Name: _____

GCSE (1 – 9)

Transformations

Instructions

- Use **black** ink or ball-point pen.
- Answer all Questions.
- Answer the Questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

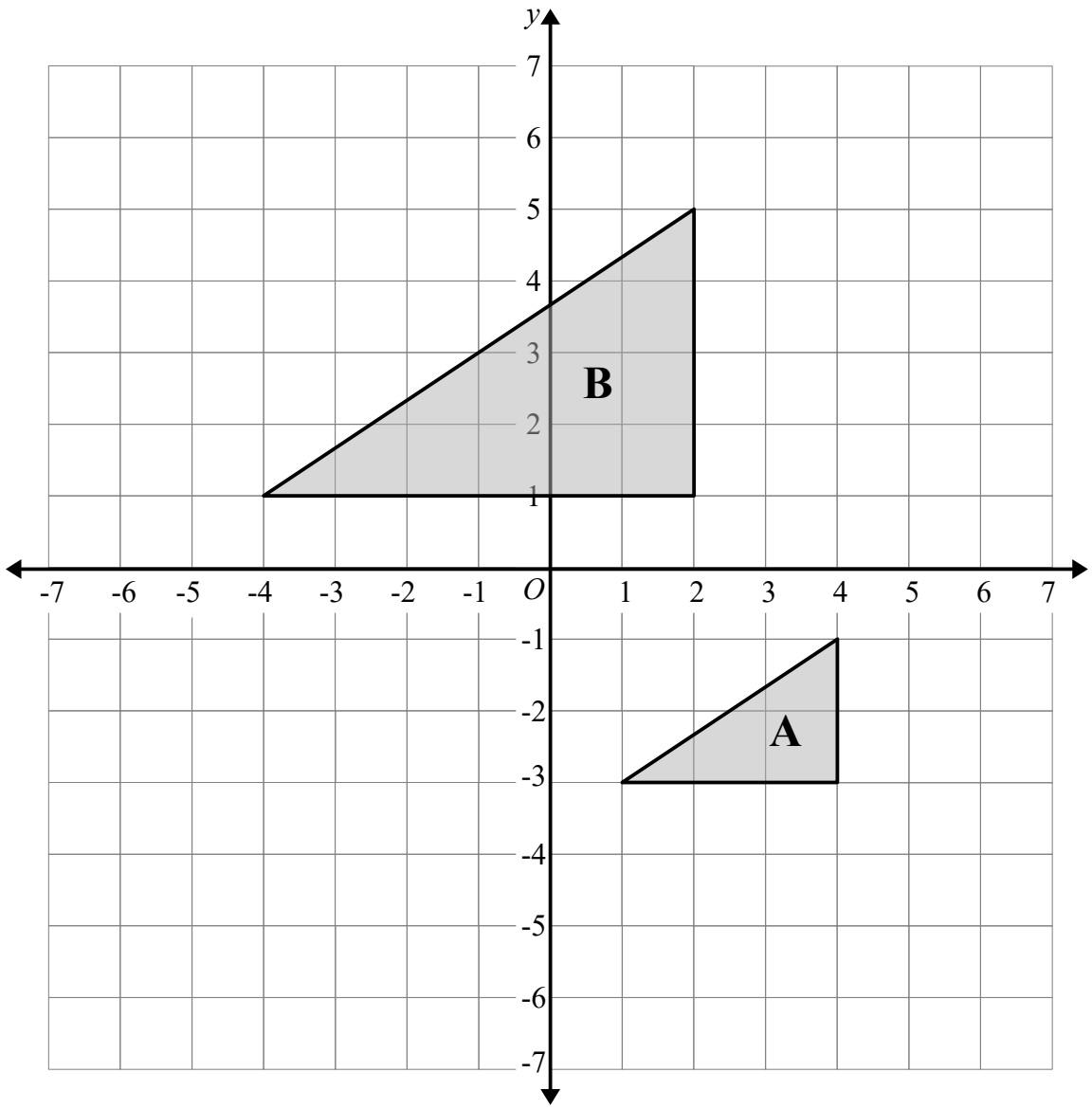
Information

- The marks for each Question are shown in brackets
– *use this as a guide as to how much time to spend on each Question.*

Advice

- Read each Question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every Question.
- Check your answers if you have time at the end

1



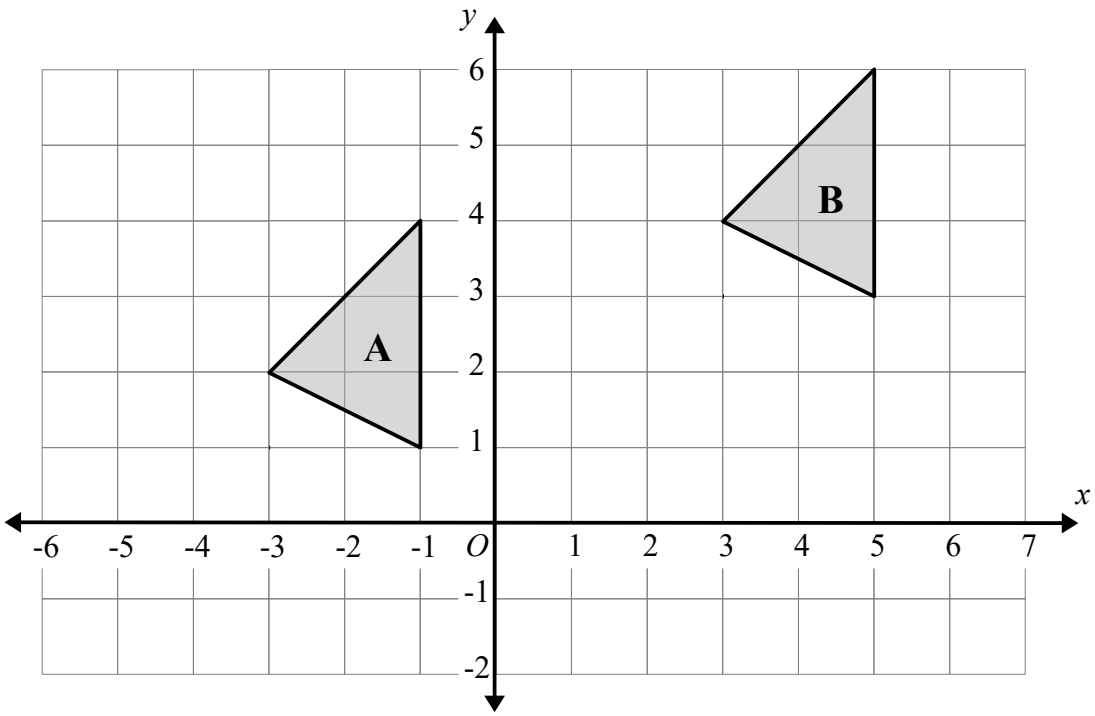
Describe fully the single transformation that maps triangle **A** on triangle **B**.

…….....……..……

…….....……..……

(Total for question 1 is 2 marks)

2

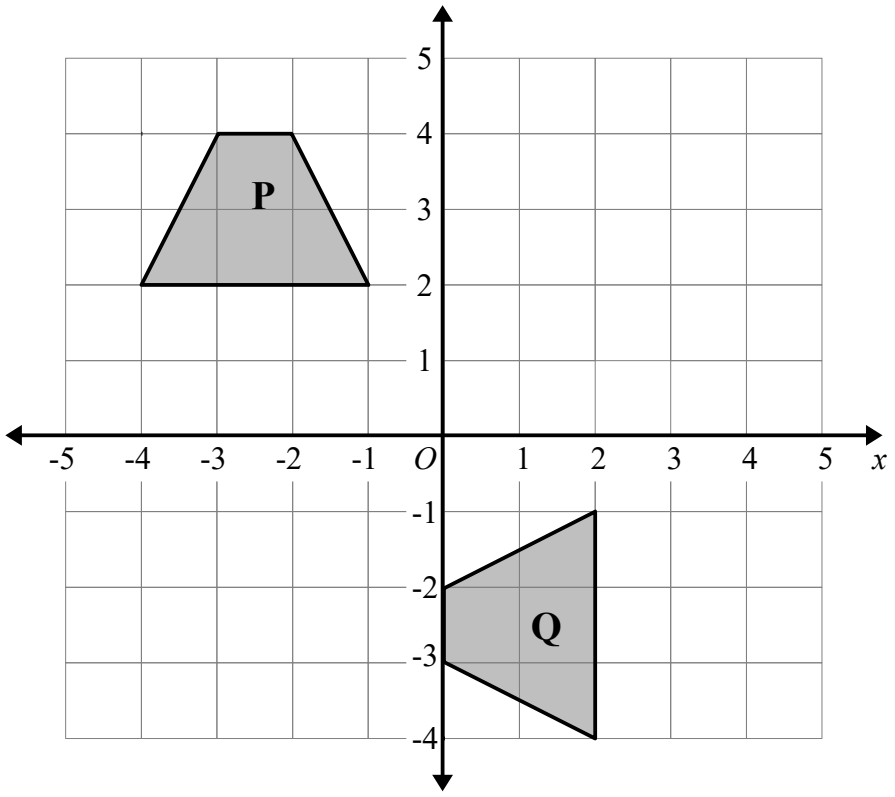


Describe fully the single transformation that maps triangle **A** on triangle **B**.

…….....……..……

(Total for question 2 is 2 marks)

3

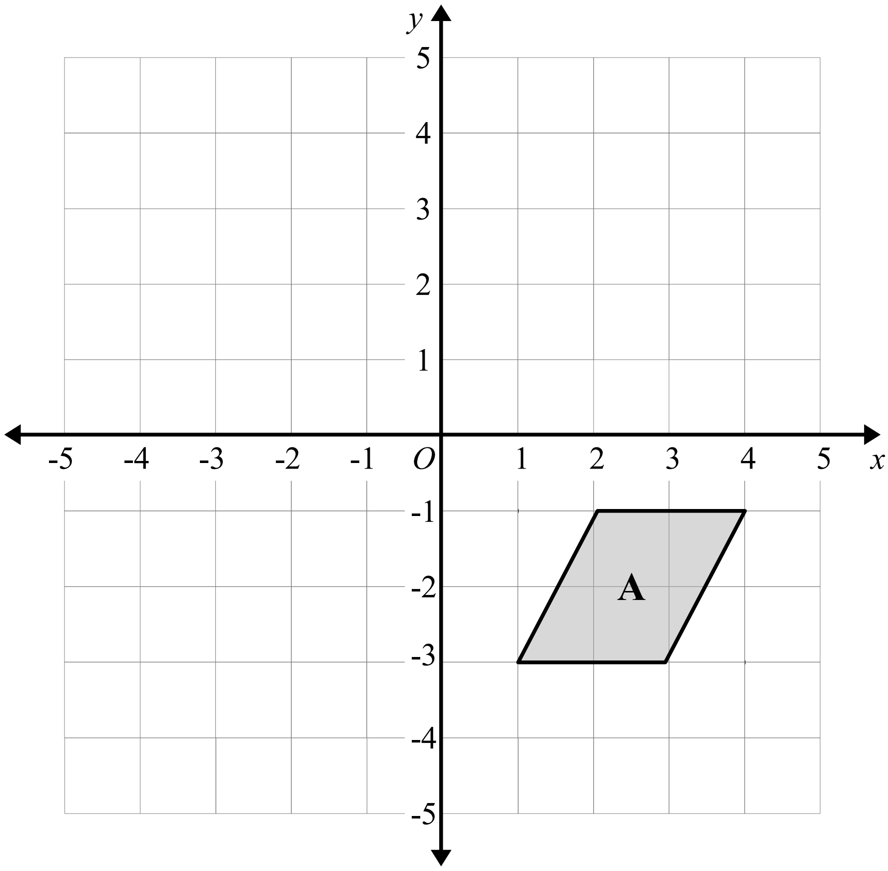


Describe fully the single transformation that maps trapezium **P** on trapezium **Q**.

…….....……..……

(Total for question 3 is 2 marks)

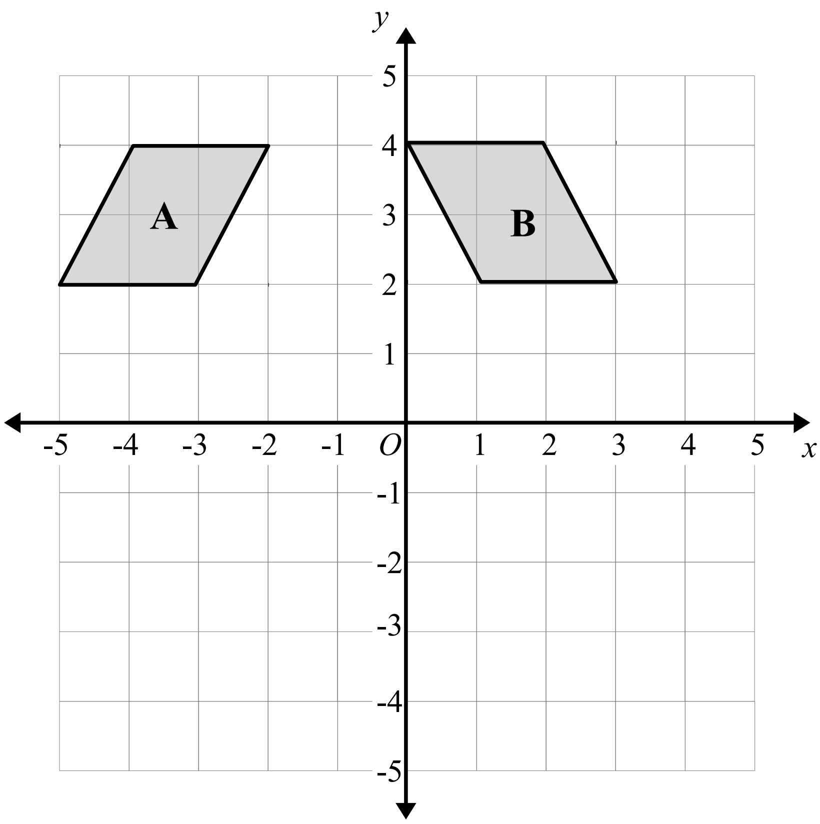
4



Reflect shape **A** in the line with equation $y = x$

(Total for question 4 is 2 marks)

5

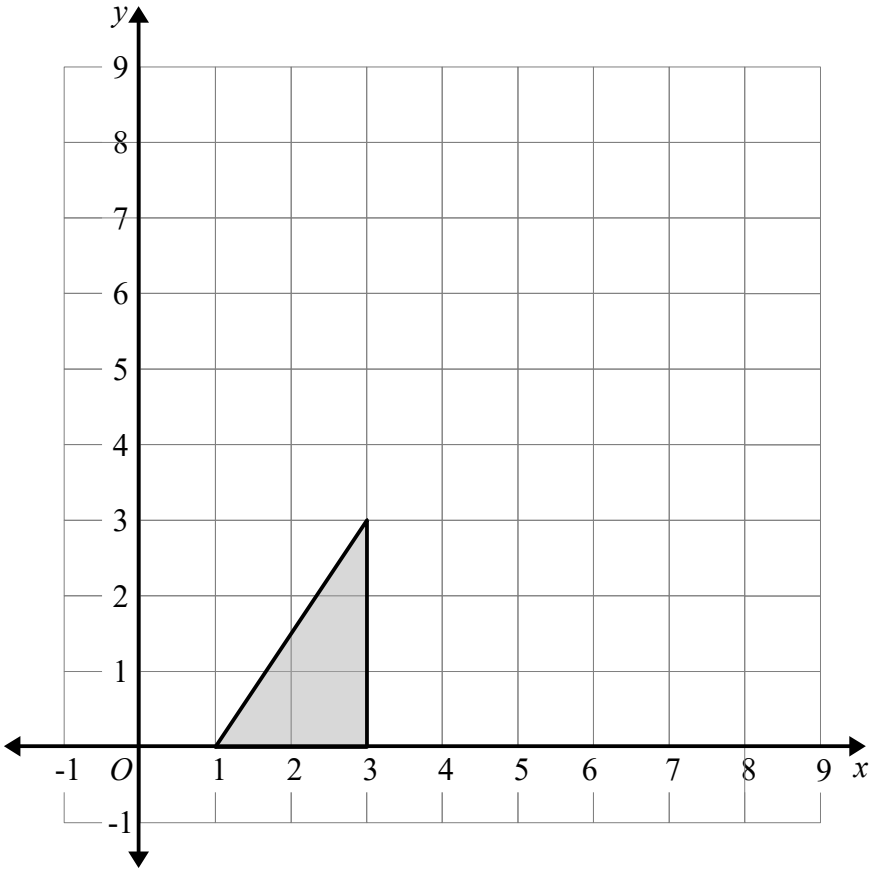


Describe fully the single transformation that maps shape **A** onto shape **B**.

……………………………………………………………………………………………

(Total for question 5 is 2 marks)

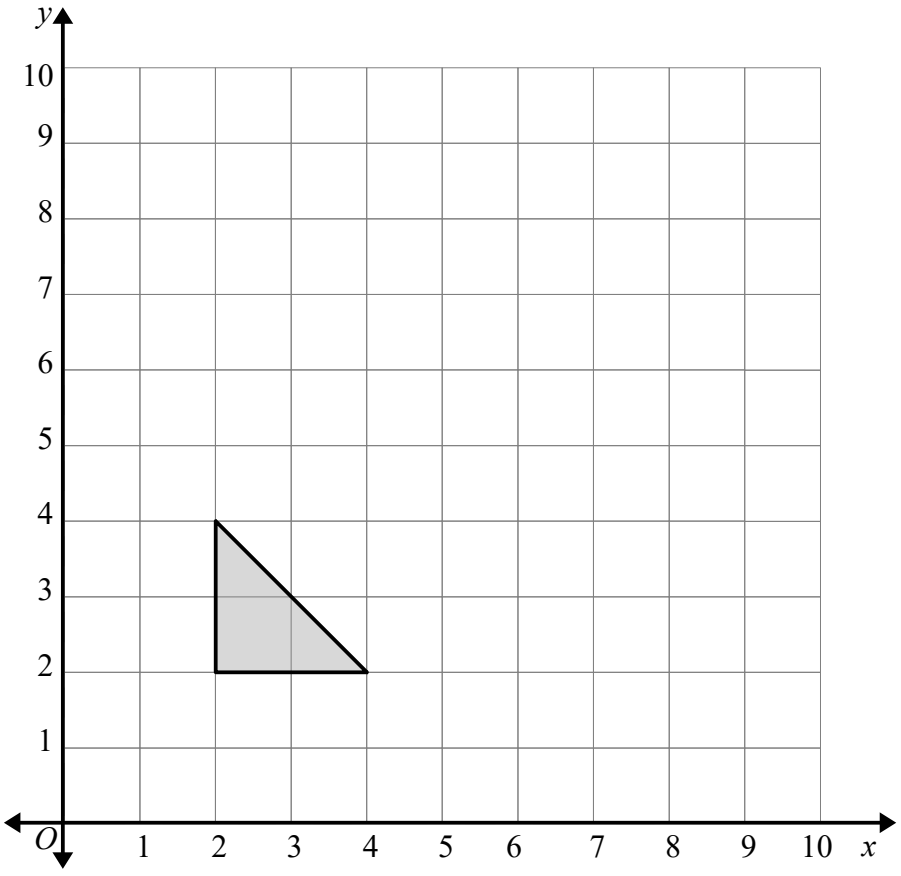
6



Enlarge the shaded triangle by scale factor 3, centre O

(Total for question 6 is 2 marks)

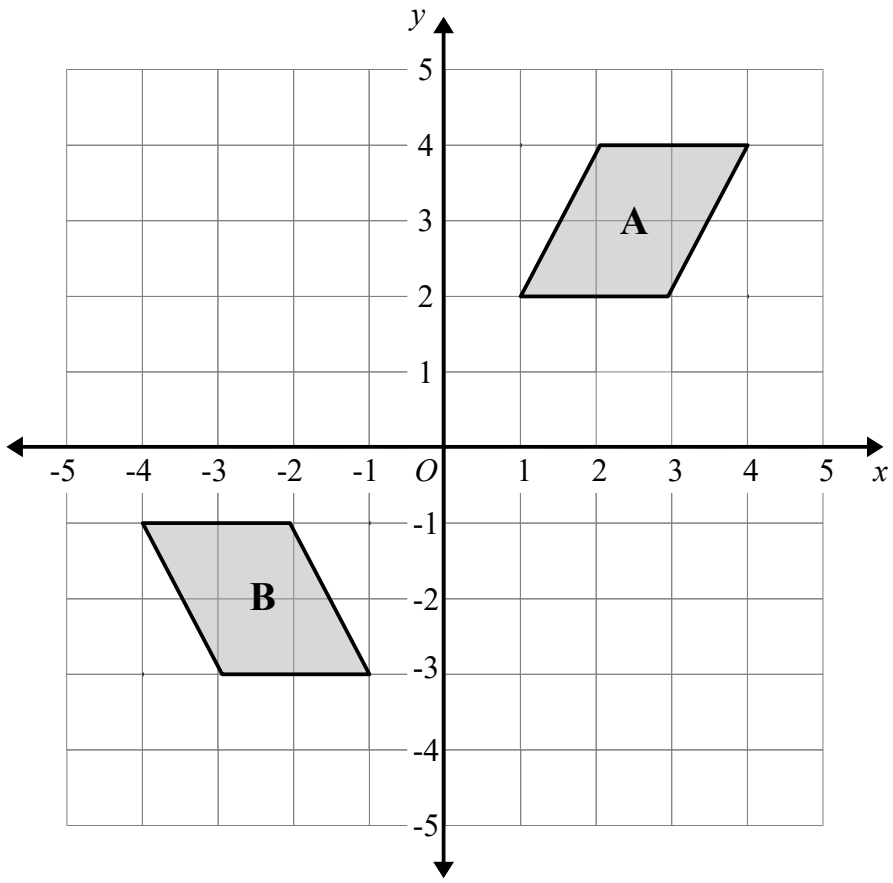
7



Enlarge the shaded triangle by scale factor 2.5, centre O.

(Total for question 7 is 2 marks)

8



Shape **A** is transformed to shape **B** by a reflection in the x axis followed by a translation $\begin{pmatrix} p \\ q \end{pmatrix}$

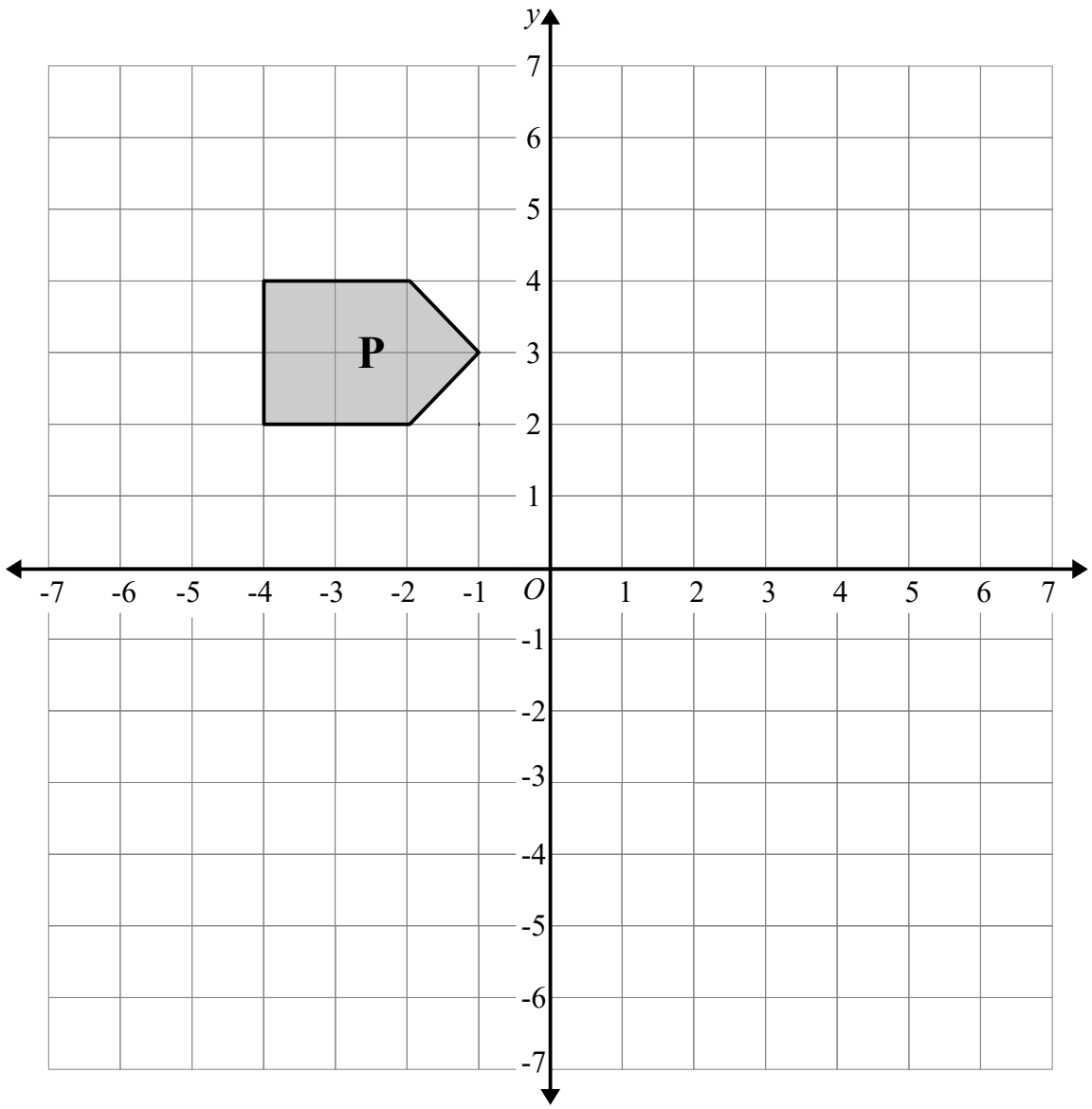
Find the value of p and the value of q.

p =.....

q =.....

(Total for question 8 is 3 marks)

9



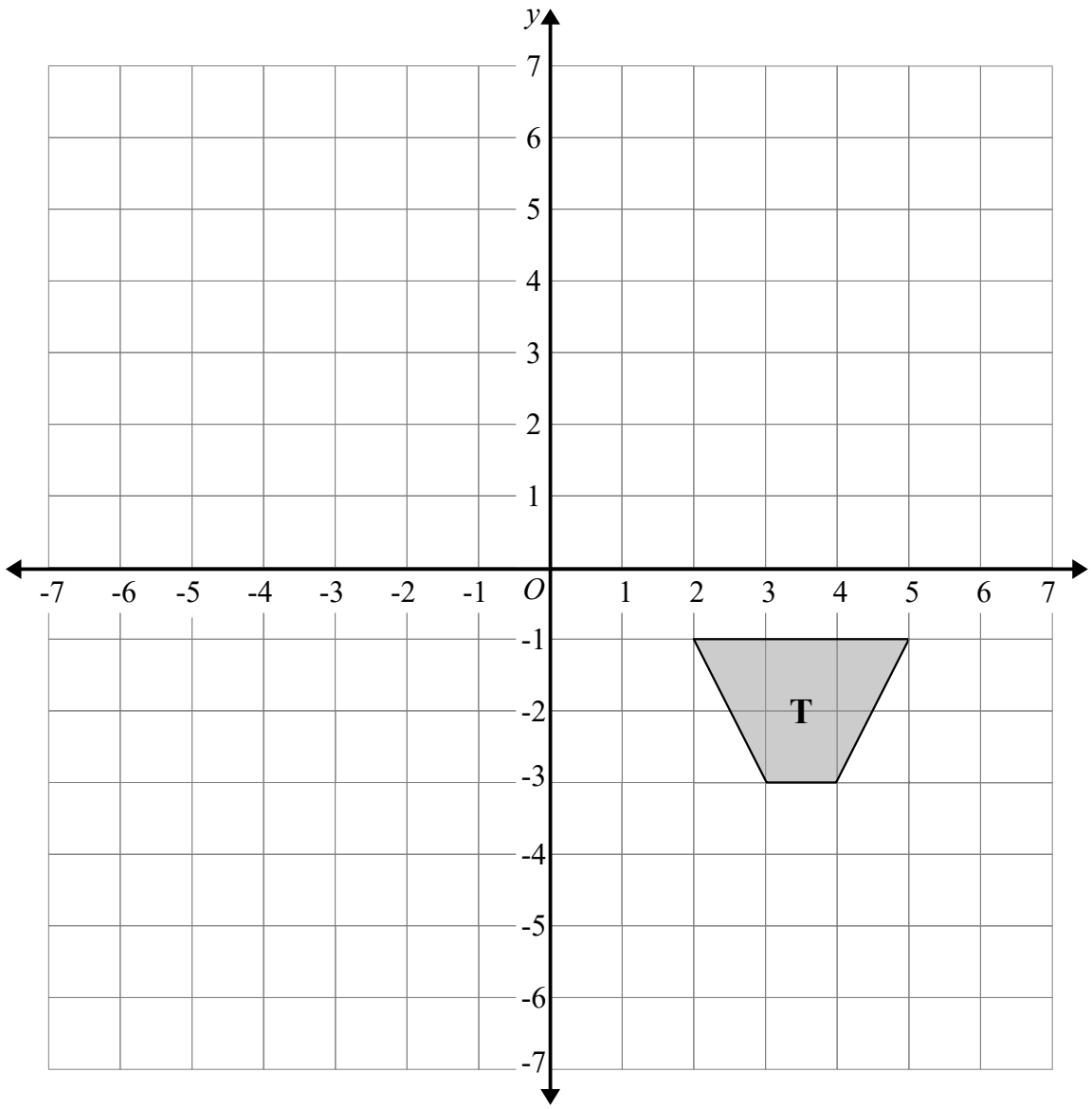
(a) Reflect shape **P** in the line $x = 1$.
Label the new shape **A**.

(b) Translate shape **P** by the vector $\begin{pmatrix} 5 \\ -6 \end{pmatrix}$
Label the new shape **B**.

(c) Rotate shape **P** by 90° anticlockwise, centre O
Label the new shape **C**

(Total for question 9 is 3 marks)

10



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

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

(Total for question 10 is 2 marks)