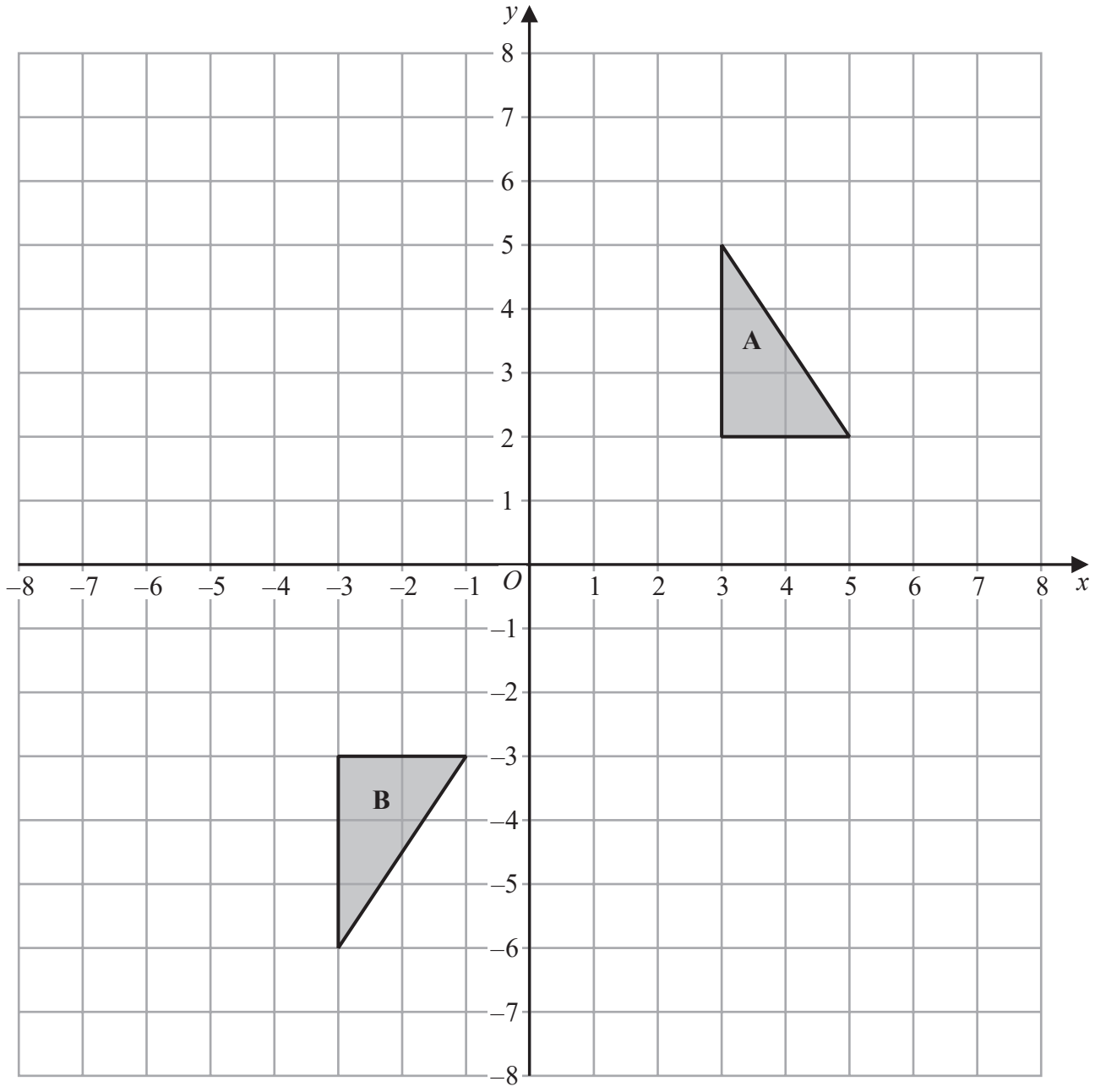
26



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

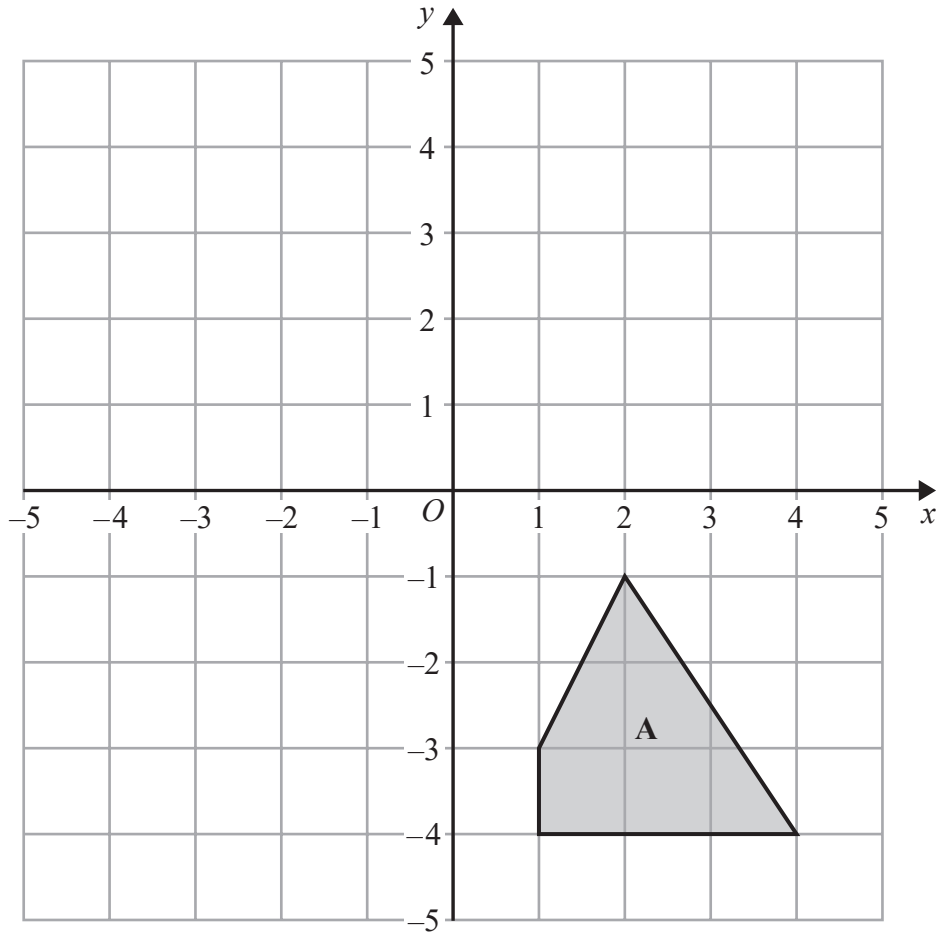
Find the value of c and the value of d.

$c =$ .....

$d =$ .....

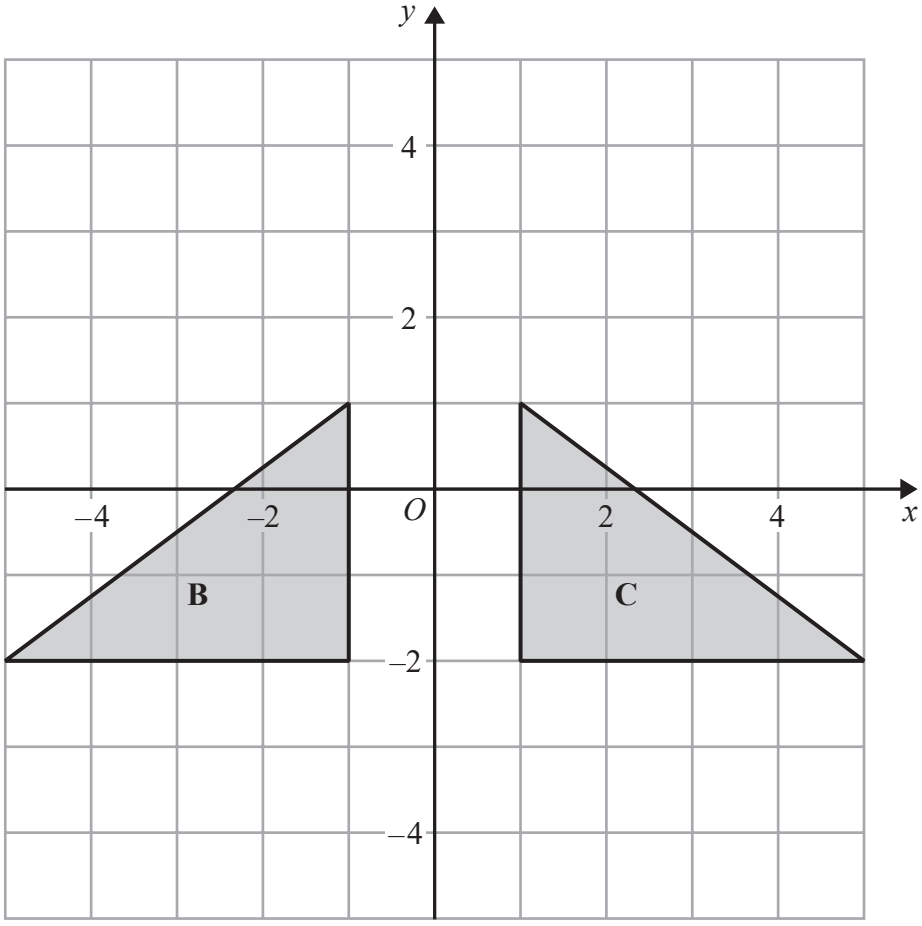
(Total for Question 26 is 3 marks)

13



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

(2)



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

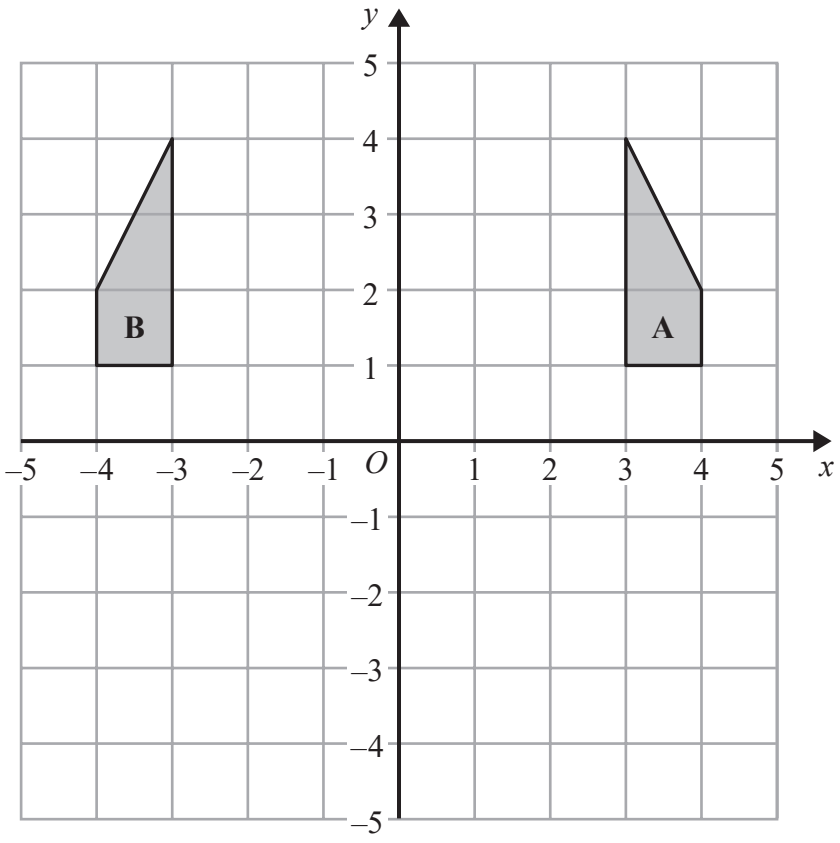
.....

.....

(2)

(Total for Question 13 is 4 marks)

18



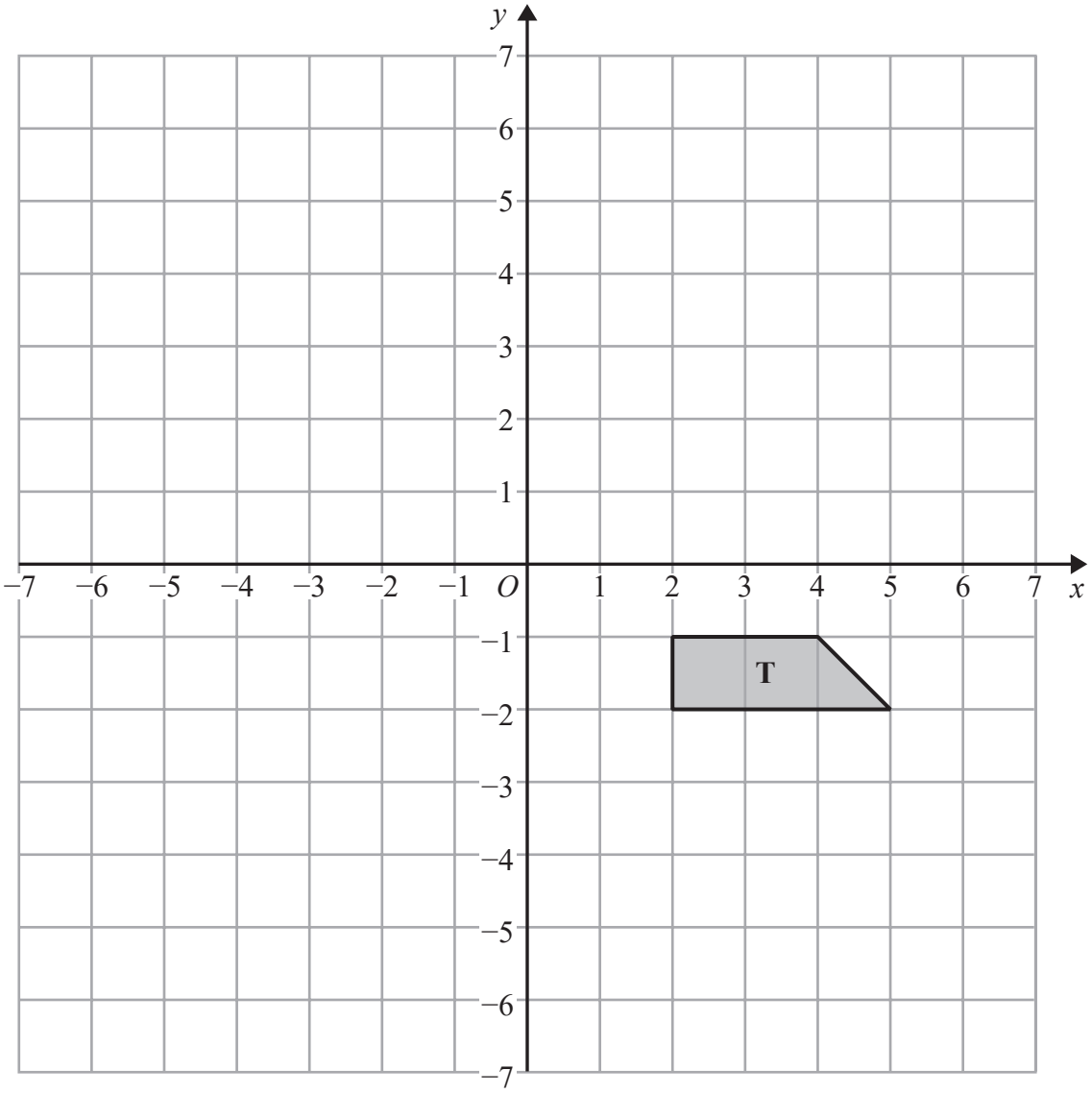
Describe fully the single transformation that maps shape **A** onto shape **B**.

.....

.....

(Total for Question 18 is 2 marks)

20



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

(1)

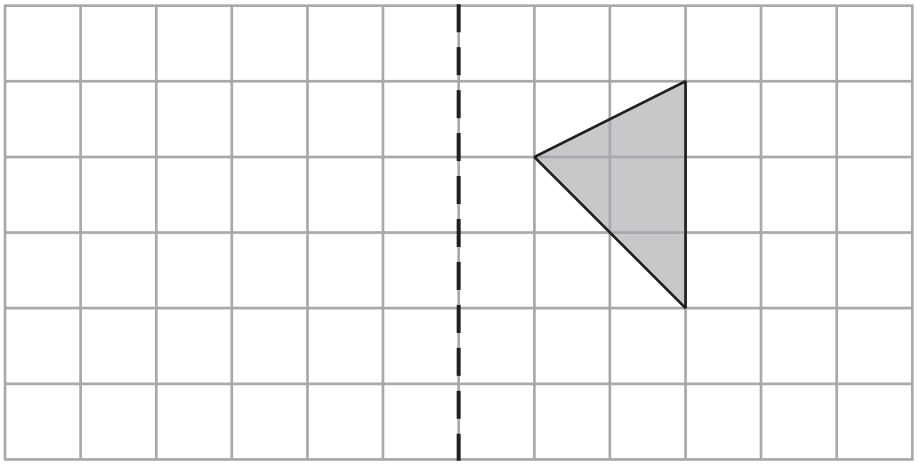
(b) Translate trapezium **T** by the vector $\begin{pmatrix} -1 \\ -3 \end{pmatrix}$
Label the new trapezium **B**.

(1)

(Total for Question 20 is 2 marks)

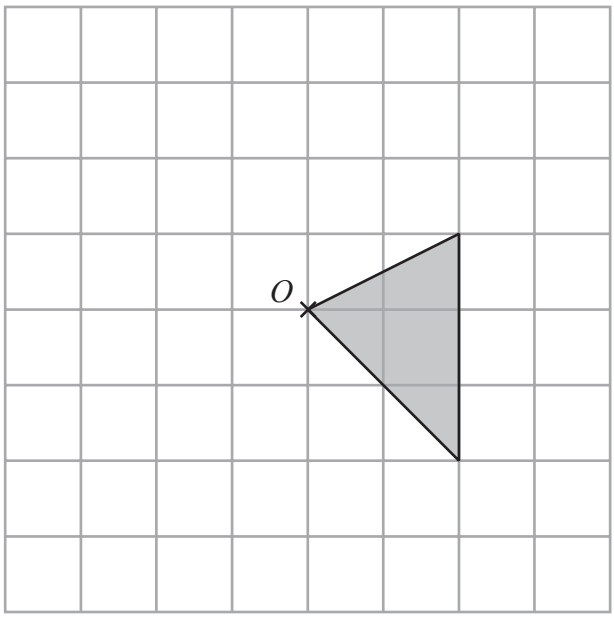
6

mirror line



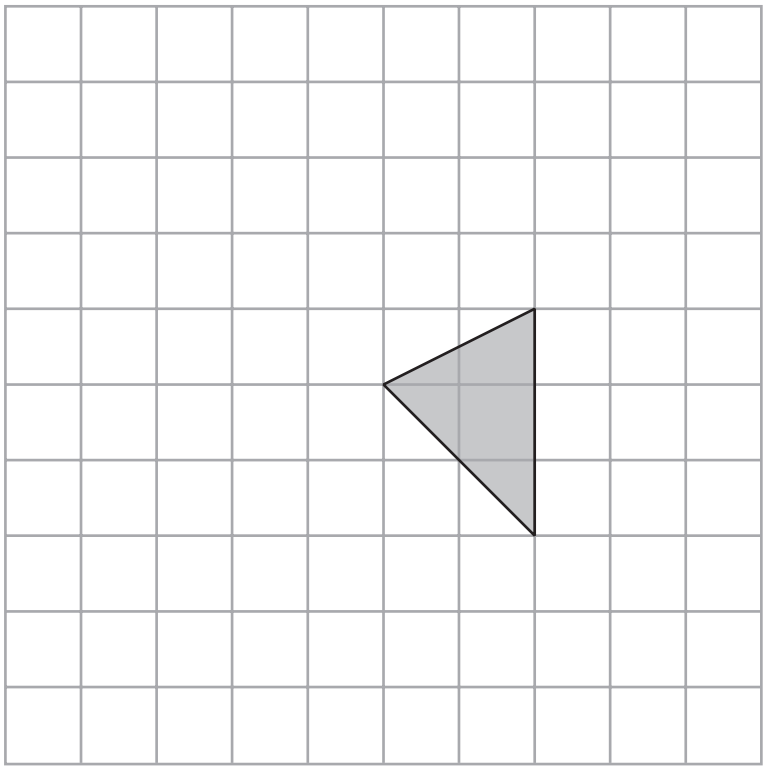
(a) Reflect the shape in the mirror line.

(1)



(b) Rotate the shape a quarter turn clockwise about O.

(2)



(c) On the grid, show how the shape will tessellate.
You should draw at least 6 shapes.

(2)

(Total for Question 6 is 5 marks)

7 Karen had 5 boxes of pens.
There were 60 pens in each box.

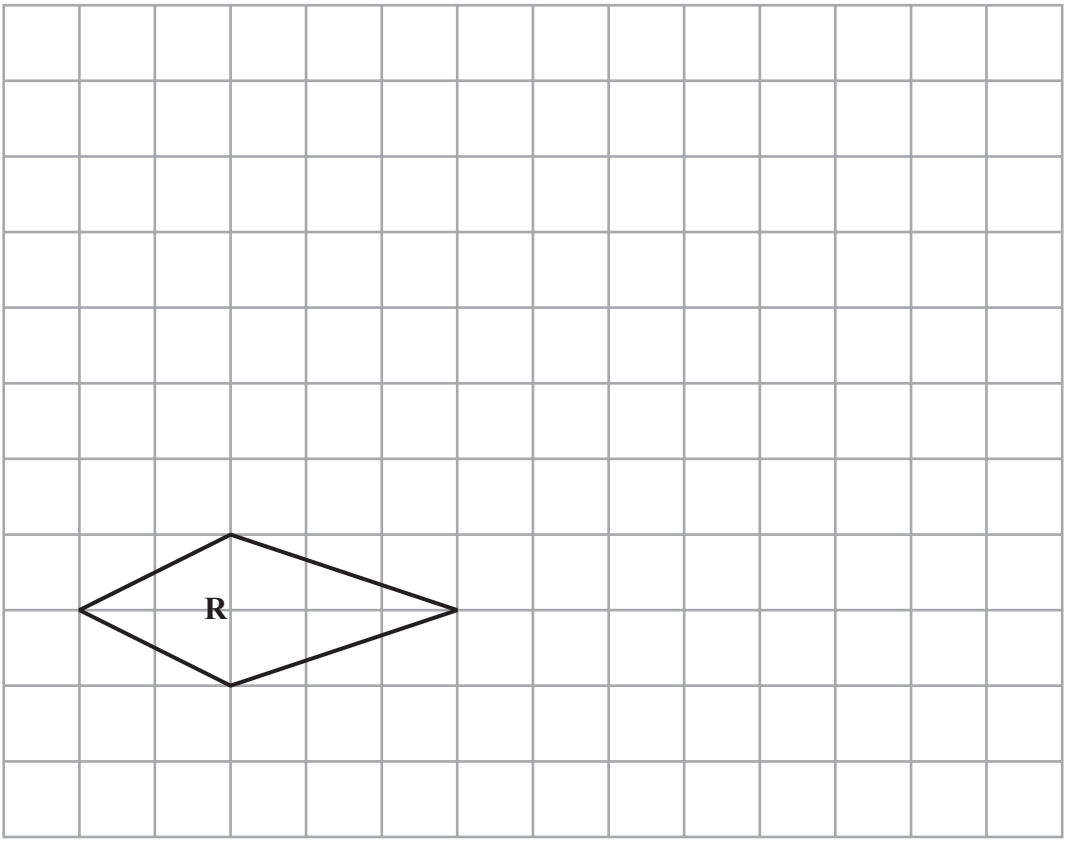
Karen gave 8 teachers 35 pens each.

Work out how many pens Karen has left.

.....

(Total for Question 7 is 3 marks)

16



On the grid, draw an enlargement of shape **R** with a scale factor of 2

(Total for Question 16 is 2 marks)

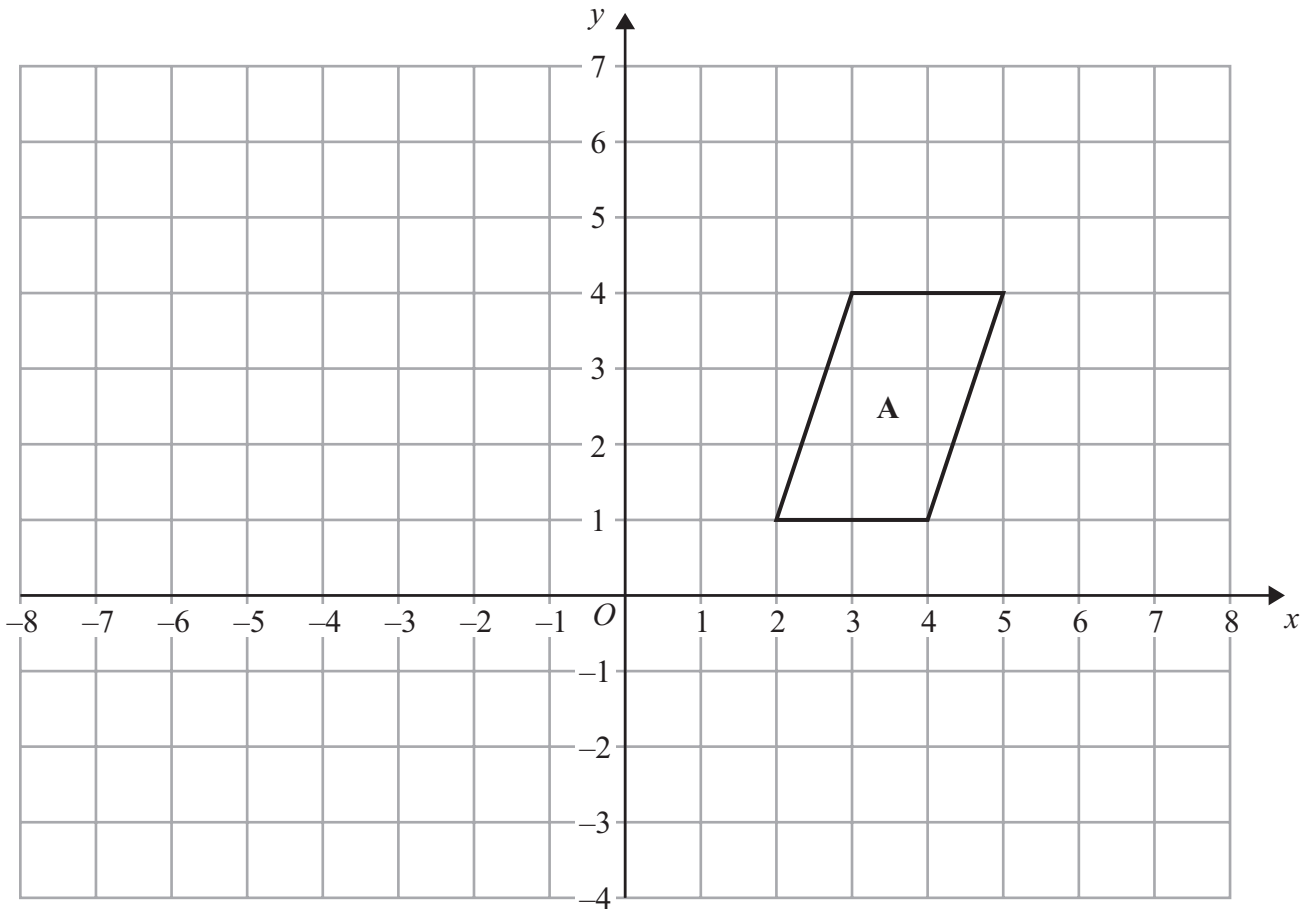
17 Write these numbers in order of size.
Start with the smallest number.

0.6 $\frac{2}{3}$ 65% 0.606

.....

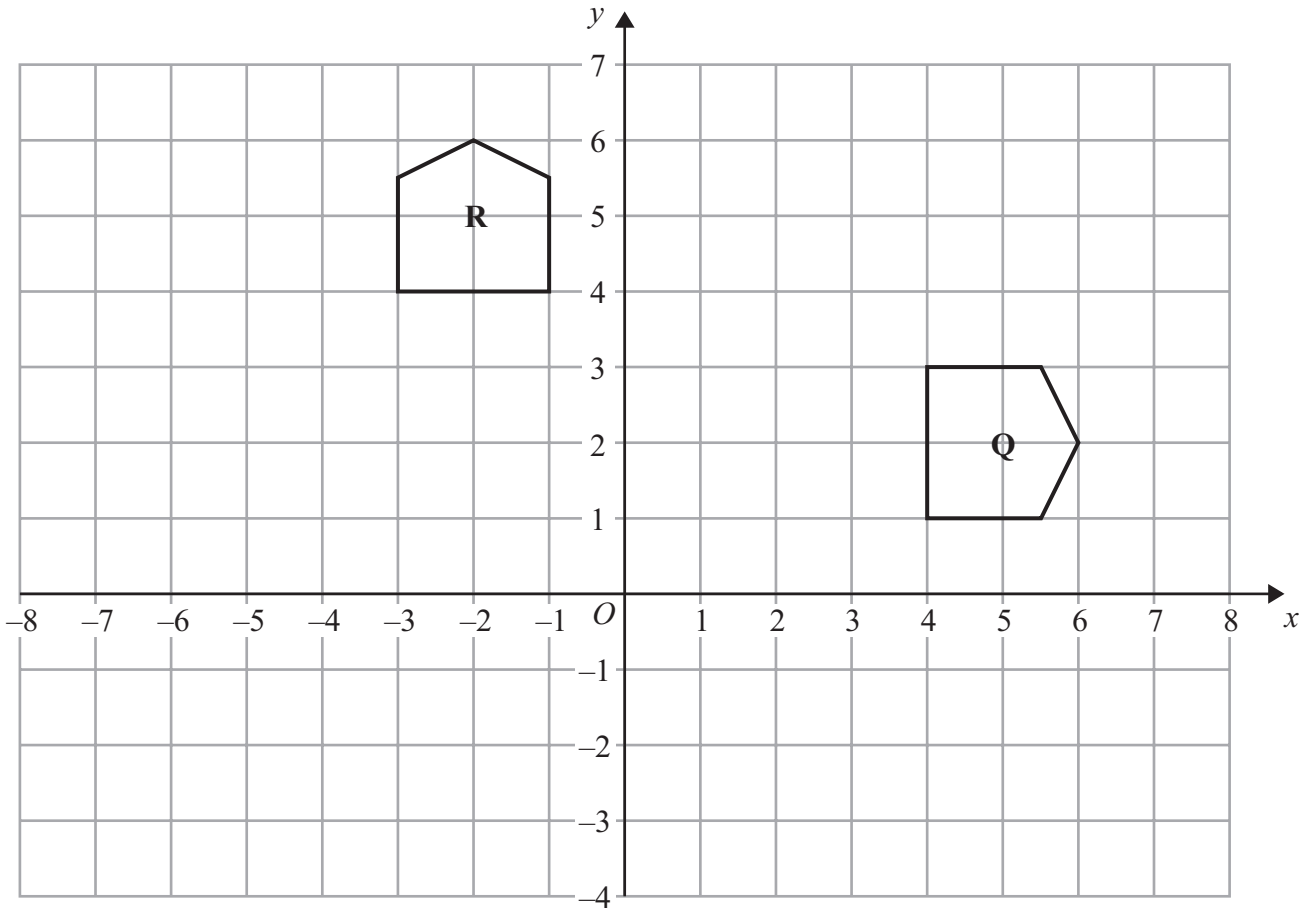
(Total for Question 17 is 2 marks)

23



(a) Translate shape **A** by the vector $\begin{pmatrix} -3 \\ 2 \end{pmatrix}$.

(1)



(b) Describe fully the single transformation that maps shape **Q** onto shape **R**.

.....

.....

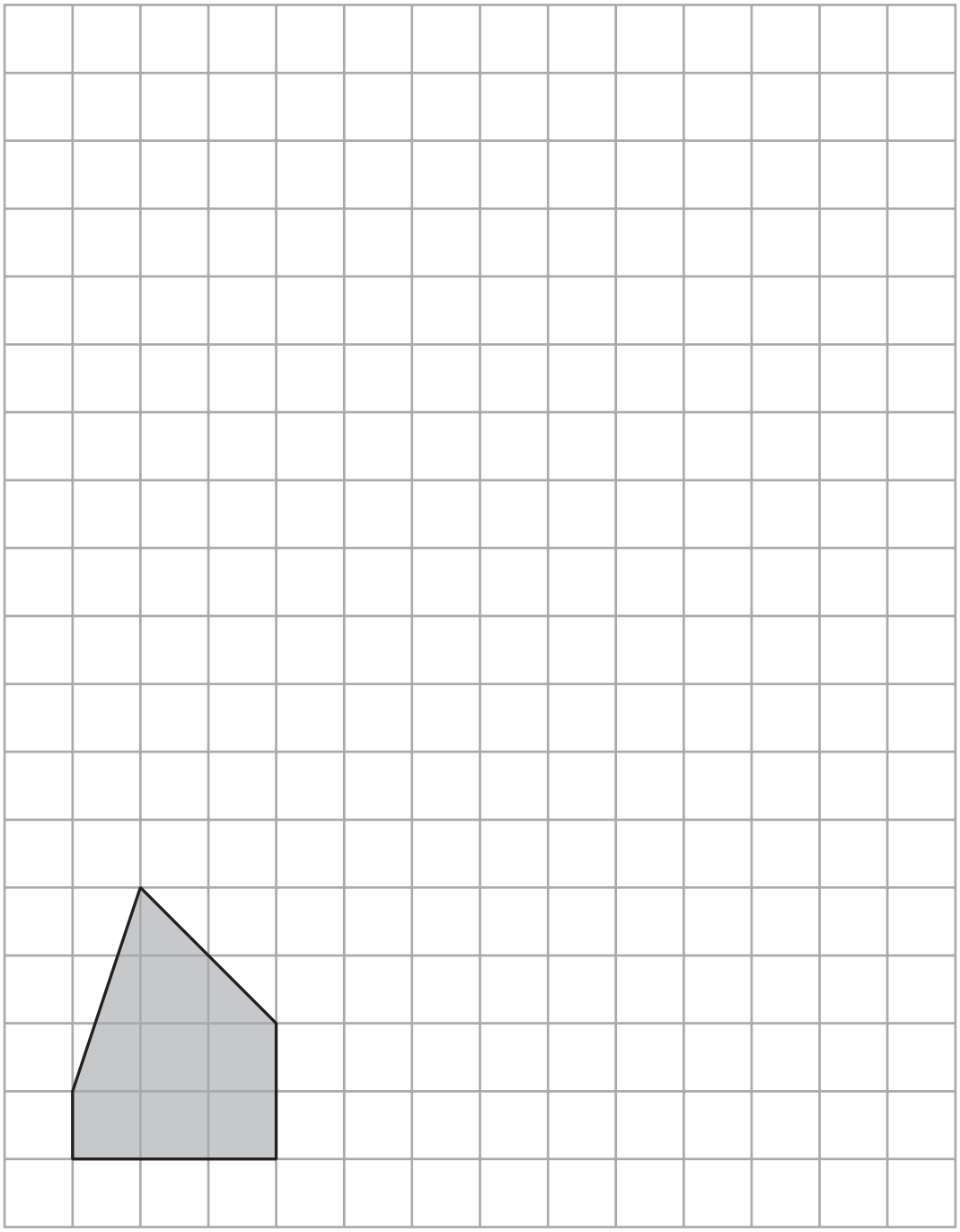
.....

.....

(3)

(Total for Question 23 is 4 marks)

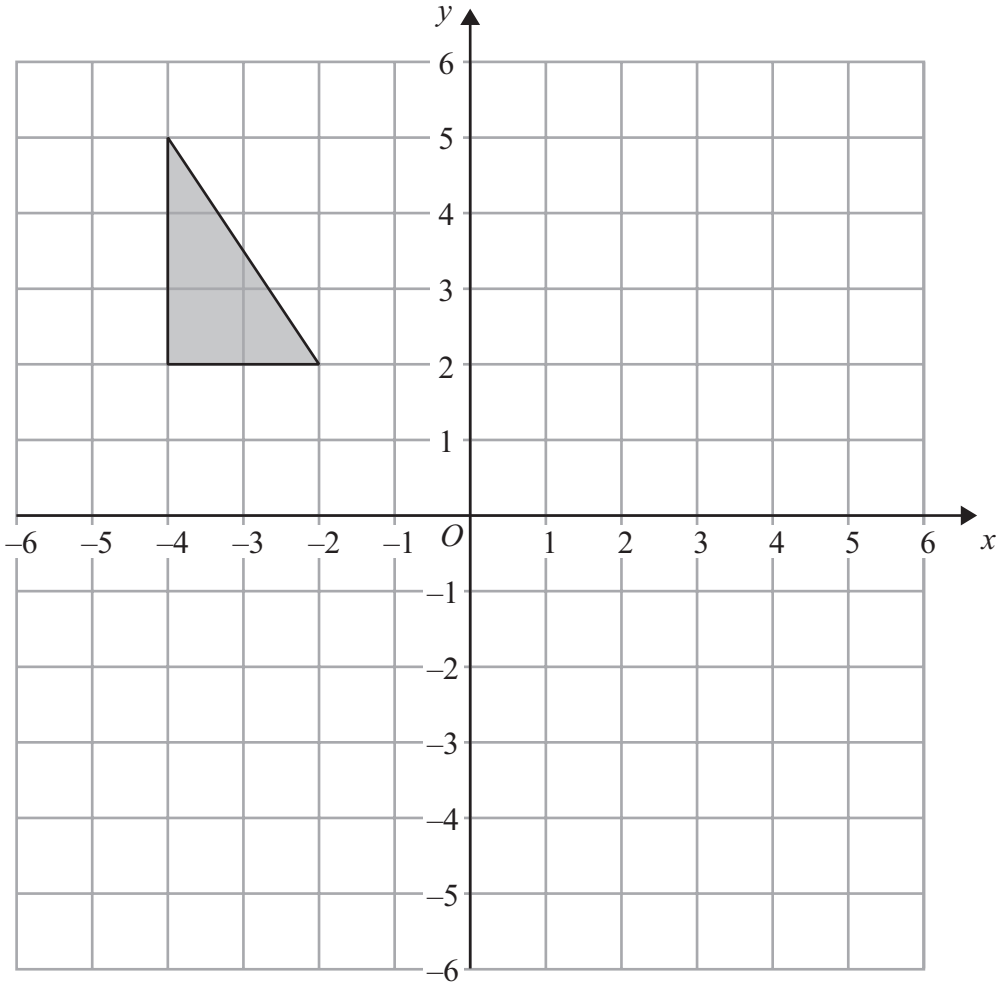
14



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

(Total for Question 14 is 2 marks)

17



Reflect the shaded triangle in the *y*-axis.

(Total for Question 17 is 2 marks)

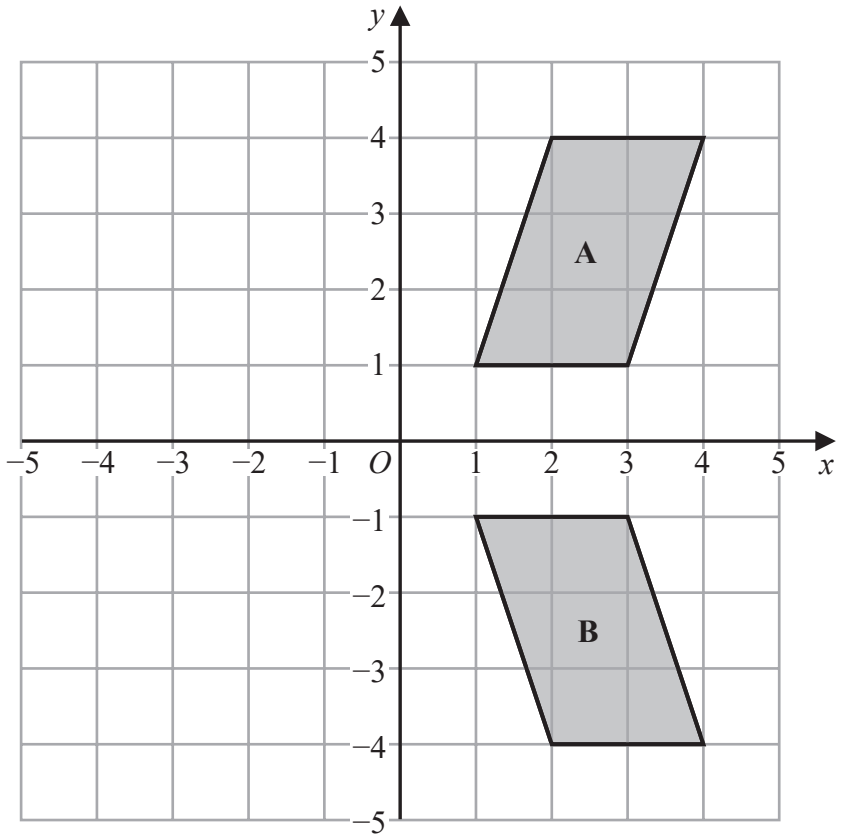
15 Remi invests £600 for 5 years in a savings account.
By the end of the 5 years he has received a total of £75 simple interest.

Work out the annual rate of simple interest.

.....%

(Total for Question 15 is 3 marks)

16



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

.....

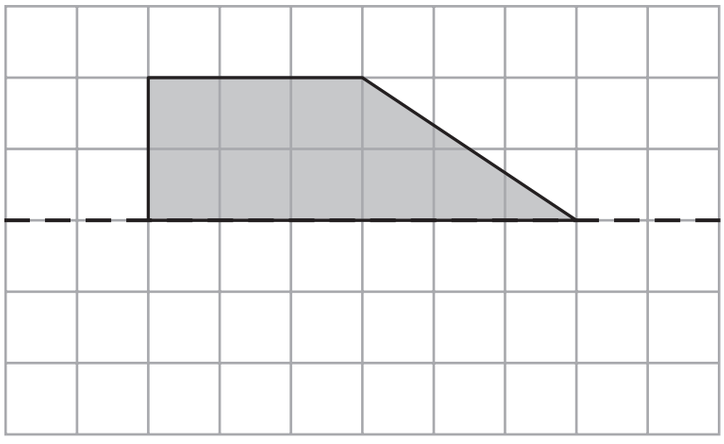
(Total for Question 16 is 2 marks)

Answer ALL questions.

Write your answers in the spaces provided.

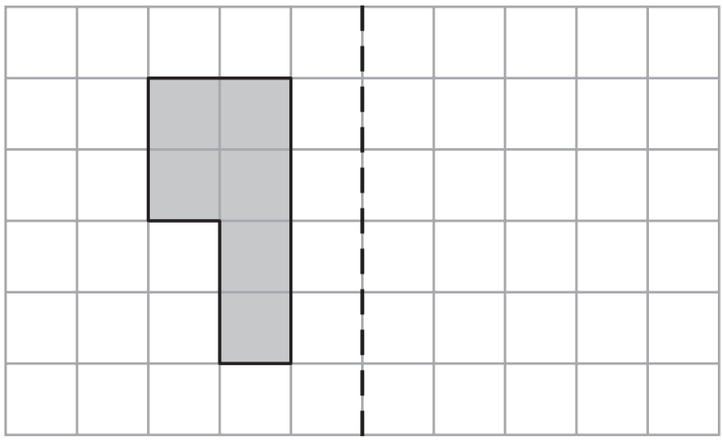
You must write down all stages in your working.

1 (a) Reflect the shaded shape in the mirror line.



(1)

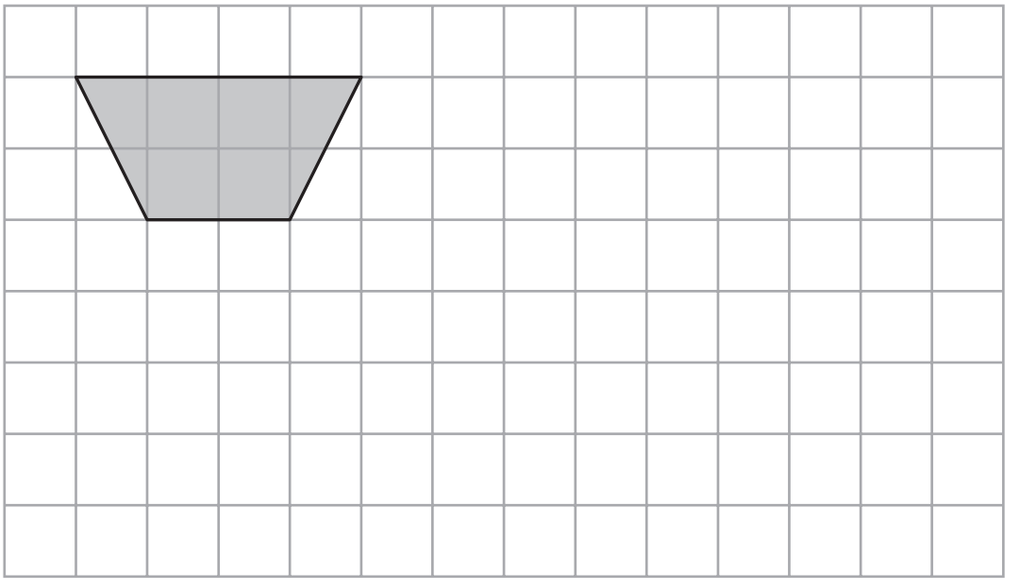
(b) Reflect the shaded shape in the mirror line.



(1)

(Total for Question 1 is 2 marks)

13 On the grid, show how this shape will tessellate.
You should draw at least **six** shapes.



(Total for Question 13 is 2 marks)

14 There are 200 students in Year 11
75 of the students are girls.

(a) Write down the fraction of the students that are girls.

.....

(1)

There is a total of 1350 students in the school.
One day, 81 of the 1350 students are absent.

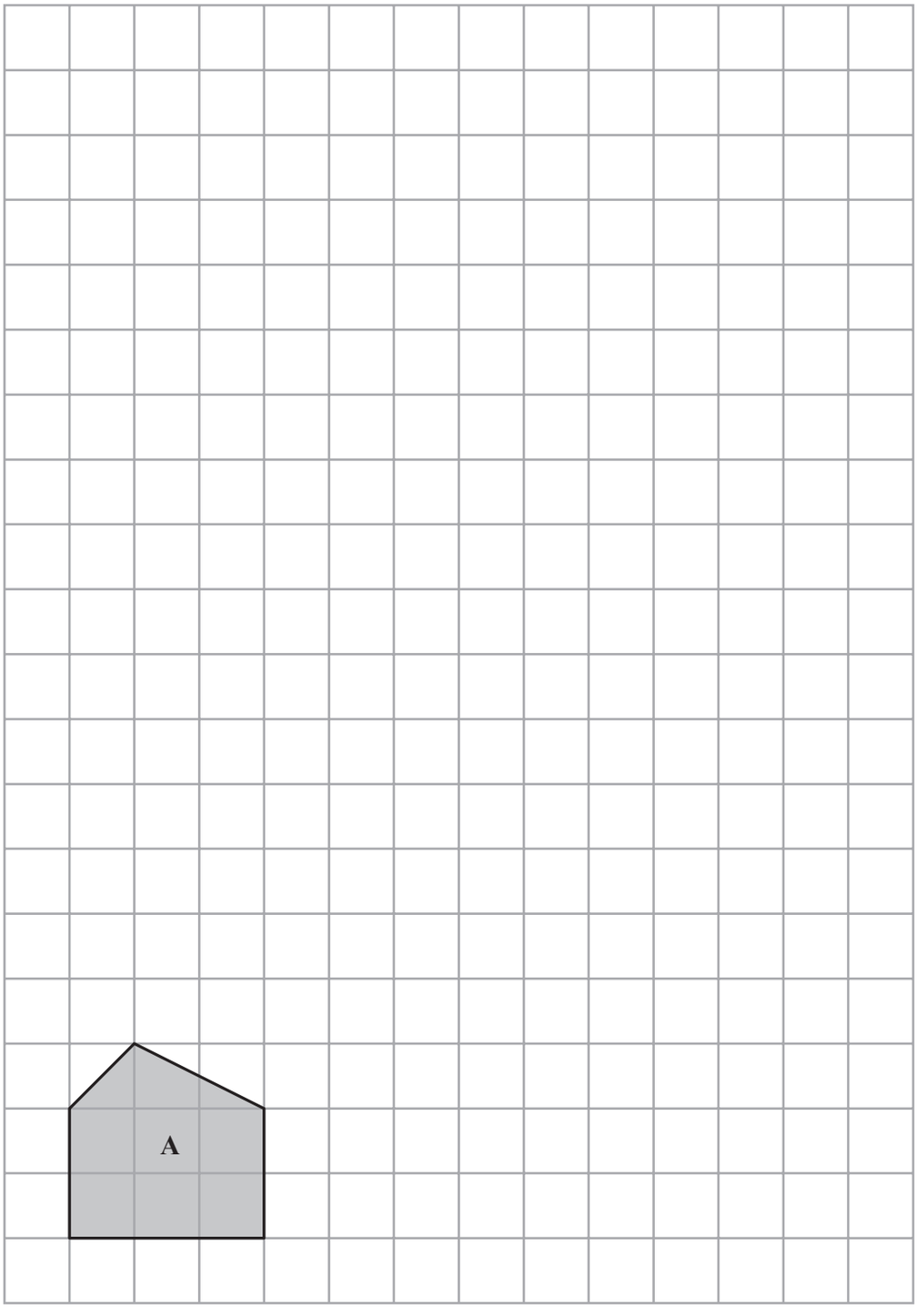
(b) Work out the percentage of the students who are absent.

.....%

(2)

(Total for Question 14 is 3 marks)

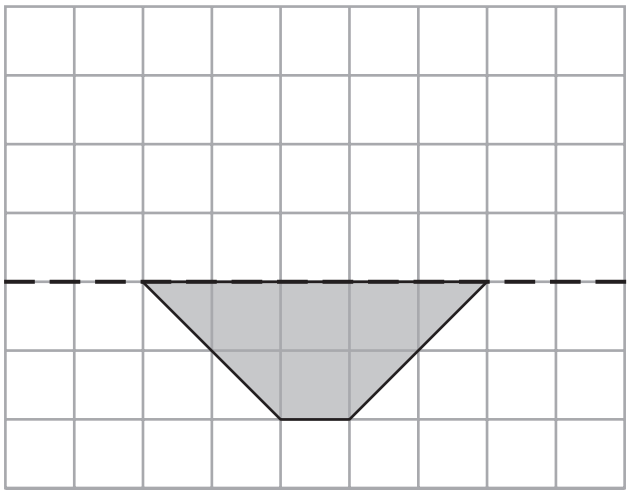
15 Shape **A** is shown on the grid.



Draw an enlargement, scale factor 3, of shape **A**.

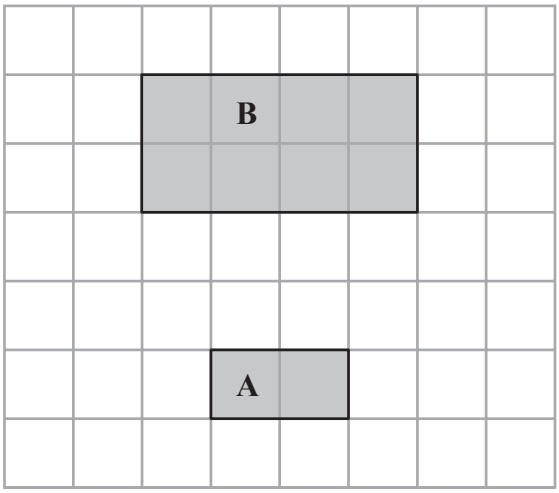
(Total for Question 15 is 2 marks)

4 (a) Reflect the shaded shape in the mirror line.



(1)

(b)



Shape **B** is an enlargement of shape **A**.

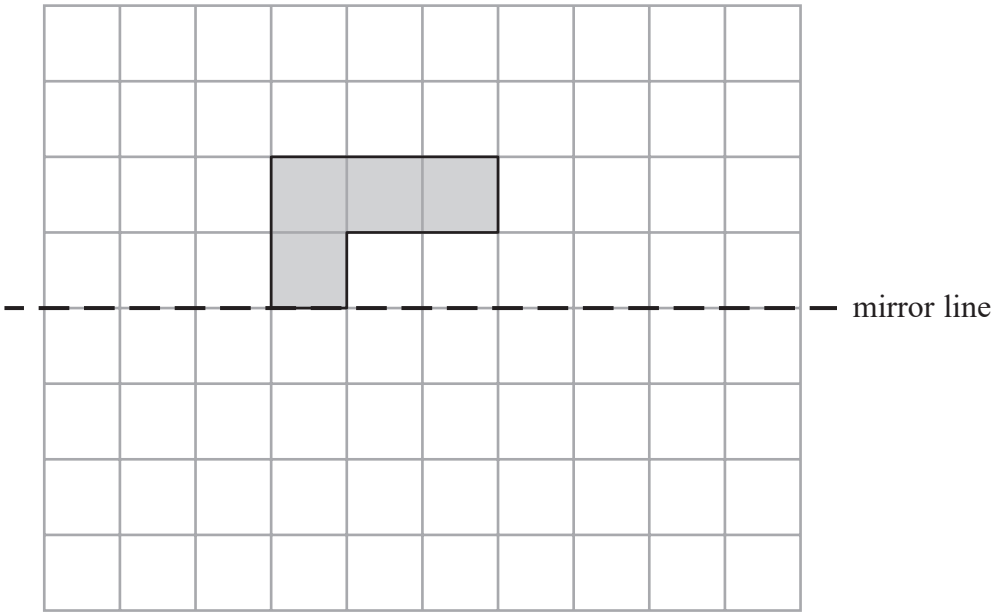
Write down the scale factor of the enlargement.

.....

(1)

(Total for Question 4 is 2 marks)

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



(Total for Question 10 is 1 mark)

11 There are men and women at a meeting.

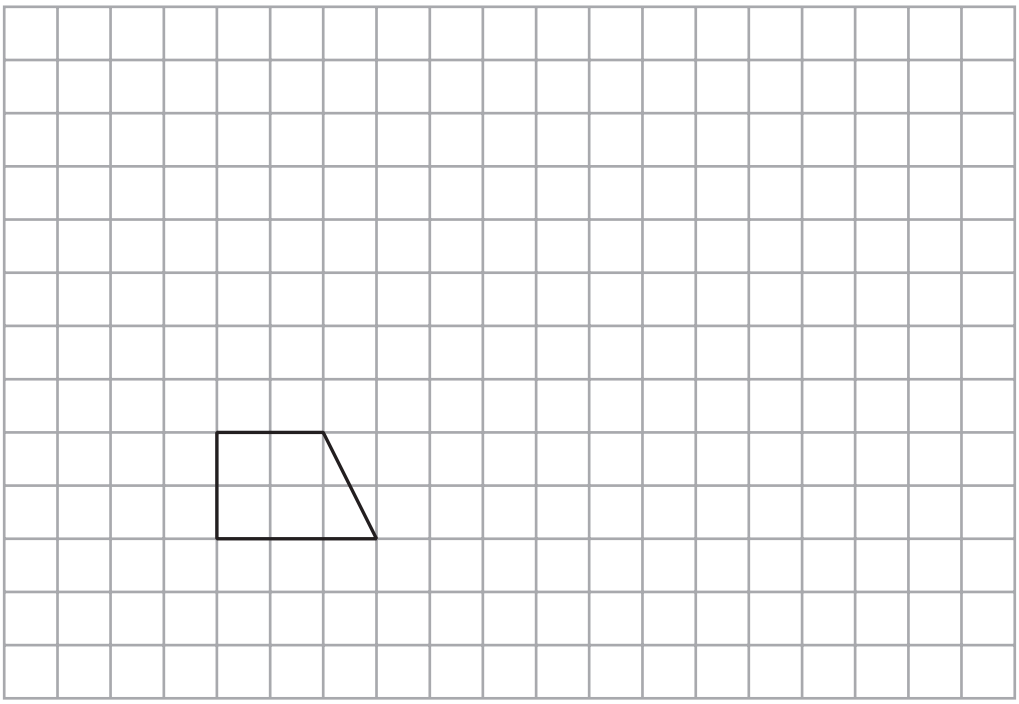
There are 28 women.
30% of the people at the meeting are men.

Work out the total number of people at the meeting.

.....

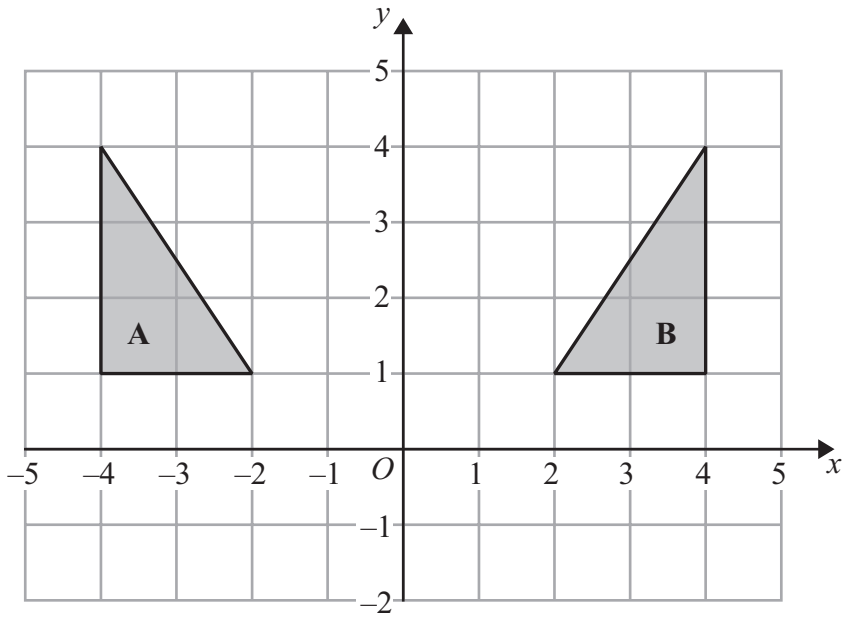
(Total for Question 11 is 3 marks)

17 Here is a shape drawn on a grid.



(a) On this grid, draw an enlargement of the shape with scale factor 3

(2)



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

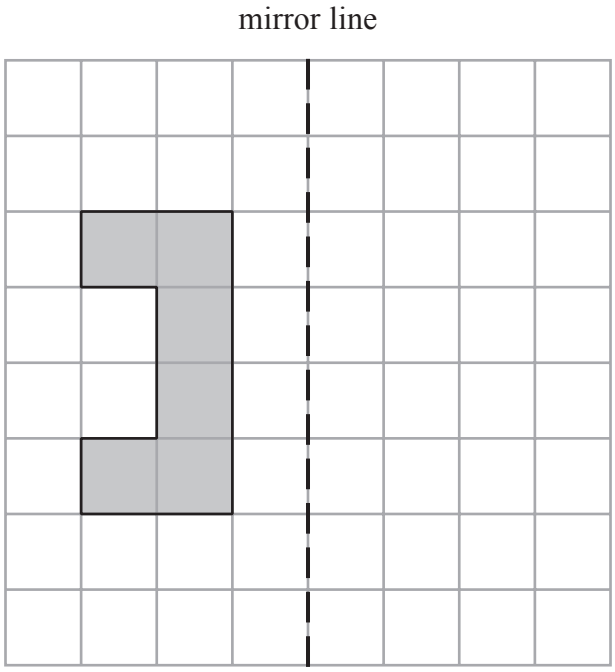
.....

.....

(2)

(Total for Question 17 is 4 marks)

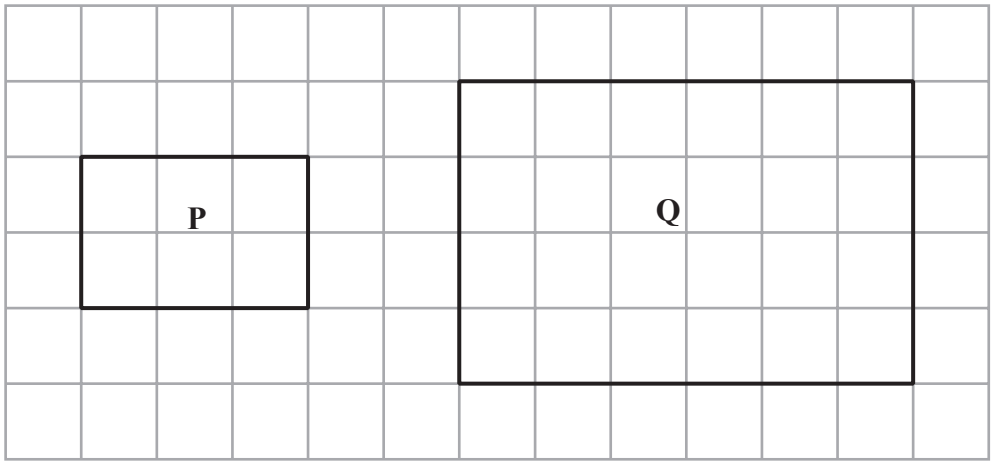
8 A shaded shape is shown on the grid.



(a) Reflect the shape in the mirror line.

(2)

Here are two rectangles.



Rectangle **Q** is an enlargement of rectangle **P**.

(b) Work out the scale factor of the enlargement.

.....

(1)

(Total for Question 8 is 3 marks)

14 (a) Solve $2x = 8$

.....

(1)

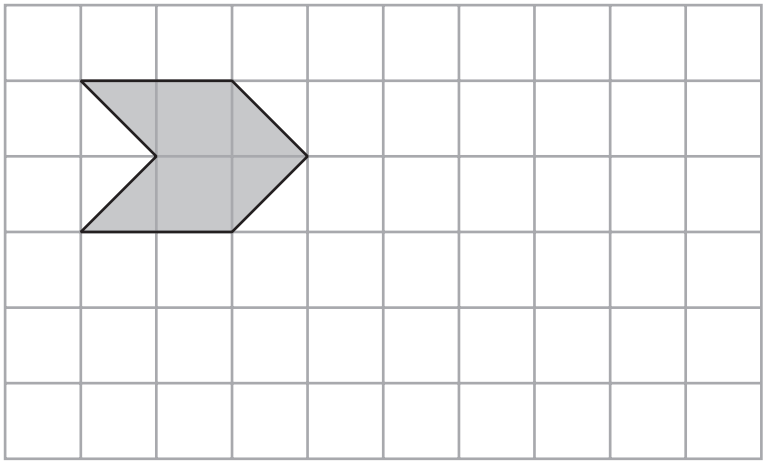
(b) Solve $y + 4 = 10$

.....

(1)

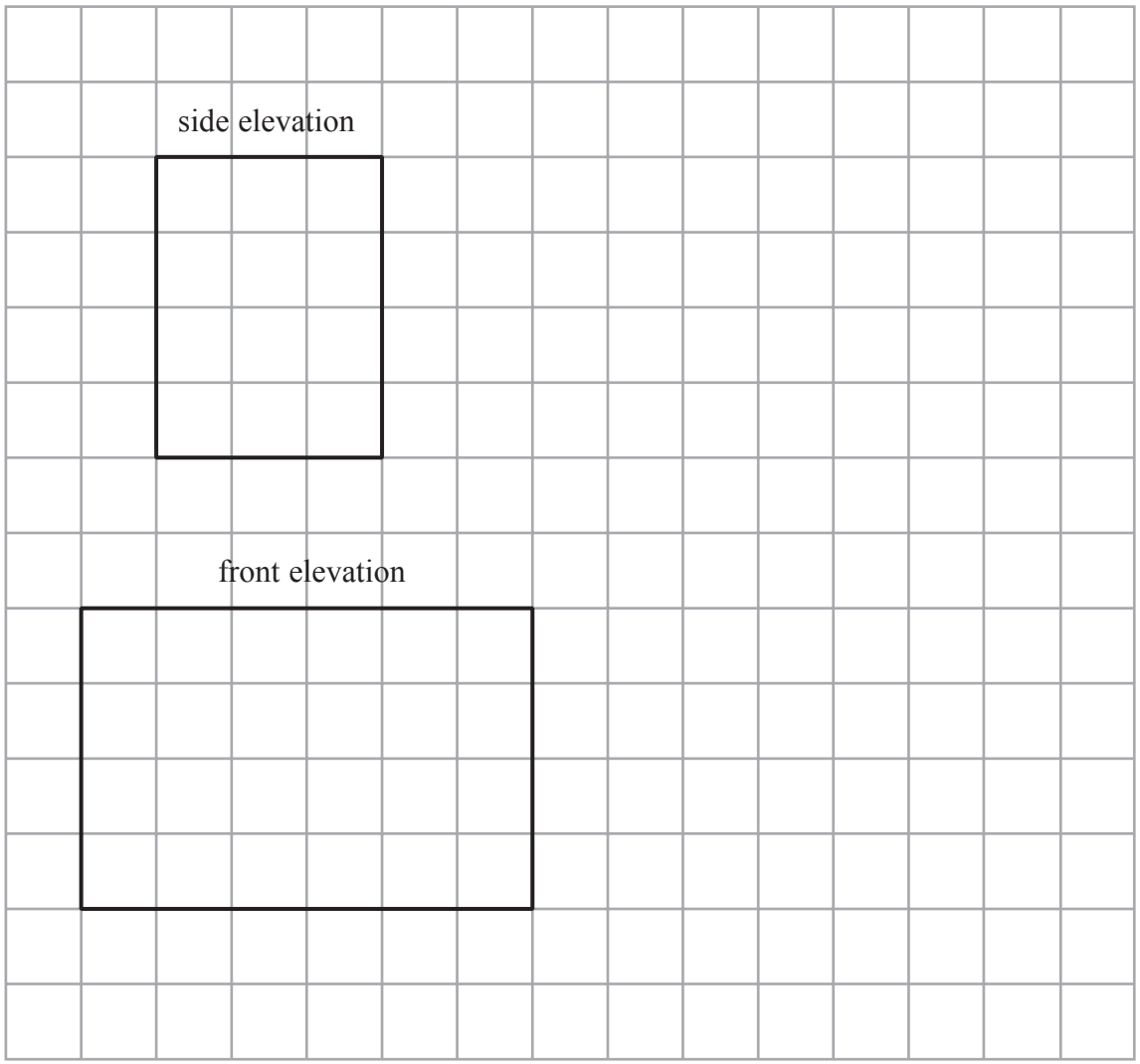
(Total for Question 14 is 2 marks)

15 On the grid, show how this shape will tessellate.
You should draw at least 6 shapes.



(Total for Question 15 is 2 marks)

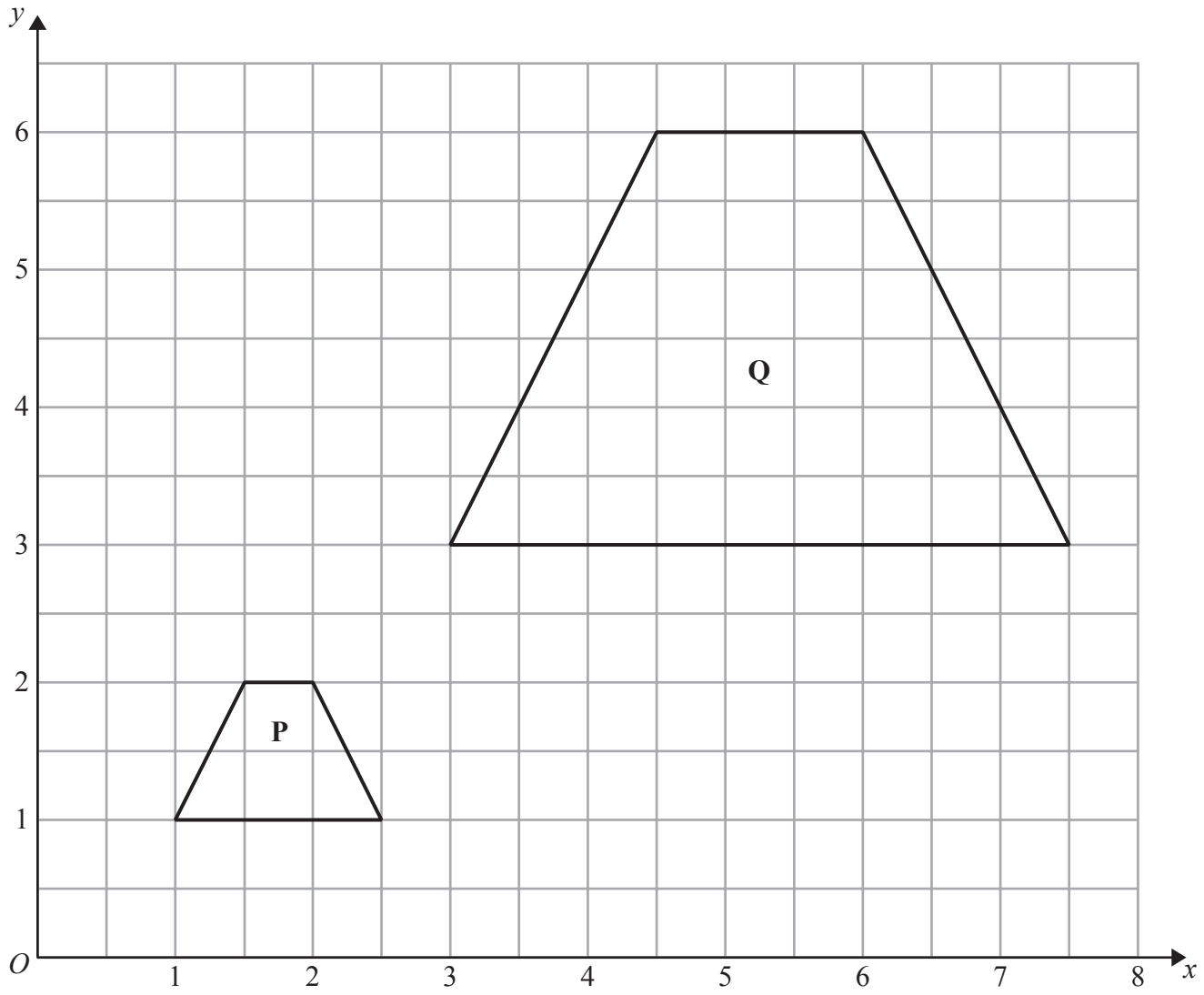
19 The side elevation and the front elevation of a cuboid are drawn on the centimetre grid.



On the grid, draw an accurate plan of the cuboid.

(Total for Question 19 is 2 marks)

23



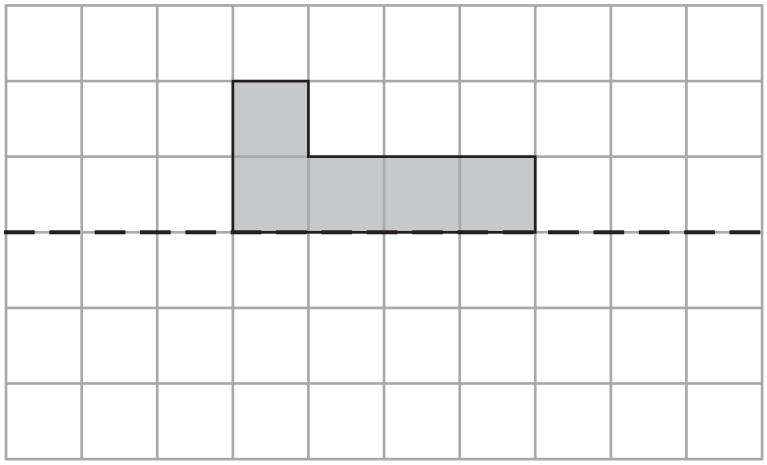
Describe fully the single transformation that maps shape **P** onto shape **Q**.

.....

.....

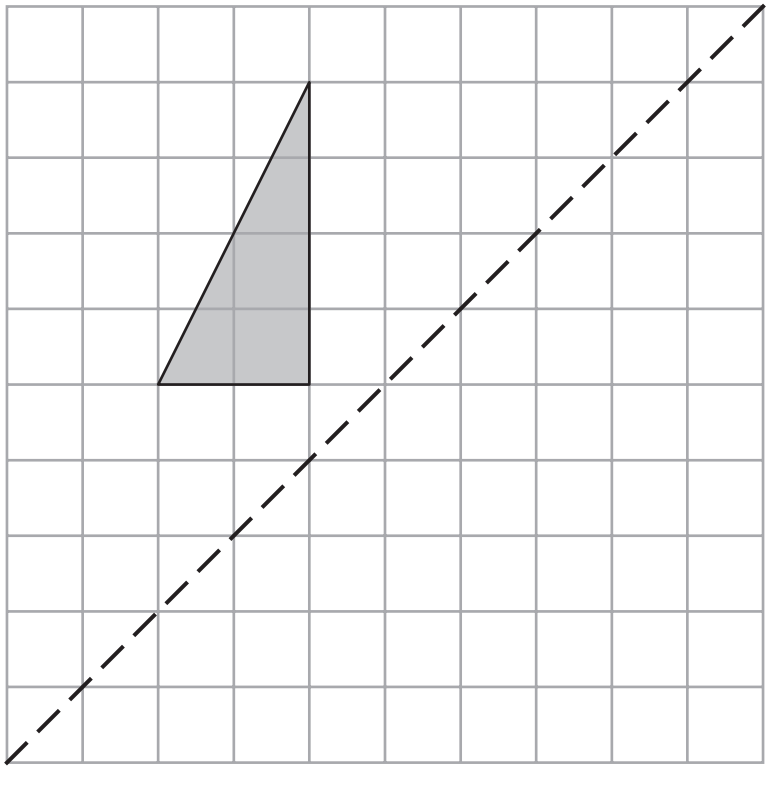
(Total for Question 23 is 3 marks)

3 (a) Reflect the shaded shape in the mirror line.



(1)

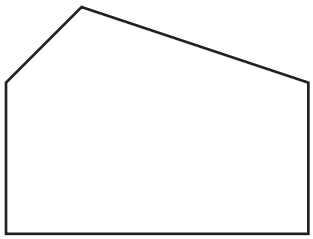
(b) Reflect the shaded shape in the mirror line.



(2)

(Total for Question 3 is 3 marks)

11 Here is a polygon with 5 sides.

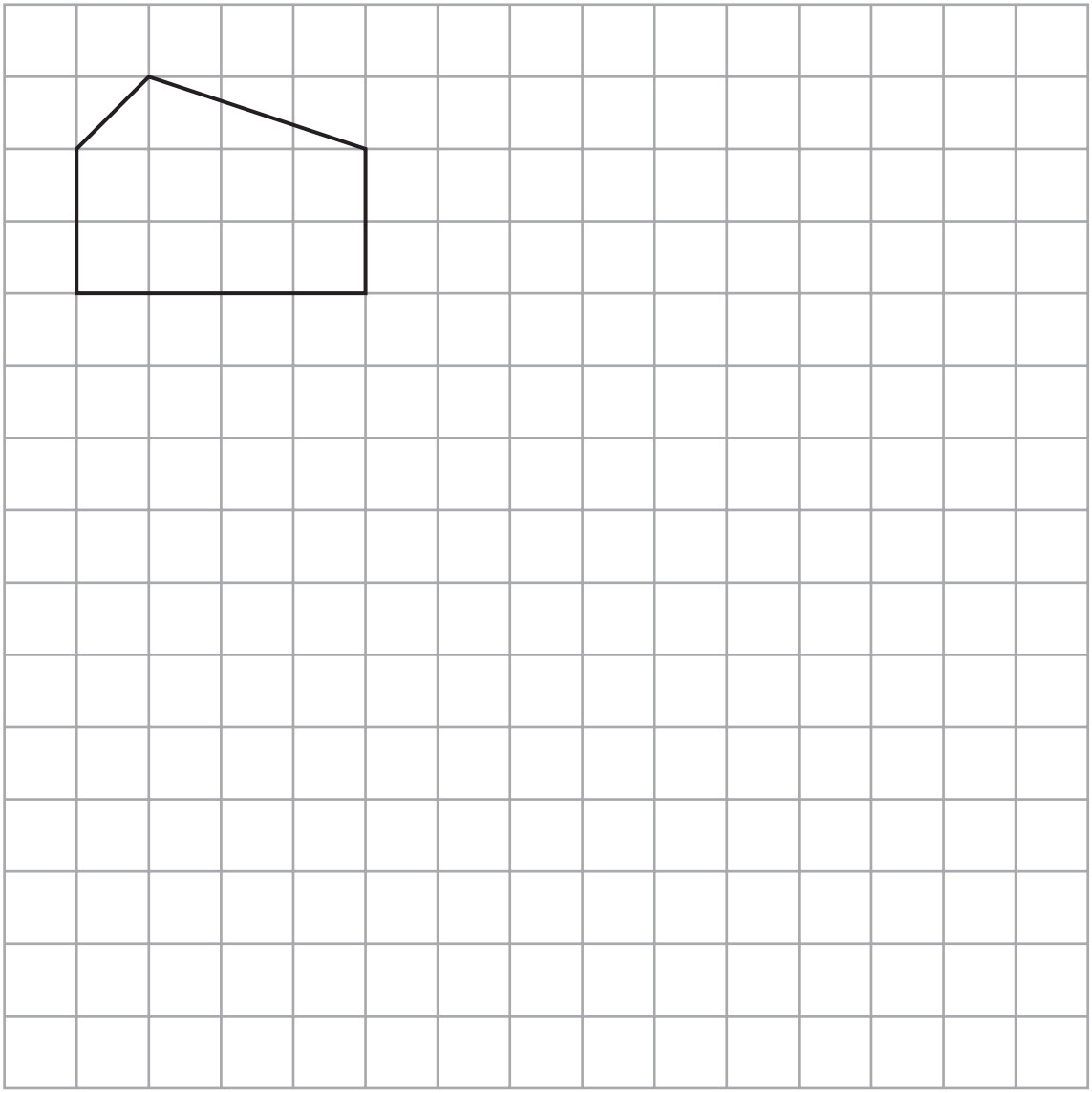


(a) Write down the mathematical name for this polygon.

.....

(1)

(b) On the grid, draw an enlargement of the polygon with scale factor 2



(2)

(Total for Question 11 is 3 marks)

12 (a) Solve $x - 5 = 13$

$x =$ .....

(1)

(b) Solve $2n + n + n = 10$

$n =$ .....

(1)

(c) Solve $\frac{p}{10} = 7$

$p =$ .....

(1)

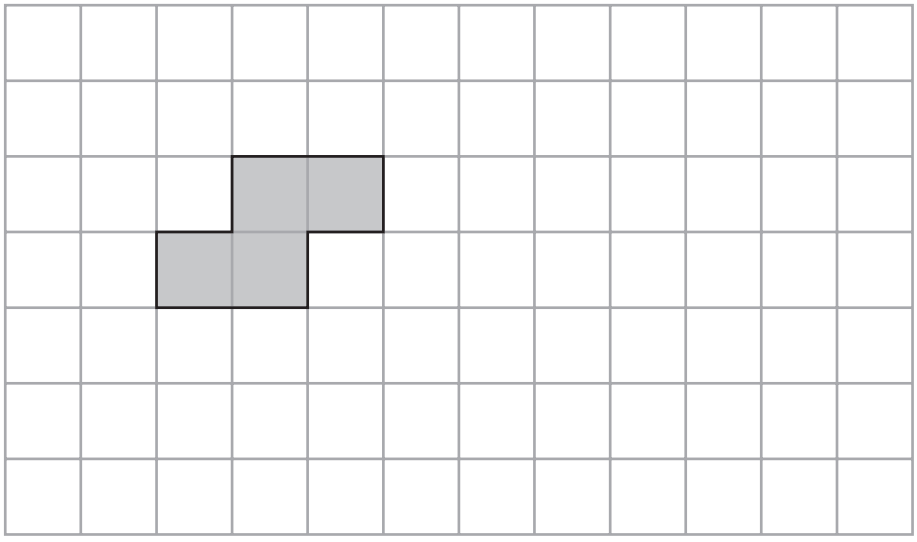
(d) Solve $5y + 6 = 18$

$y =$ .....

(2)

(Total for Question 12 is 5 marks)

13 On the grid, show how this shape will tessellate.
You should draw at least 8 more shapes.



(Total for Question 13 is 2 marks)