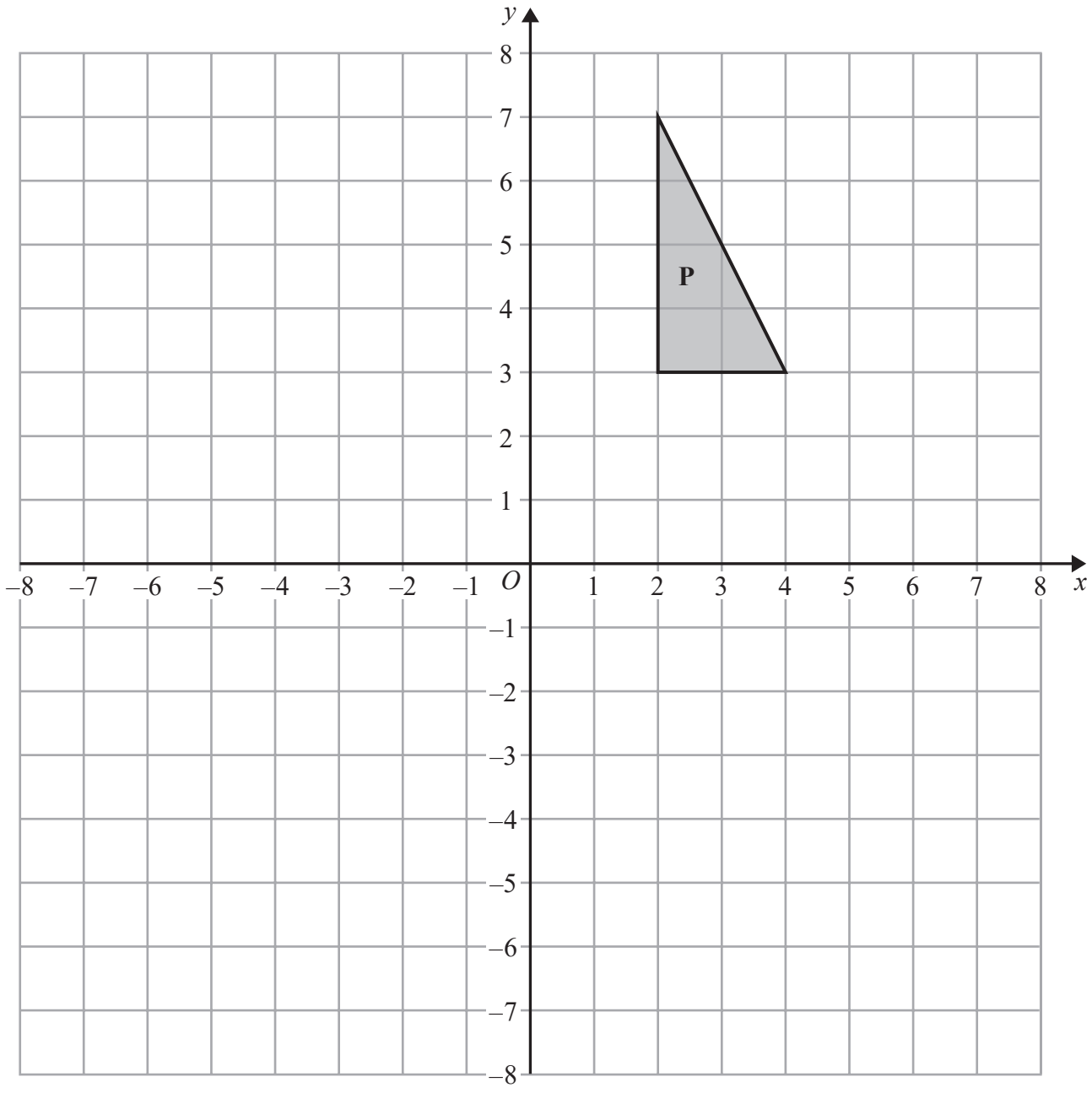
Autumn 2017 Paper 1 Q18

1



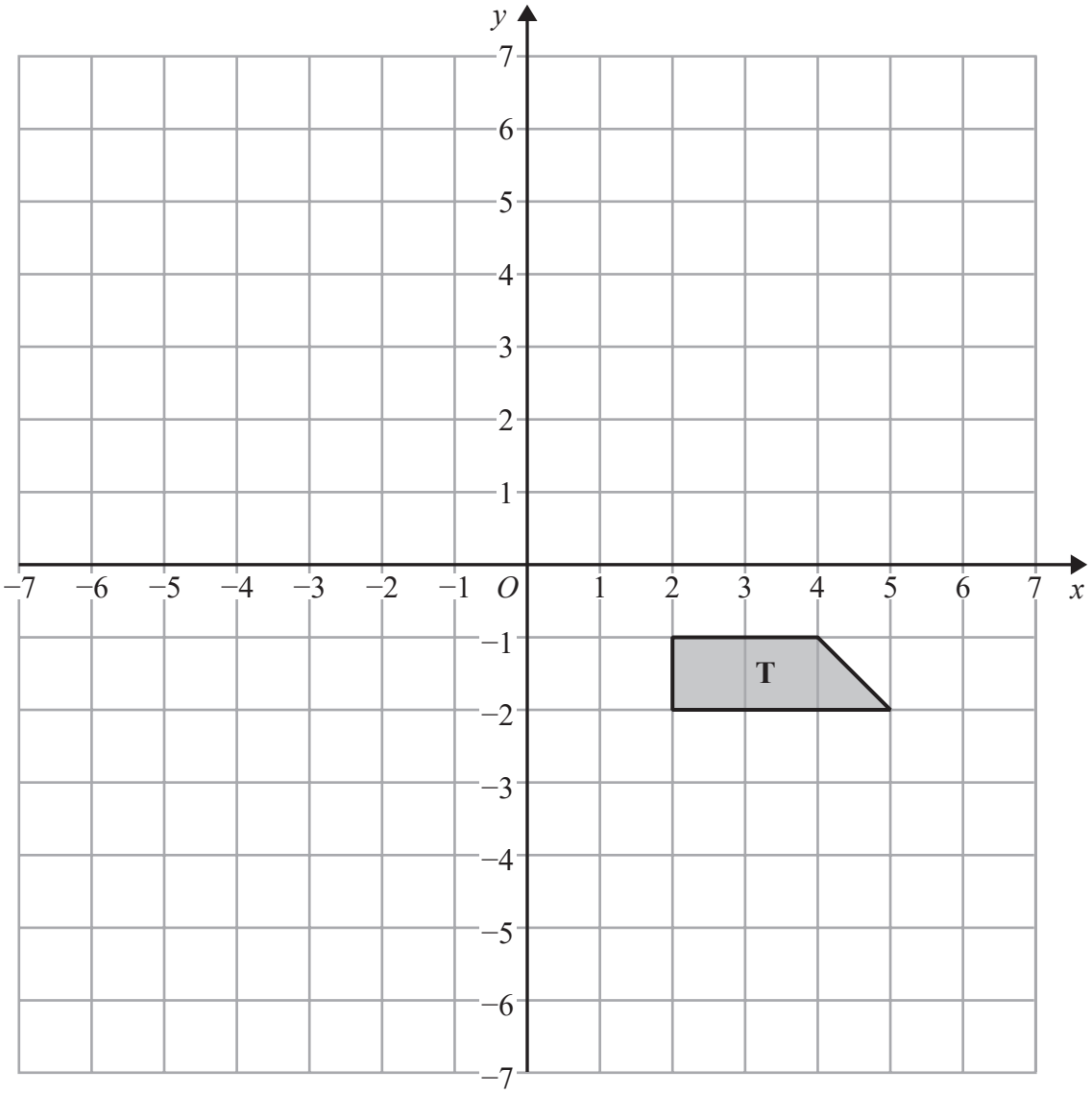
Enlarge shape **P** by scale factor $-\frac{1}{2}$ with centre of enlargement (0, 0).

Label your image **Q**.

(Total for Question 1 is 2 marks)

Autumn 2017 Paper 2 Q5

2



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

(1)

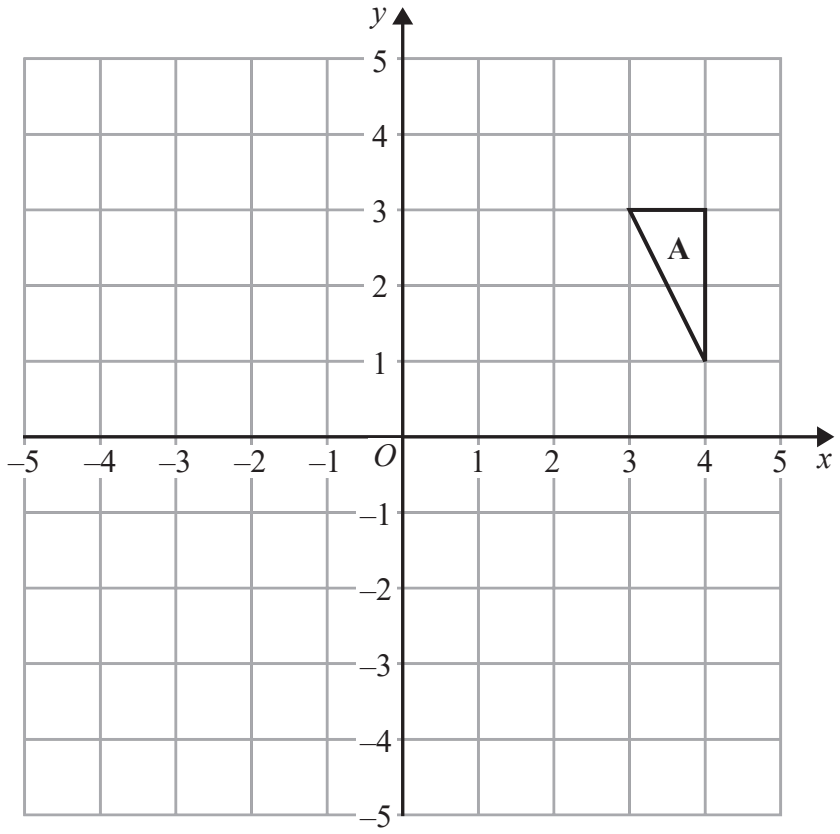
(b) Translate trapezium **T** by the vector $\begin{pmatrix} -1 \\ -3 \end{pmatrix}$
Label the new trapezium **B**.

(1)

(Total for Question 2 is 2 marks)

Summer 2017 Paper 2 Q9

3 The diagram shows triangle **A** drawn on a grid.



Kyle reflects triangle **A** in the x-axis to get triangle **B**.
He then reflects triangle **B** in the line $y = x$ to get triangle **C**.

Amy reflects triangle **A** in the line $y = x$ to get triangle **D**.
She is then going to reflect triangle **D** in the x-axis to get triangle **E**.

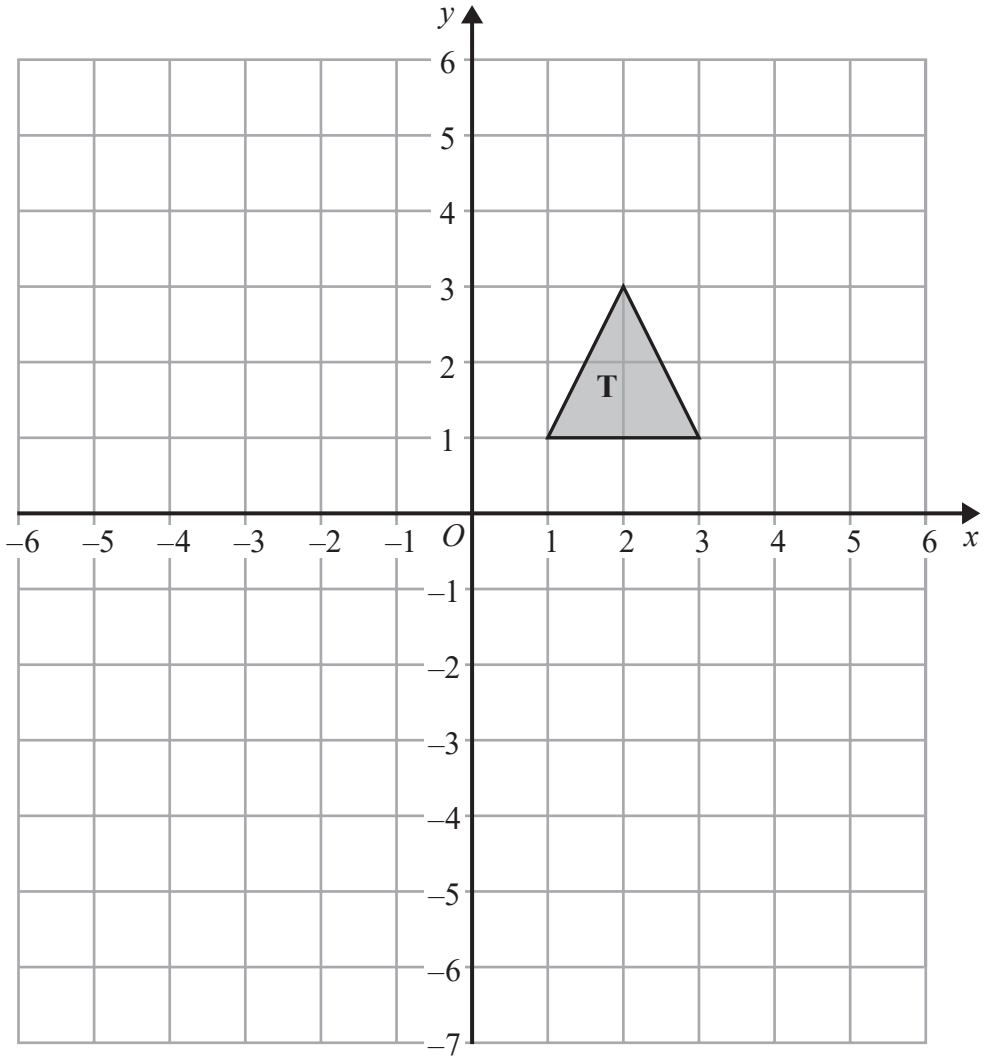
Amy says that triangle **E** should be in the same position as triangle **C**.

Is Amy correct?
You must show how you get your answer.

(Total for Question 3 is 3 marks)

Summer 2018 Paper 1 Q7

4



Shape **T** is reflected in the line $x = -1$ to give shape **R**.
Shape **R** is reflected in the line $y = -2$ to give shape **S**.

Describe the **single** transformation that will map shape **T** to shape **S**.

.....

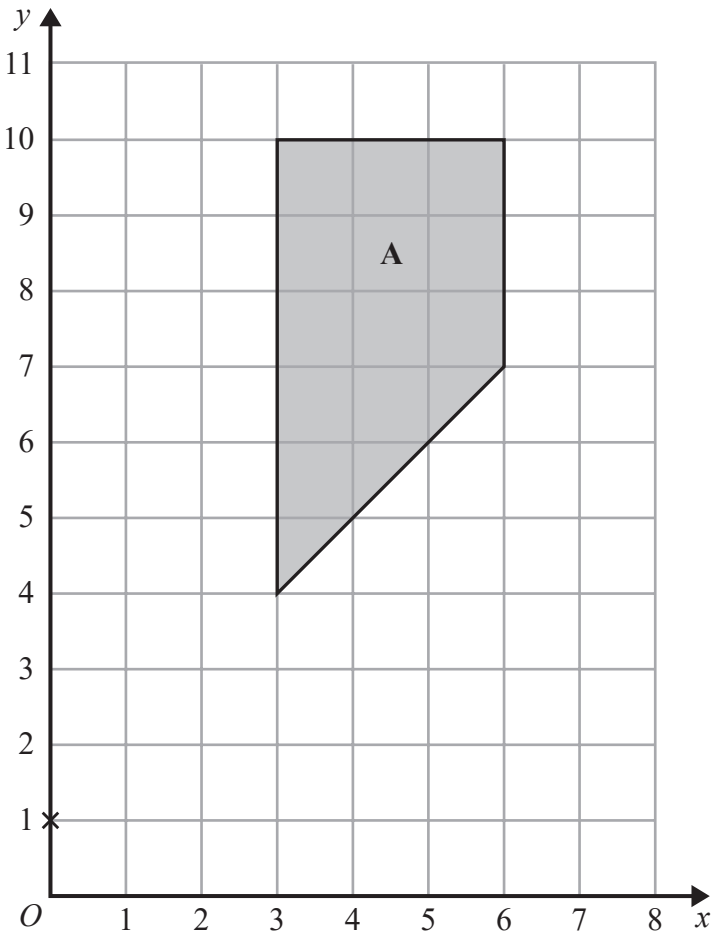
.....

.....

(Total for Question 4 is 2 marks)

Summer 2018 Paper 2 Q7

5

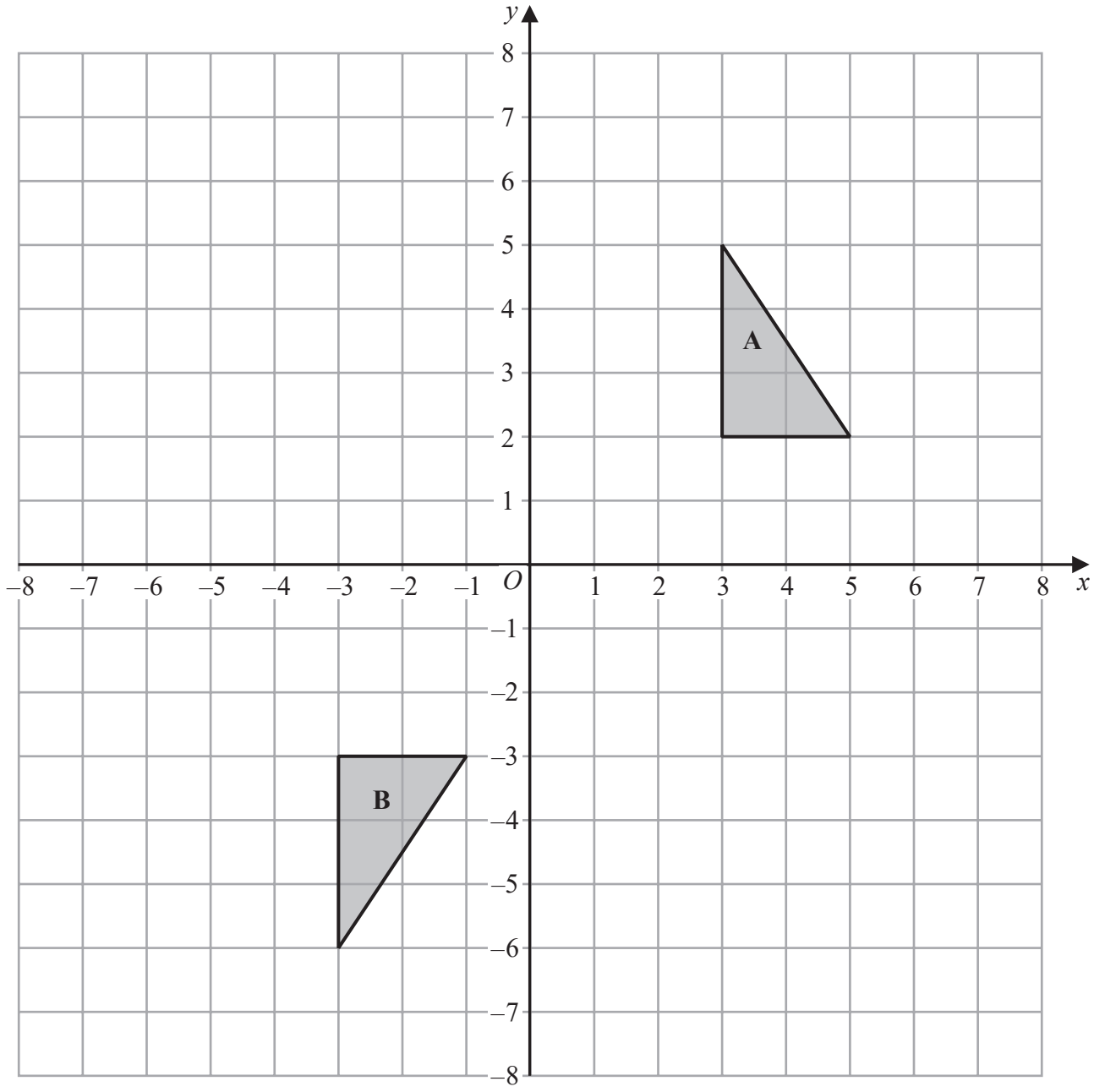


Enlarge shape **A** by scale factor $\frac{1}{3}$ centre (0, 1)

(Total for Question 5 is 2 marks)

Summer 2019 Paper 1 Q5

6



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.

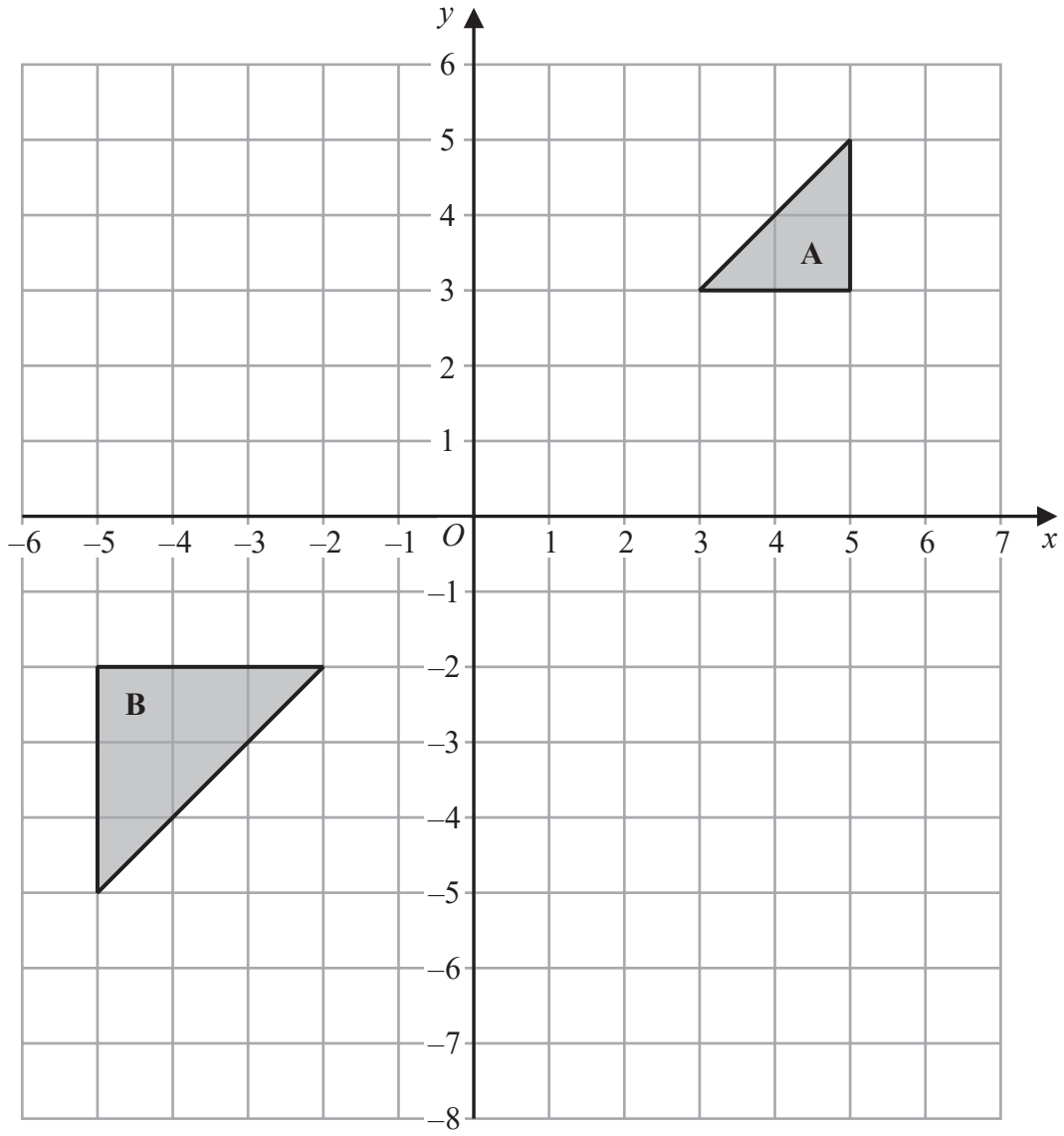
$c =$ .....

$d =$ .....

(Total for Question 6 is 3 marks)

Summer 2020 Paper 2 Q15

7



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

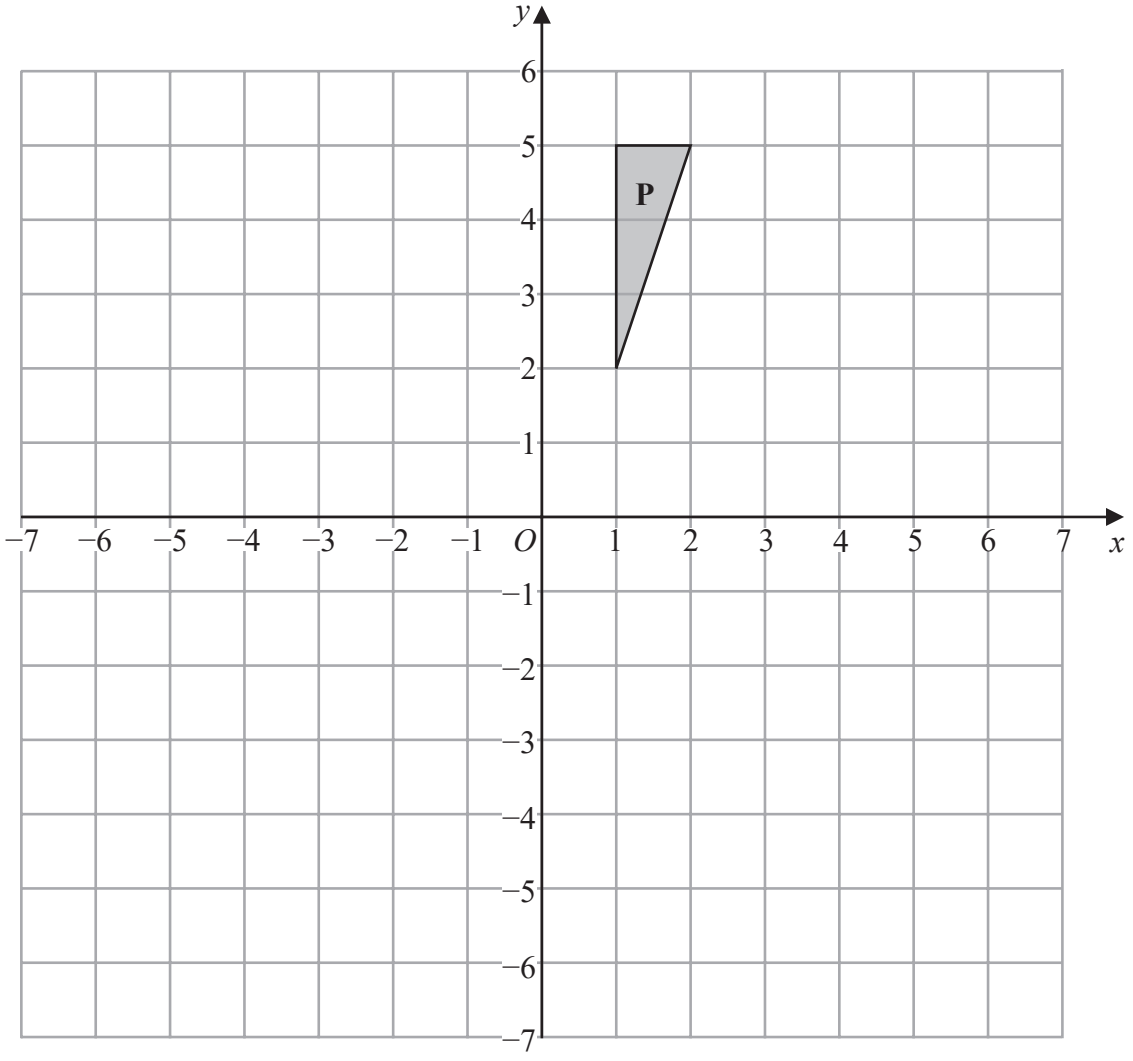
.....

.....

(Total for Question 7 is 2 marks)

Summer 2020 Paper 3 Q11

8 The diagram shows a triangle **P** on a grid.



Triangle **P** is rotated 180° about (0, 0) to give triangle **Q**.

Triangle **Q** is translated by $\begin{pmatrix} 5 \\ -2 \end{pmatrix}$ to give triangle **R**.

(a) Describe fully the single transformation that maps triangle **P** onto triangle **R**.

.....

.....

(3)

Under the transformation that maps triangle **P** onto triangle **R**, the point A is invariant.

(b) Write down the coordinates of point A.

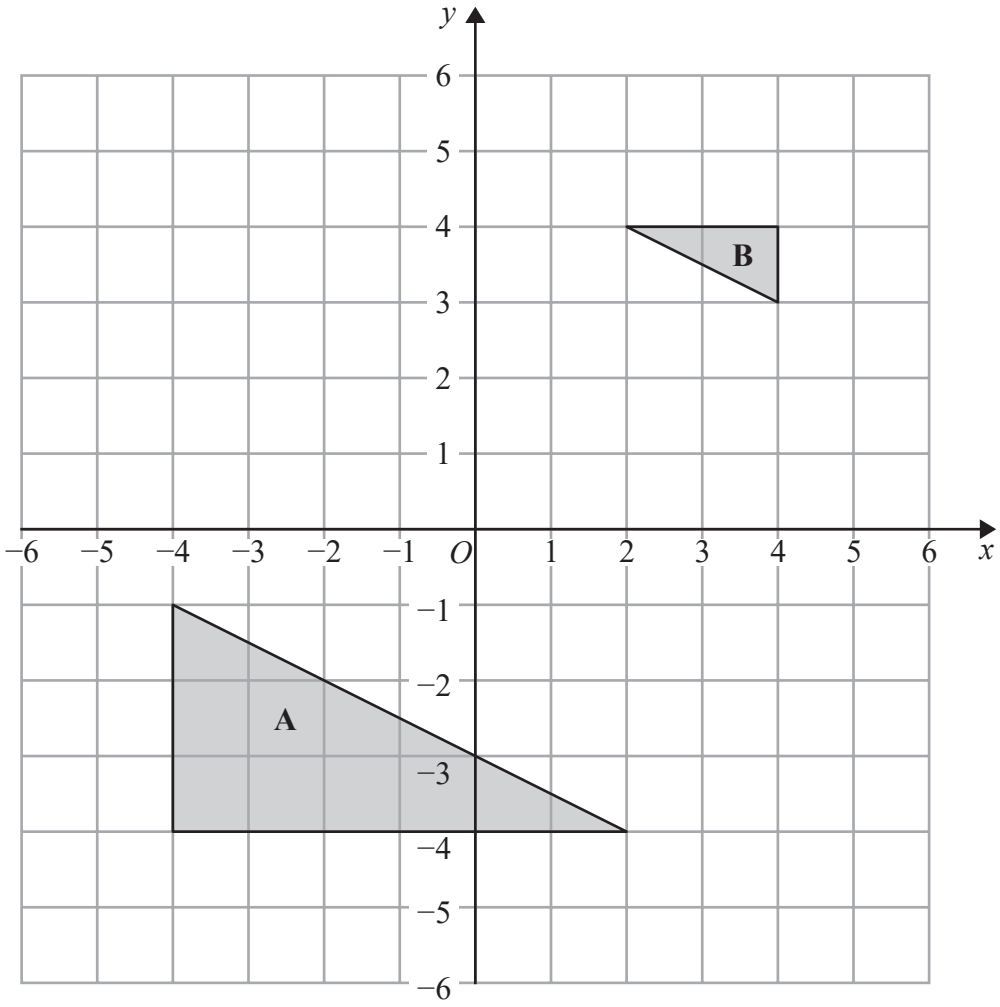
(..... , ...)

(1)

(Total for Question 8 is 4 marks)

Autumn 2018 Paper 1 Q13

9



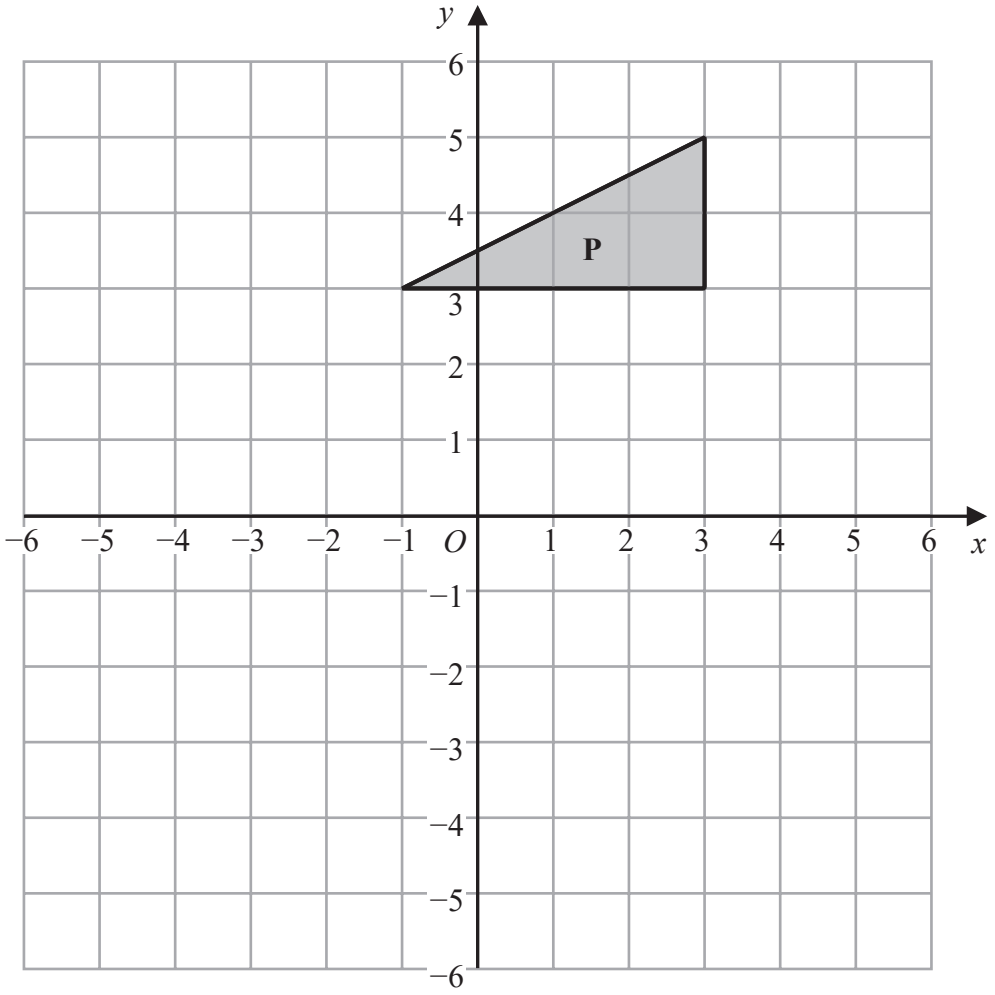
Describe fully the single transformation that maps triangle **A** onto triangle **B**.

.....

(Total for Question 9 is 2 marks)

Autumn 2018 Paper 2 Q8

10



Triangle **P** is reflected in the line $y = -x$ to give triangle **Q**.
Triangle **Q** is reflected in the line $x = -1$ to give triangle **R**.

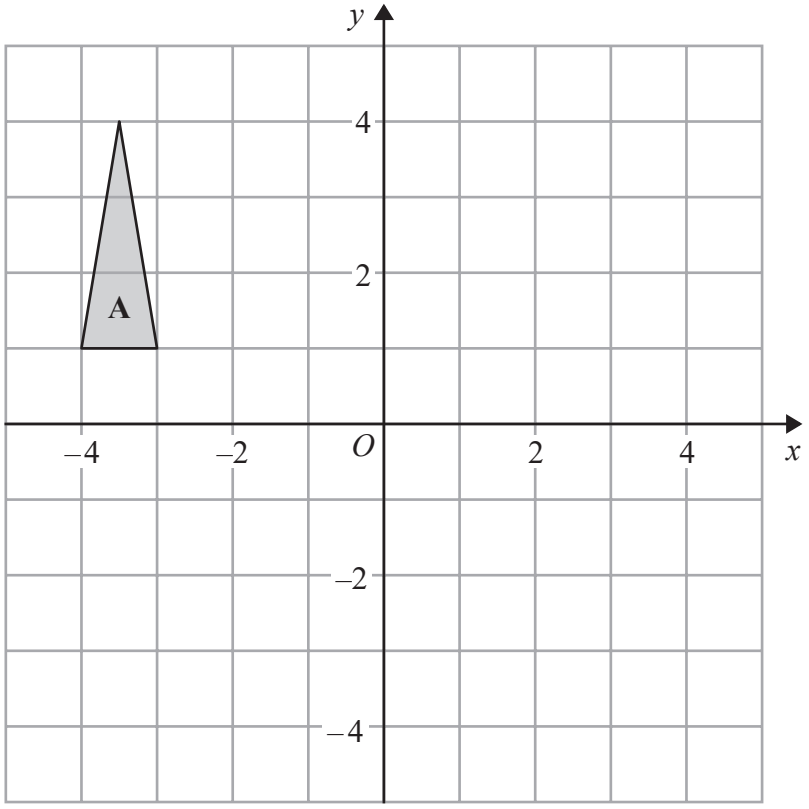
Describe fully the single transformation that maps triangle **R** to triangle **P**.

.....

(Total for Question 10 is 3 marks)

11

Autumn 2018 Paper 3 Q20



Triangle **A** is transformed by the combined transformation of a rotation of 180° about the point (−2, 0) followed by a translation with vector $\begin{pmatrix} -3 \\ 2 \end{pmatrix}$

One point on triangle **A** is invariant under the combined transformation.

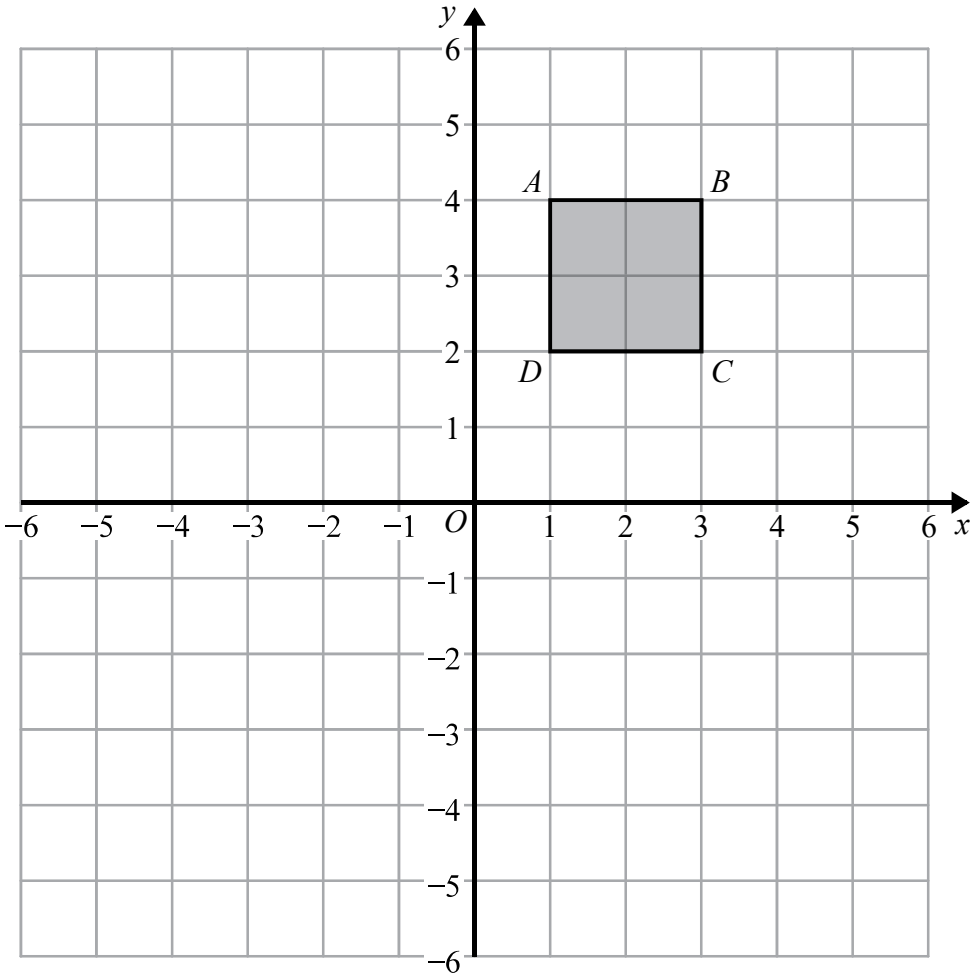
Find the coordinates of this point.

(..... , ...)

(Total for Question 11 is 2 marks)

Autumn 2019 Paper 2 Q24

12



Square *ABCD* is transformed by a combined transformation of a reflection in the line $x = -1$ followed by a rotation.

Under the combined transformation, two vertices of the square *ABCD* are invariant.

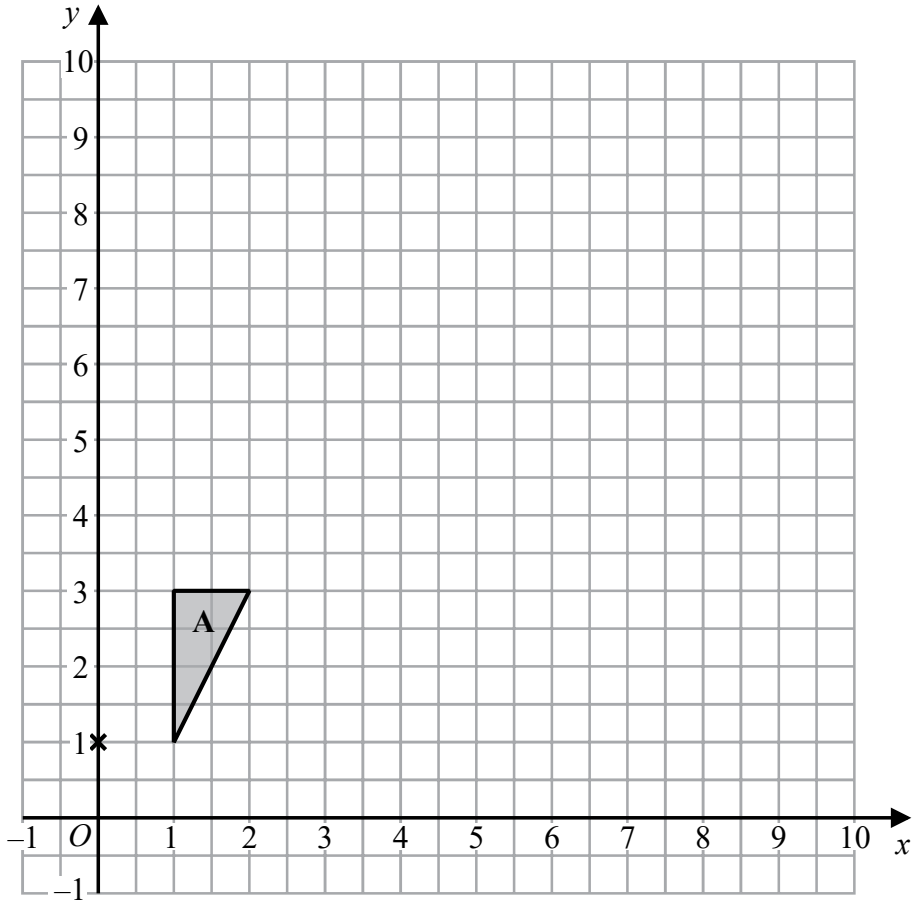
Describe fully one possible rotation.

.....

(Total for Question 12 is 2 marks)

Autumn 2019 Paper 3 Q9

13

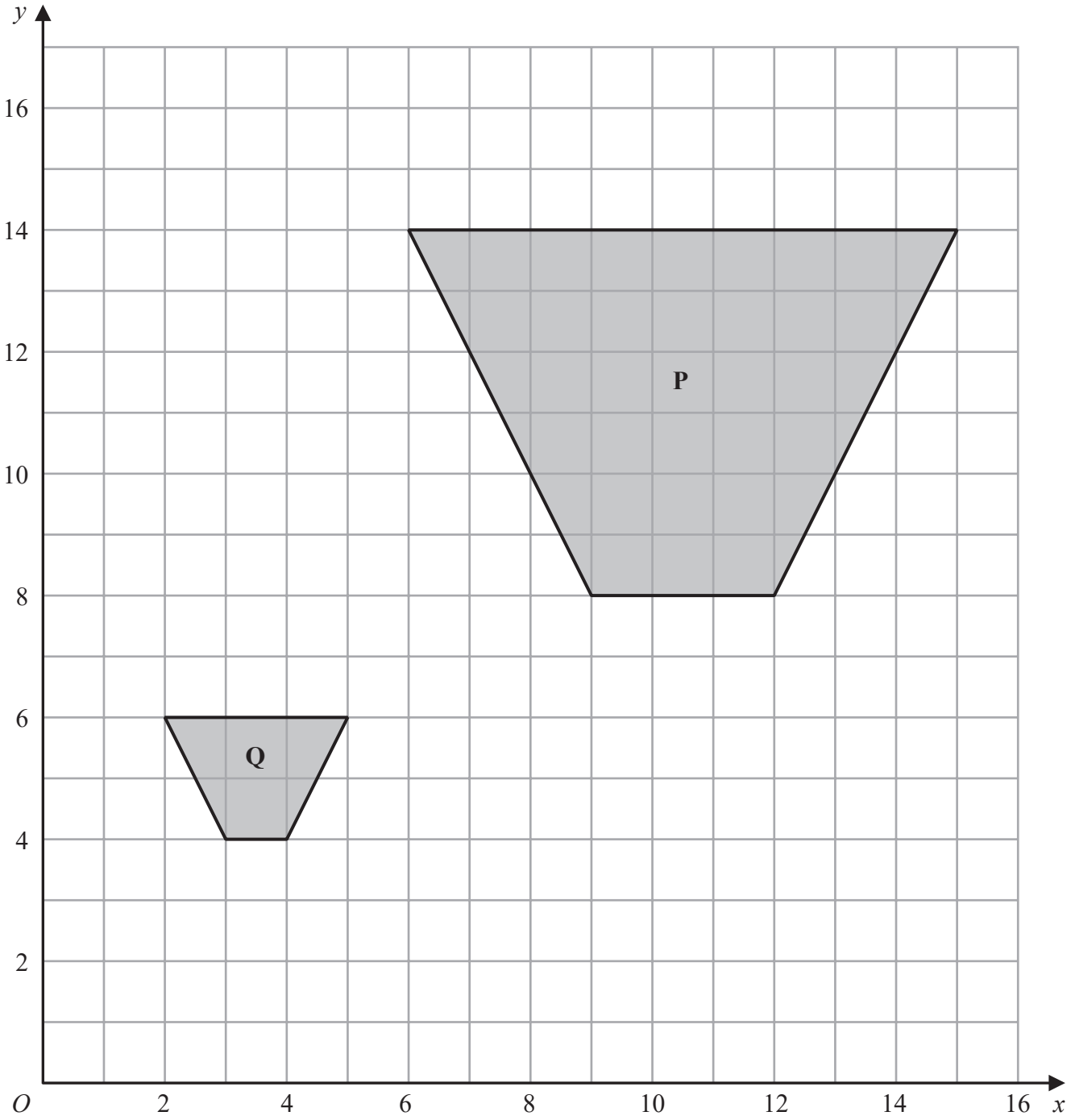


Enlarge triangle **A** by scale factor 2.5 with centre (0, 1)

(Total for Question 13 is 2 marks)

Autumn 2022 Paper 1 Q11

14



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

.....

.....

.....

(Total for Question 14 is 2 marks)

Autumn 2022 Paper 3 Q18

15 Shape **A** is reflected in the line with equation $x = 2$ to give shape **B**.
Shape **B** is reflected in the line with equation $x = 6$ to give shape **C**.

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

.....

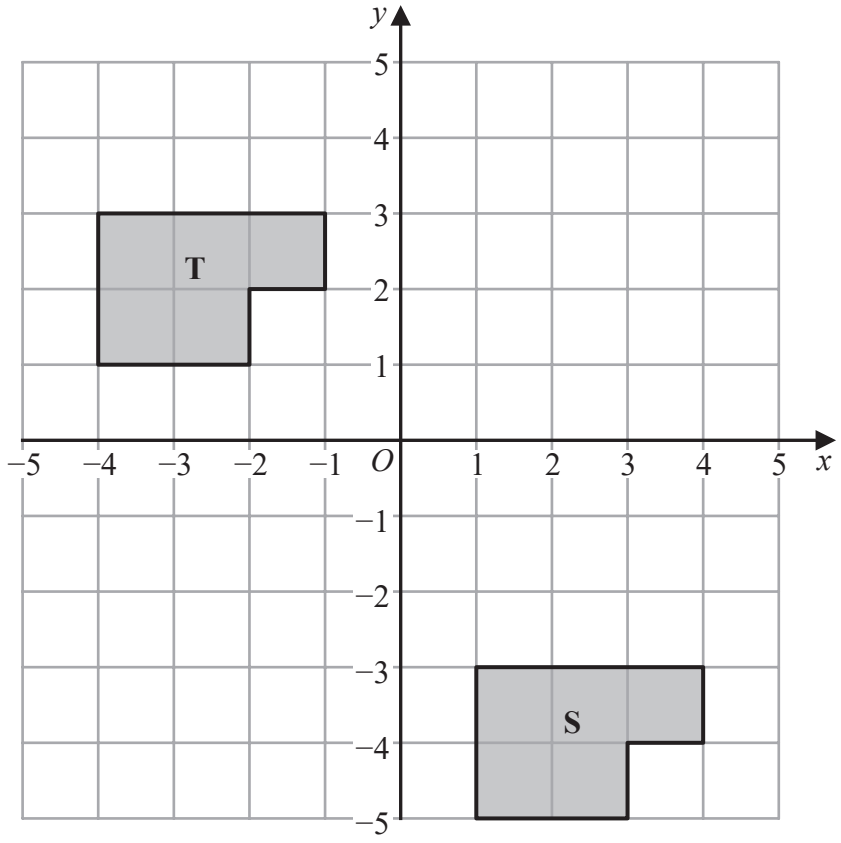
.....

.....

(Total for Question 15 is 2 marks)

Summer 2022 Paper 2 Q2

16



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

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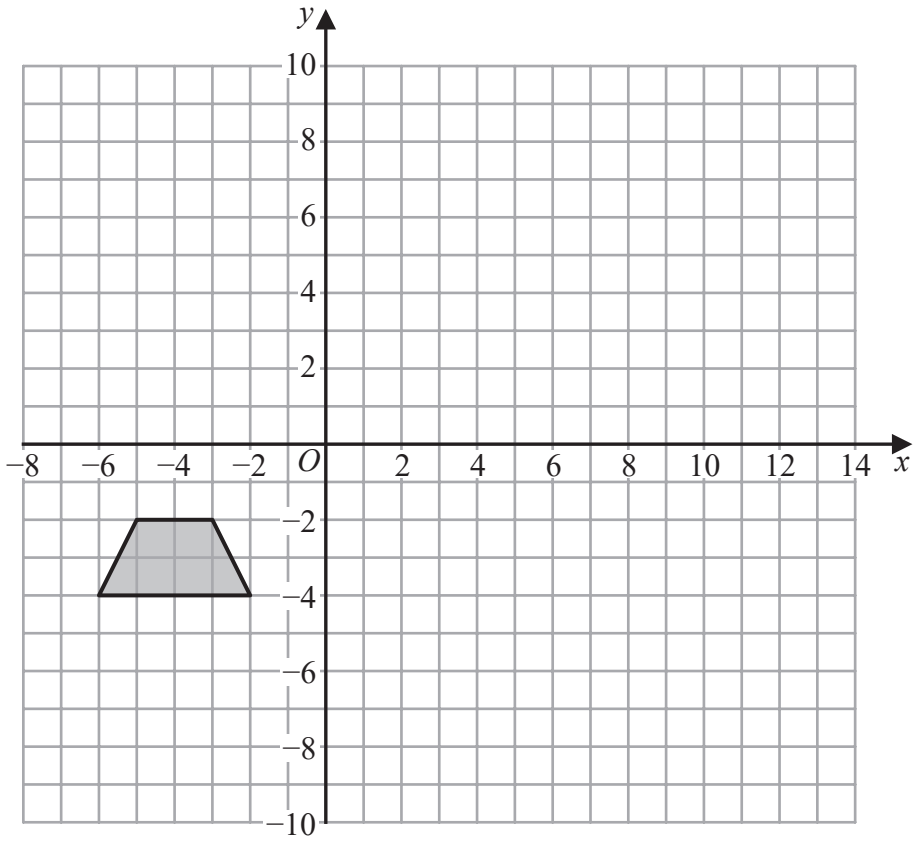
.....

.....

(Total for Question 16 is 2 marks)

Summer 2022 Paper 2 Q13

17



Enlarge the shaded shape by scale factor −2 with centre of enlargement (0, 0)

(Total for Question 17 is 2 marks)