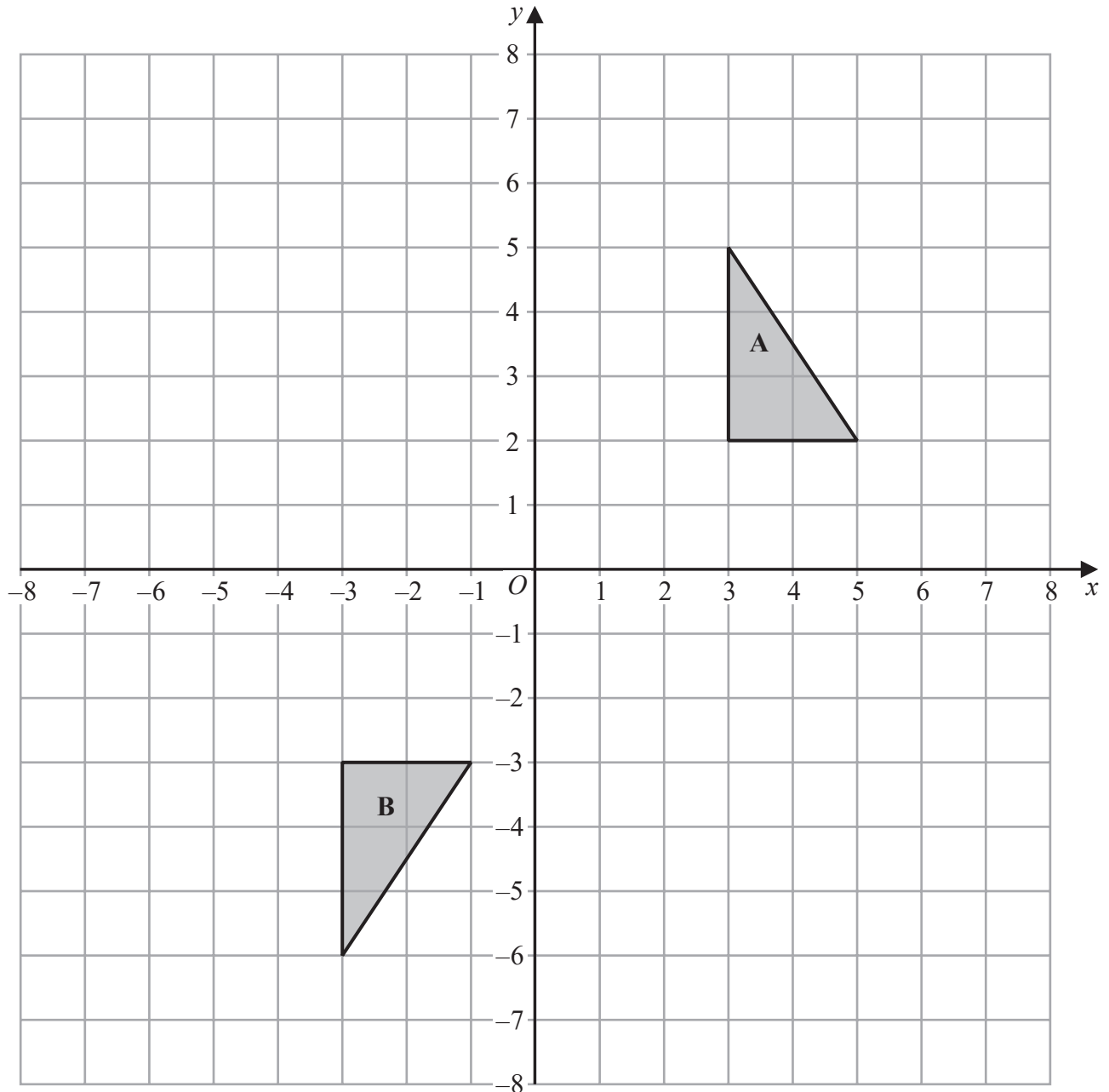
8



Reflect shape **P** in the line $y = 3$

(Total for Question 8 is 2 marks)

9



Shape **A** can be transformed to shape **B** by a reflection in the x -axis followed by a translation $\begin{pmatrix} c \\ d \end{pmatrix}$

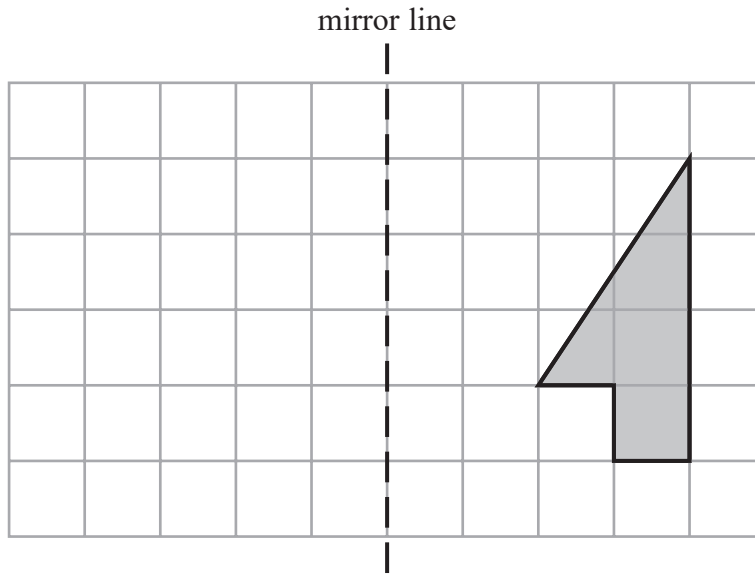
Find the value of c and the value of d .

$c = \dots\dots\dots$

$d = \dots\dots\dots$

(Total for Question 9 is 3 marks)

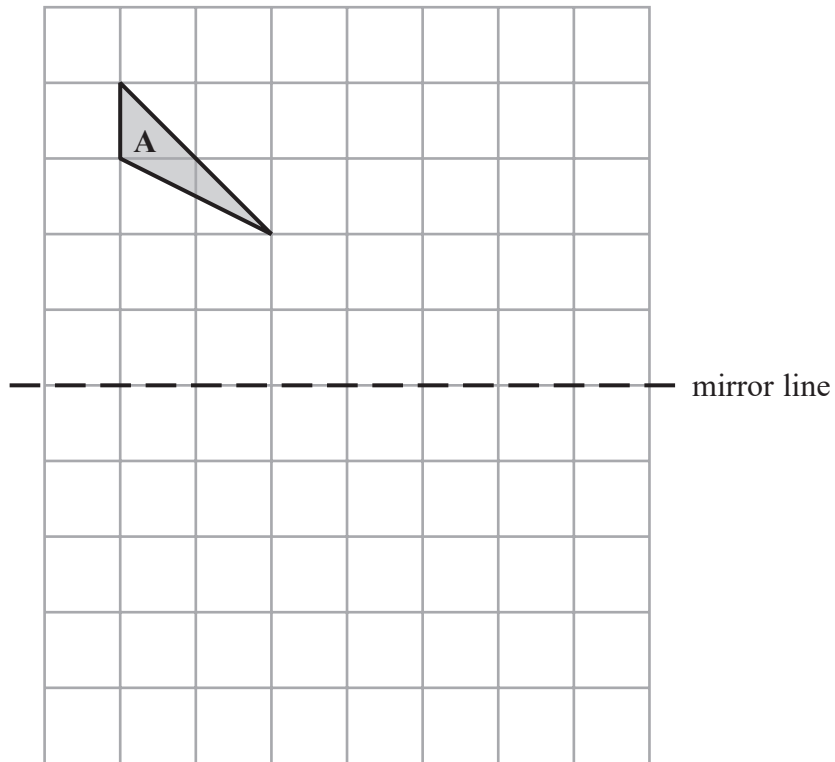
10



Reflect the shaded shape in the mirror line.

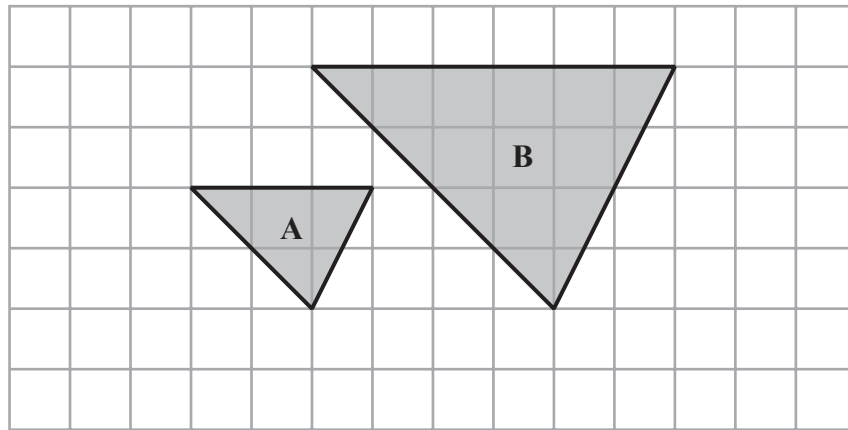
(Total for Question 10 is 2 marks)

11 Reflect shape A in the mirror line.



(Total for Question 11 is 2 marks)

12 Here are two triangles on a grid.



Triangle **B** is an enlargement of triangle **A**.

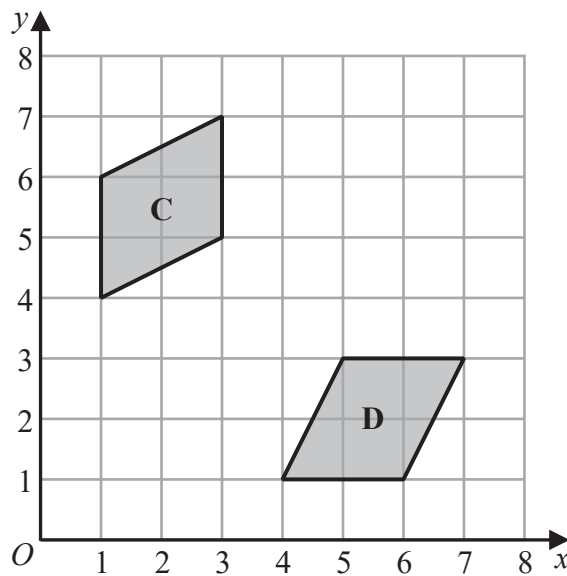
(a) (i) Write down the scale factor of the enlargement.

.....
(1)

(ii) On the grid, mark with a cross (×) the centre of enlargement.

(1)

Here are two parallelograms on a coordinate grid.



Parallelogram **D** is a reflection of parallelogram **C**.

(b) (i) On the grid, draw the mirror line.

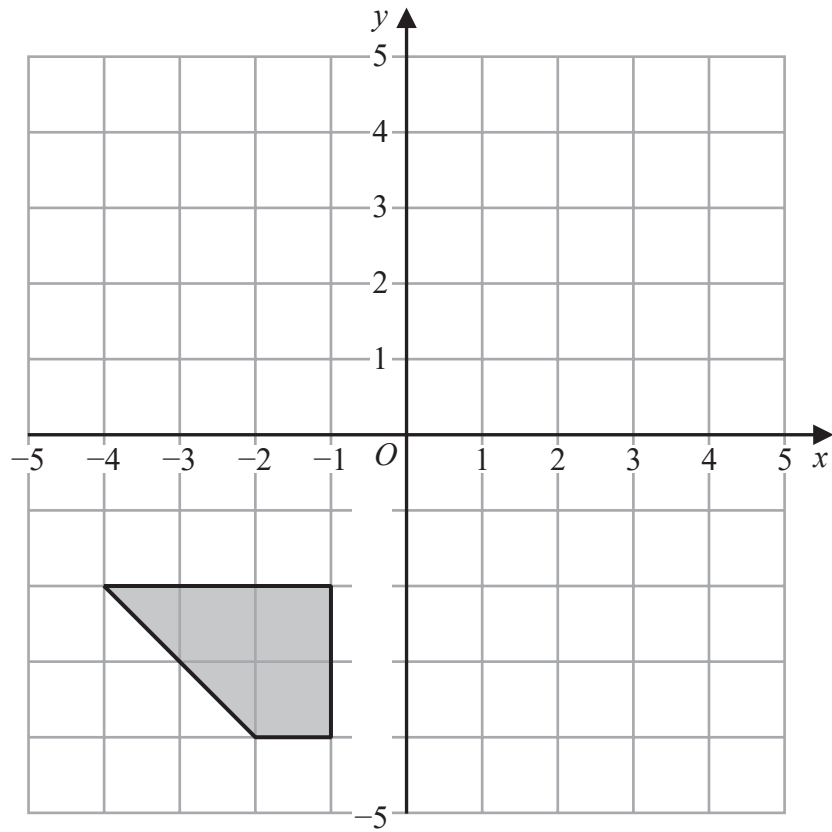
(1)

(ii) Write down an equation of this mirror line.

.....
(1)

(Total for Question 12 is 4 marks)

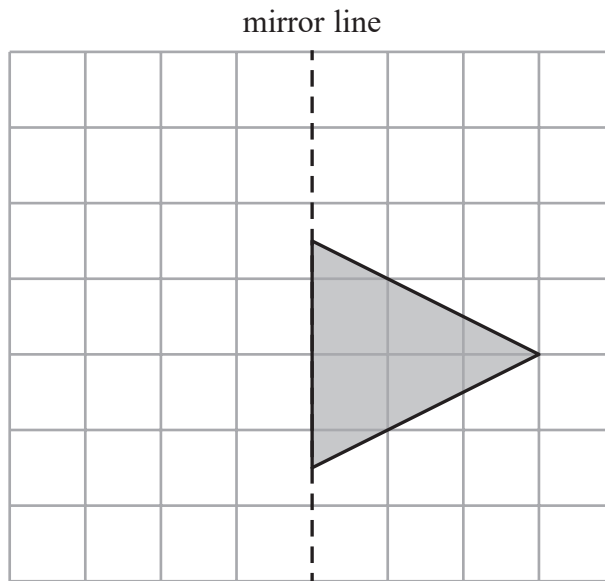
13



Rotate the shaded shape 90° anticlockwise about (0,0)

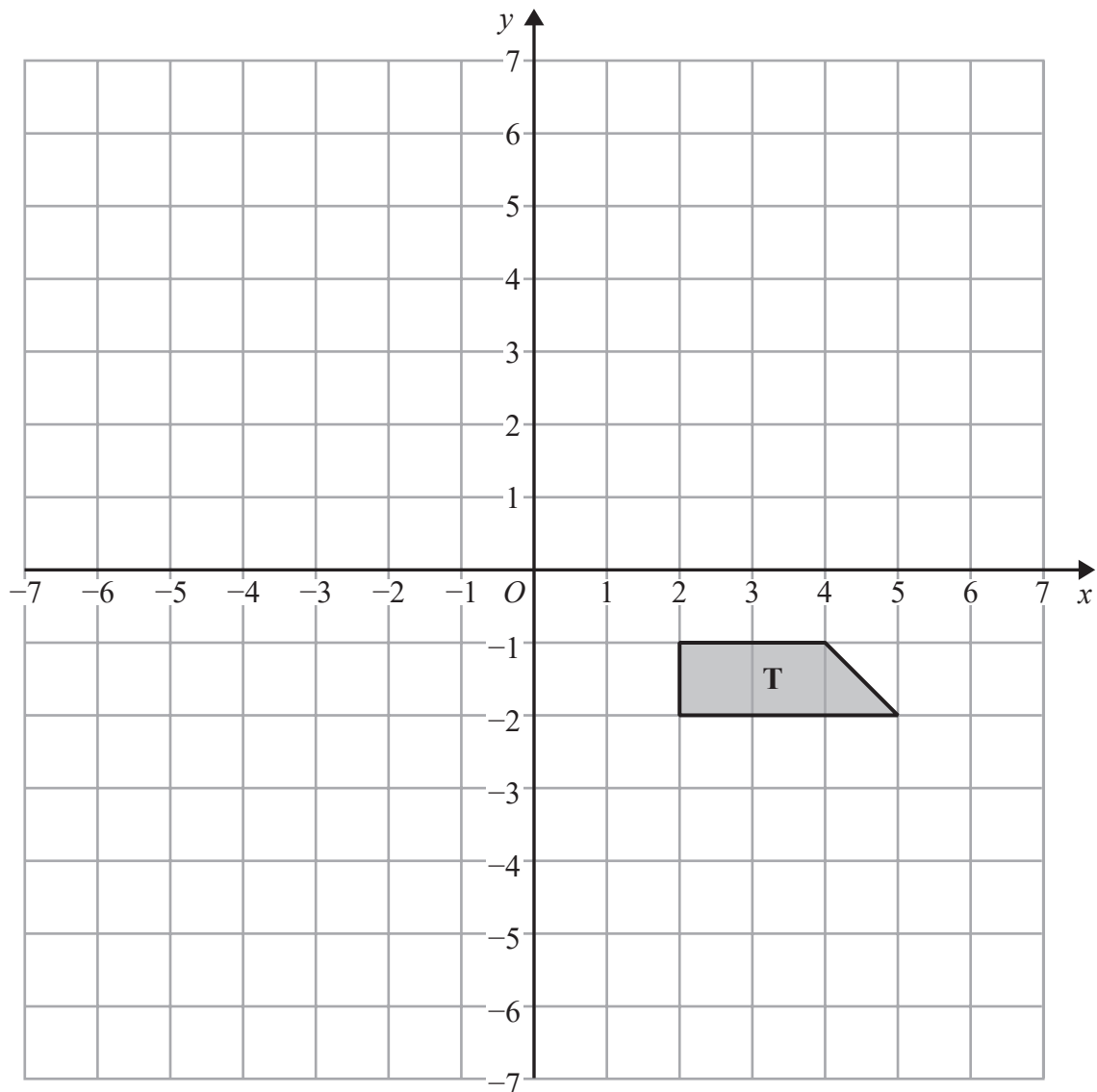
(Total for Question 13 is 2 marks)

14 On the grid, reflect the shaded triangle in the mirror line.



(Total for Question 14 is 1 mark)

15



- (a) Rotate trapezium **T** 180° about the origin.
Label the new trapezium **A**.

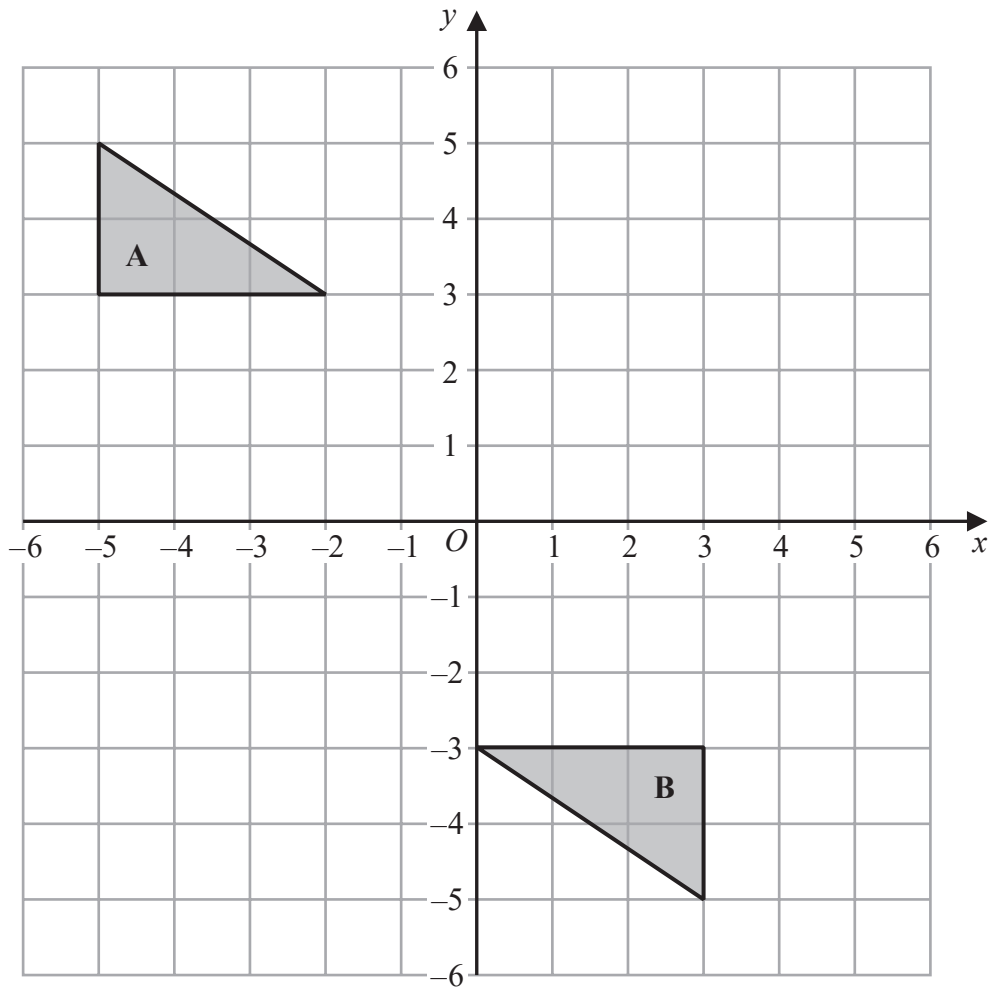
(1)

- (b) Translate trapezium **T** by the vector $\begin{pmatrix} -1 \\ -3 \end{pmatrix}$
Label the new trapezium **B**.

(1)

(Total for Question 15 is 2 marks)

16



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

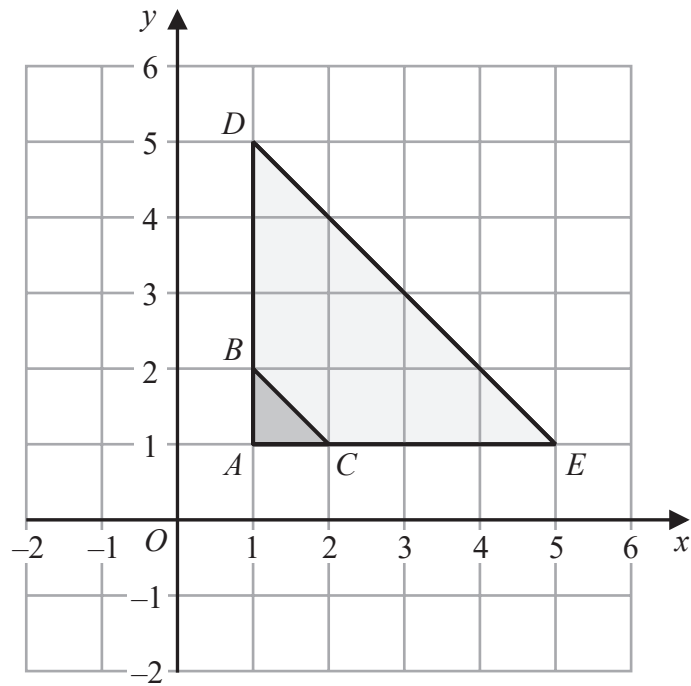
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.....

(Total for Question 16 is 2 marks)

17 Here is a diagram showing triangle ABC and triangle ADE .



Describe fully the single transformation that maps triangle ABC onto triangle ADE .

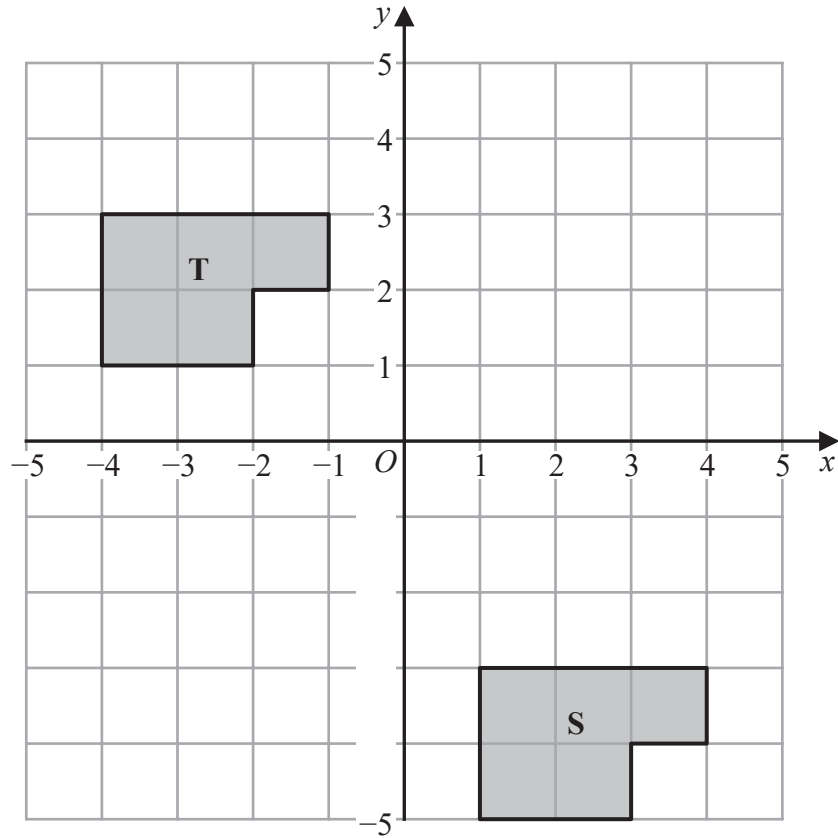
.....

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.....

(Total for Question 17 is 2 marks)

18



Describe fully the single transformation that maps shape S onto shape T.

.....

.....

.....

(Total for Question 18 is 2 marks)