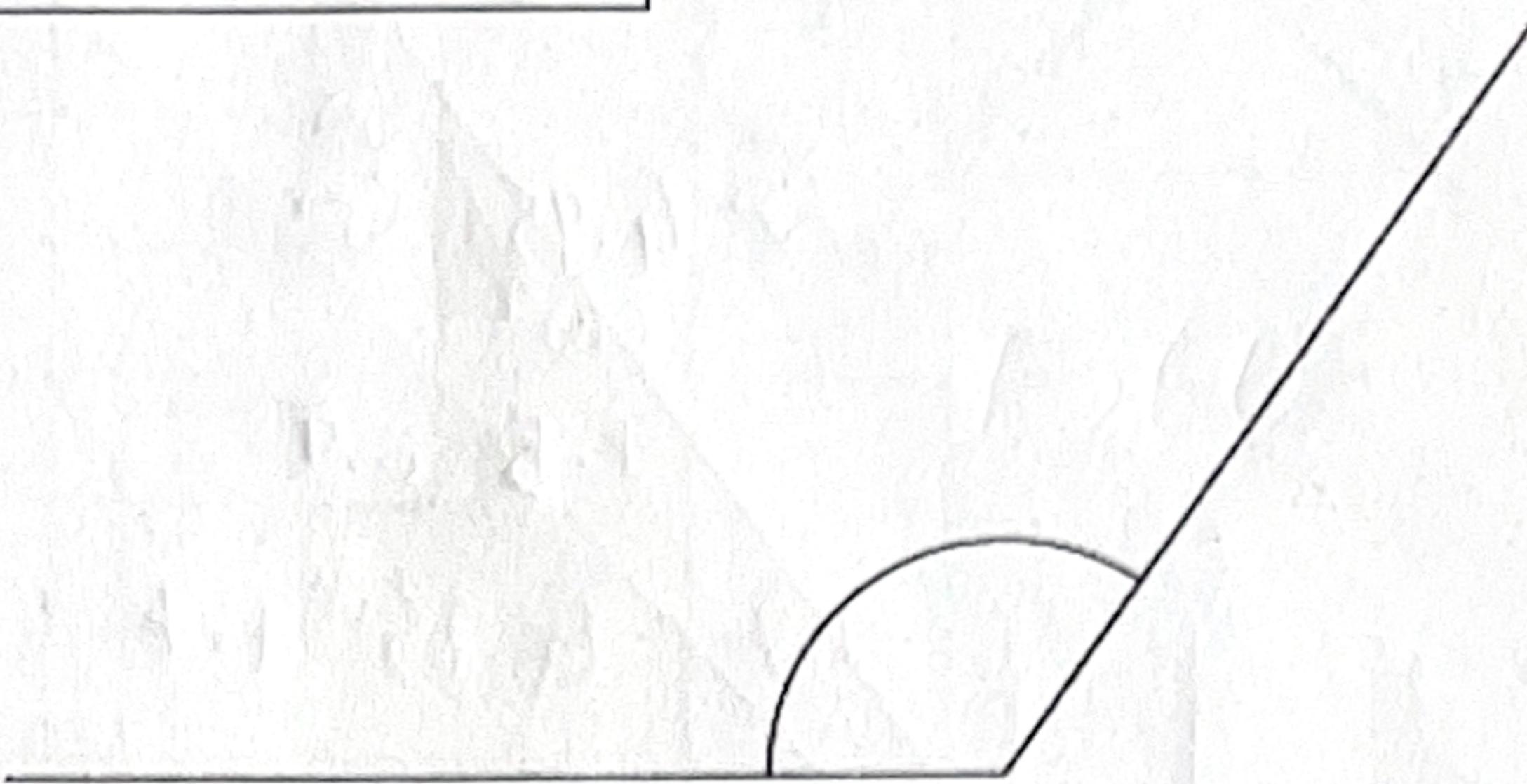


Q1. Here is an angle



- (i) What type of angle is it?
(ii) Measure the size of the angle.

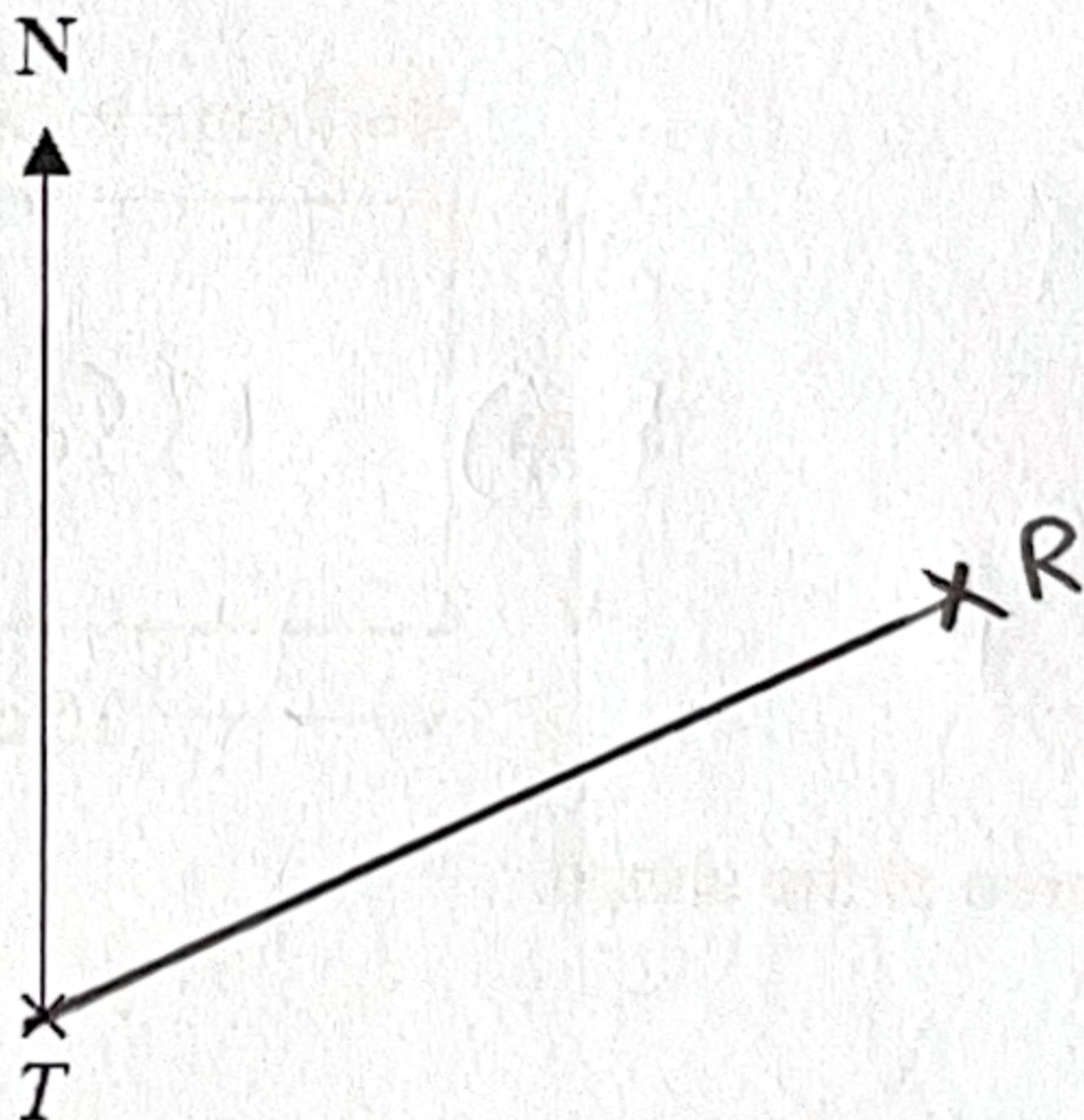
Obtuse

125°

(Total for question = 2 marks)

Q2.

The diagram shows the position of town T.



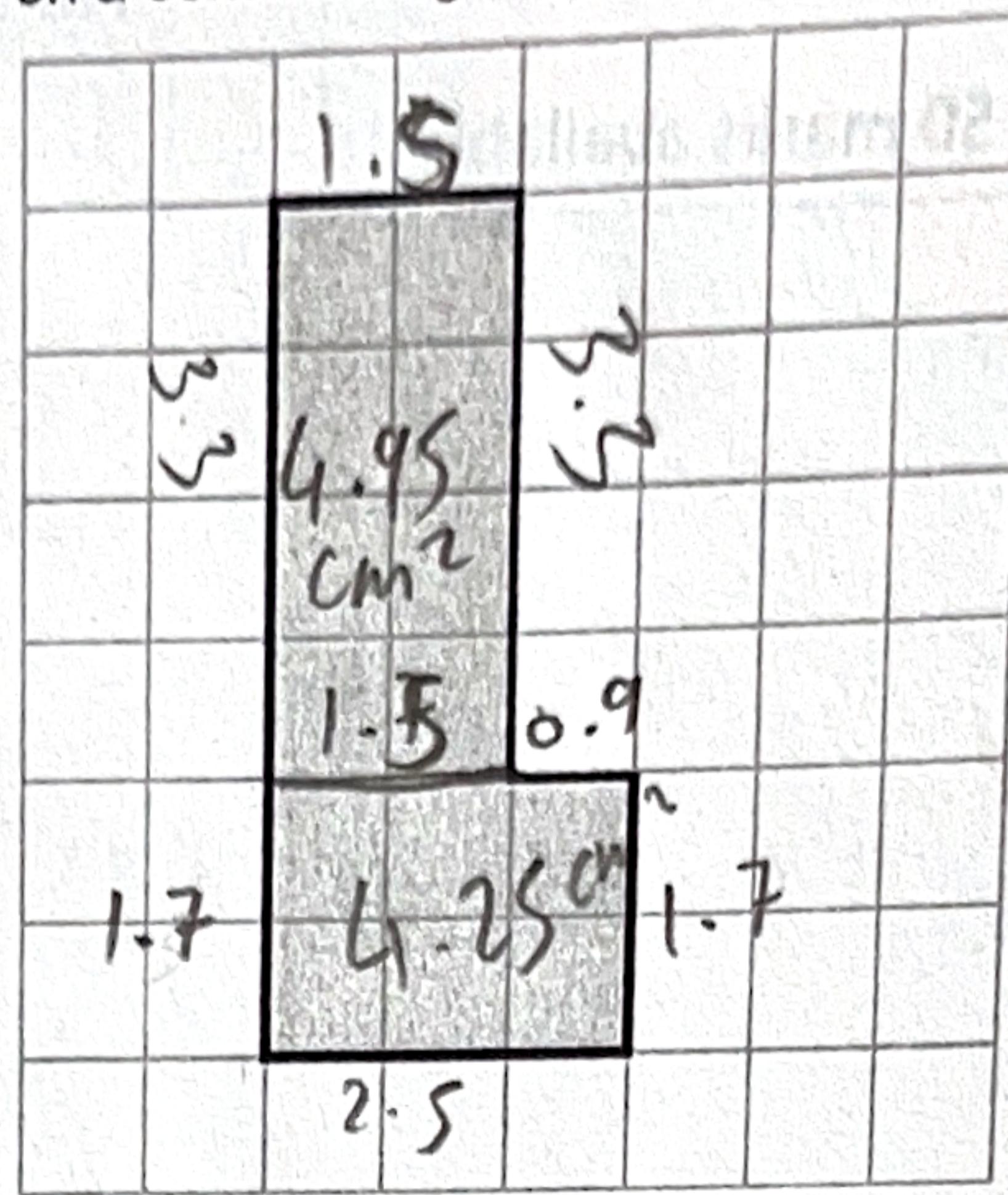
Town R is 55 km from town T on a bearing of 065°

Mark the position of town R with a cross (x).

Use a scale of 1 cm to 10 km.

(Total for question = 2 marks)

Q3. The diagram shows a shape on a centimetre grid.



- (a) Find the area of the shape.

$$9.2 \text{ cm}^2$$

(1)

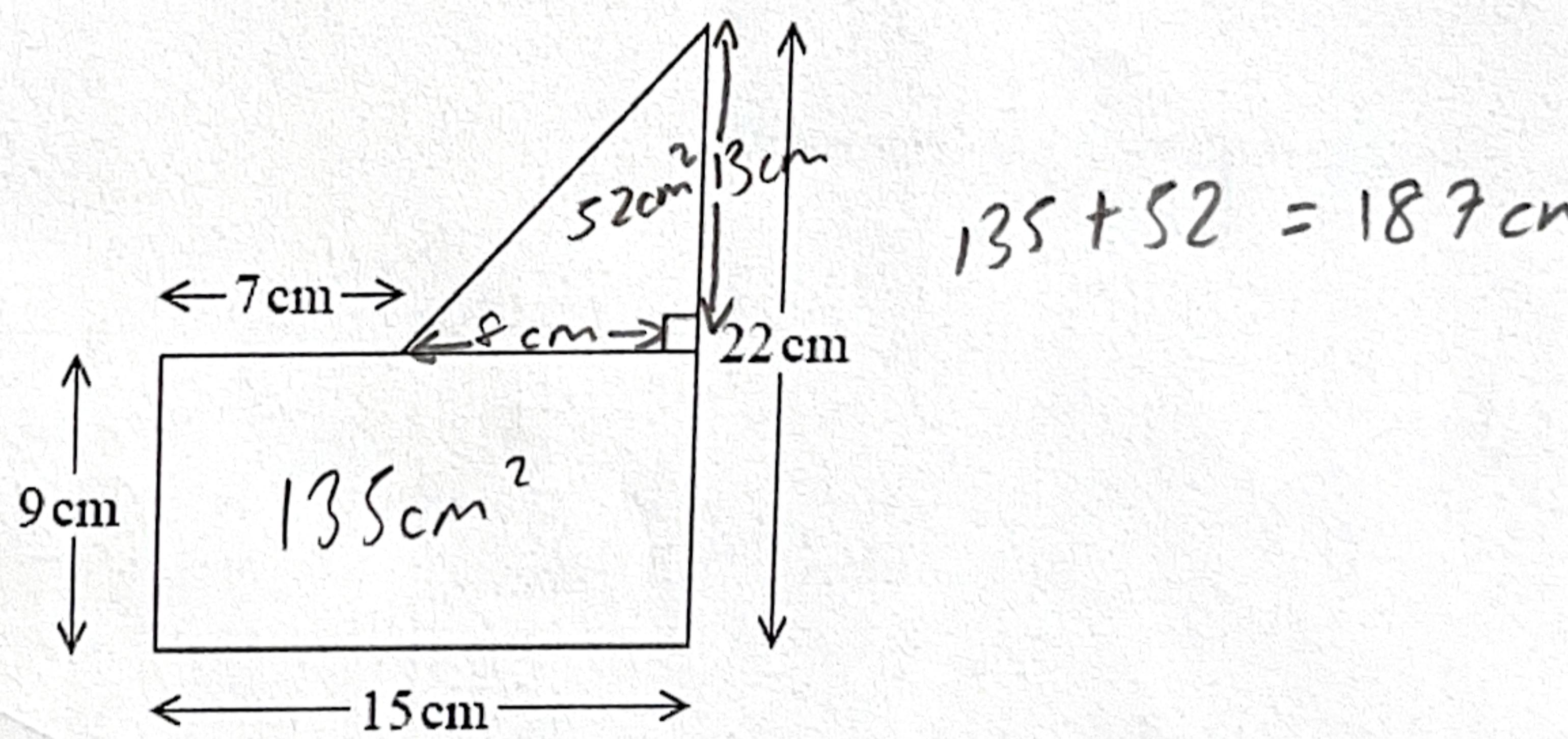
- (b) Find the perimeter of the shape.

$$14.9 \text{ cm}$$

(1)

(Total for question = 2 marks)

Q4. Here is a shape made from a rectangle and a triangle.



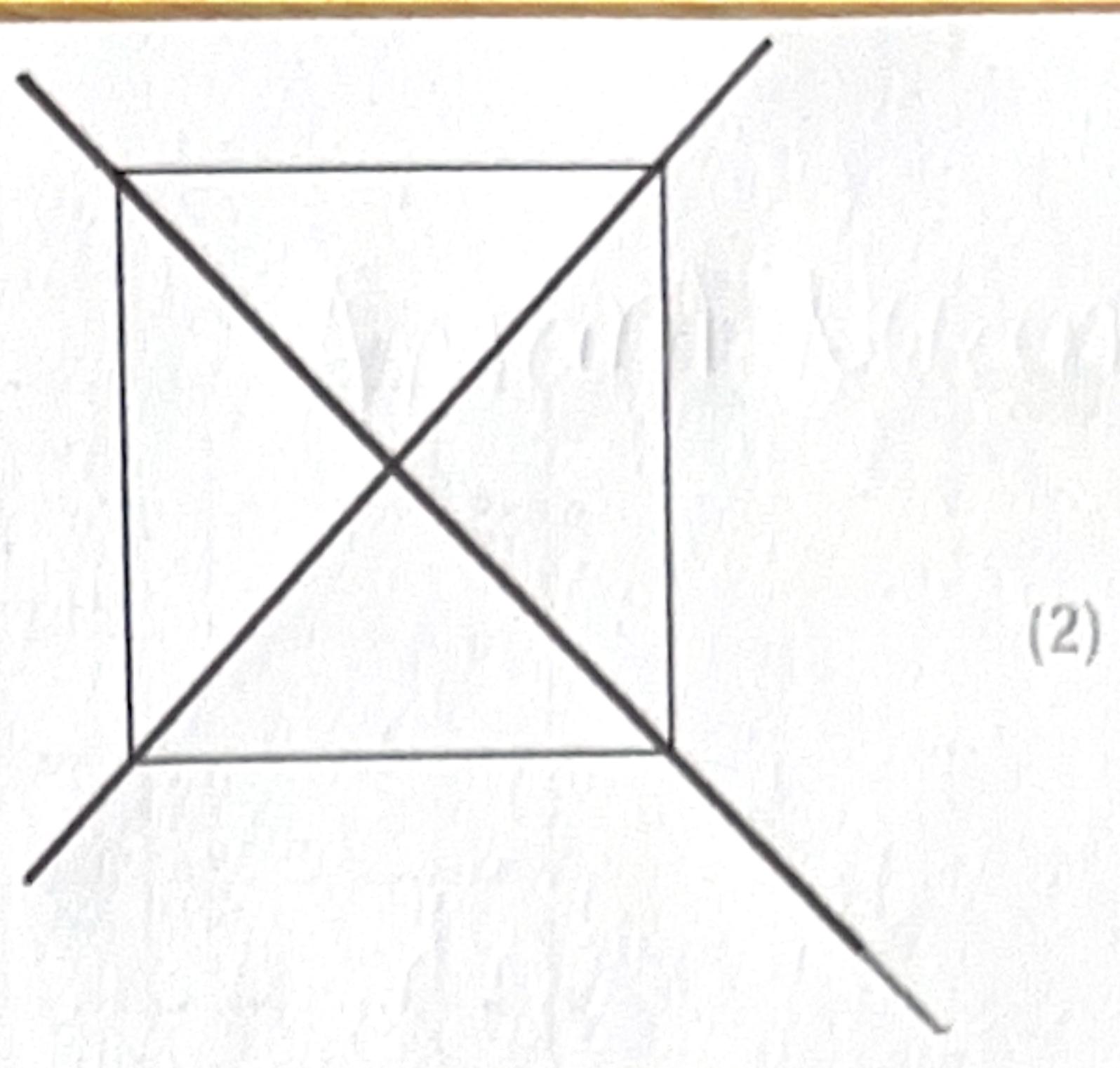
Work out the total area of the shape.

$$187 \text{ cm}^2$$

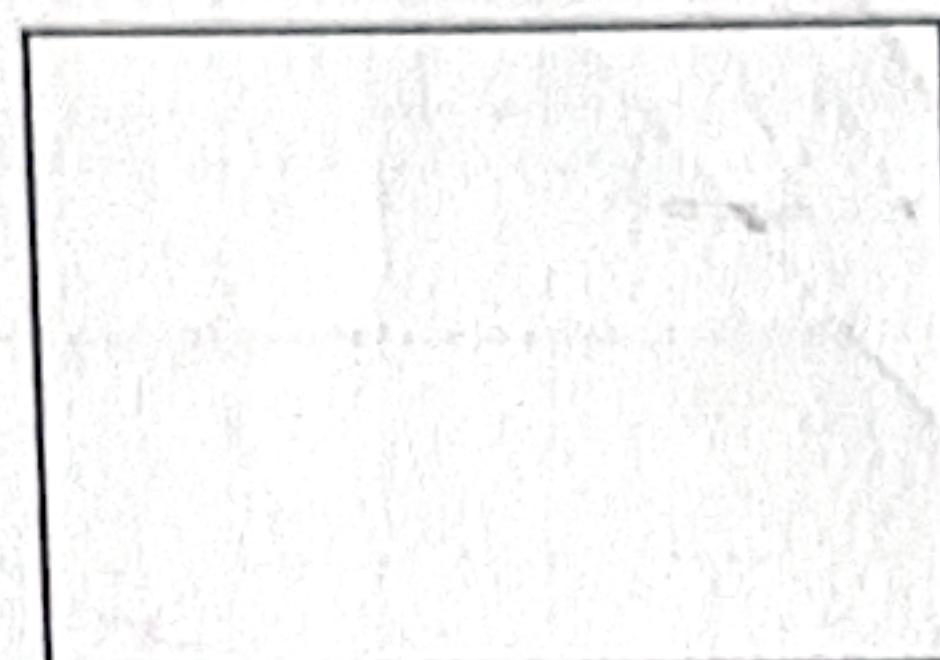
(Total for question = 3 marks)

Q5. Here is a square.

a) On the square, draw all the lines of symmetry.



Here is a rectangle.



(b) Write down the order of rotational symmetry of the rectangle.

2

(1)

Here is a different rectangle.

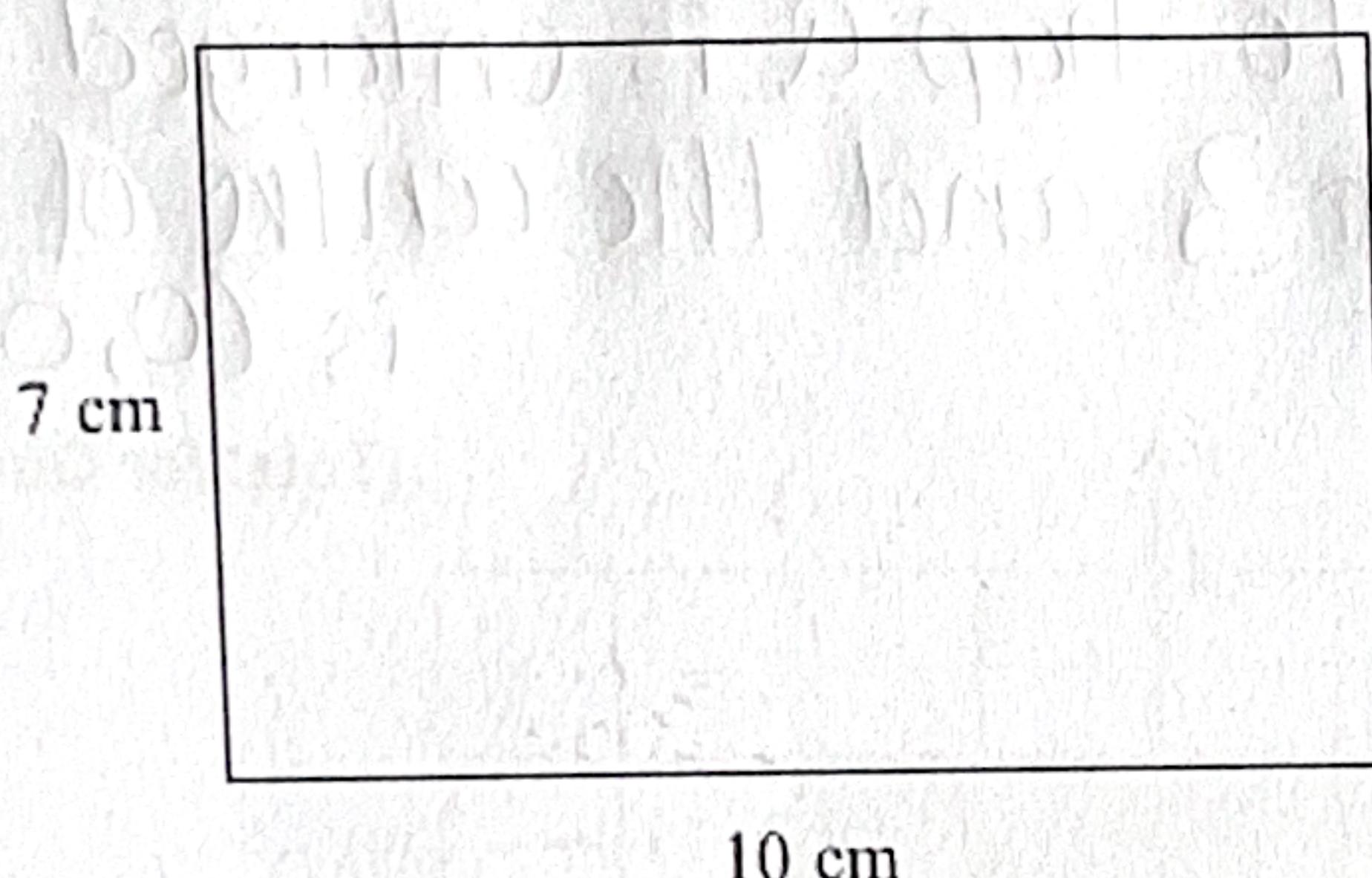


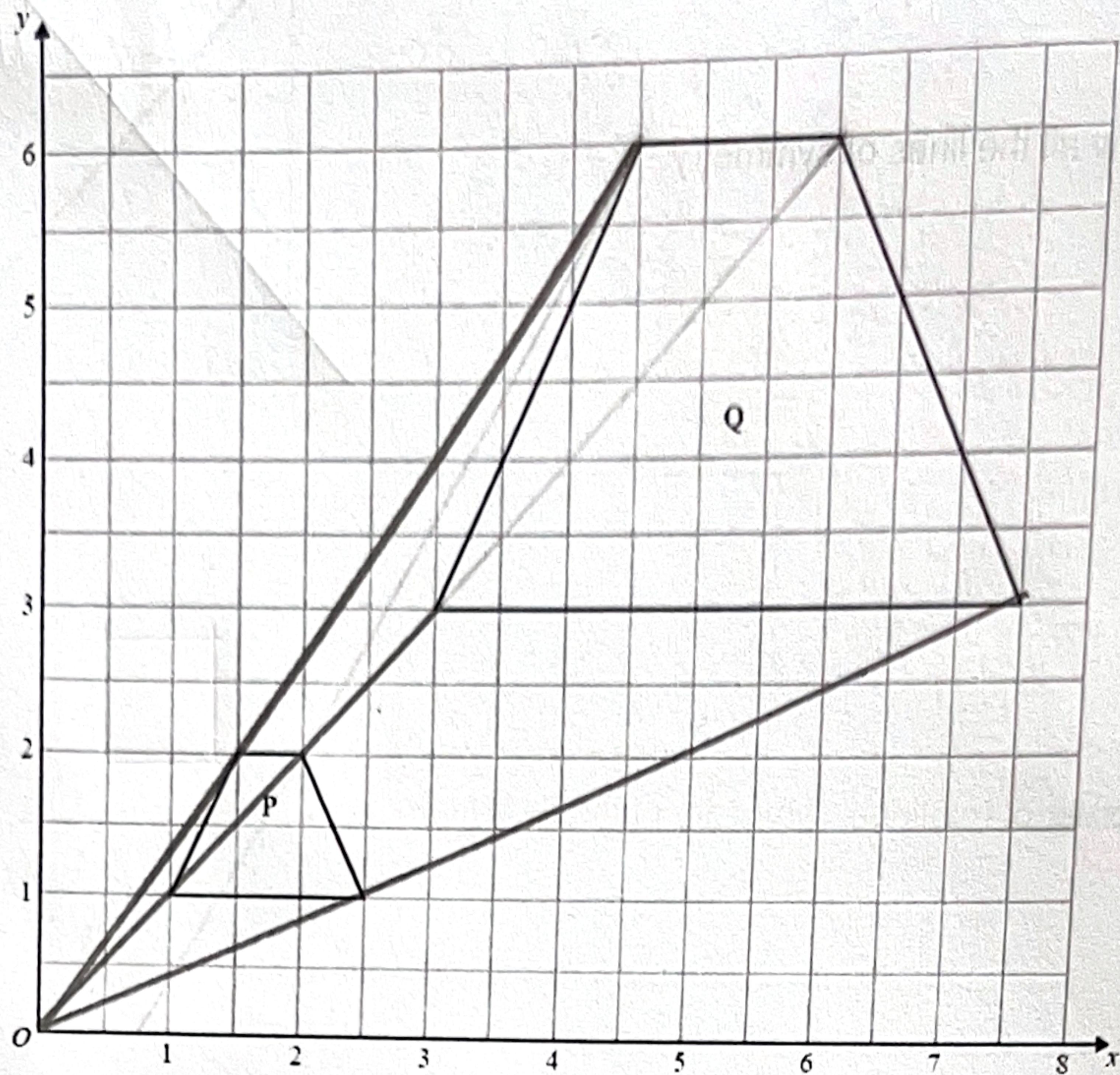
Diagram **NOT**
accurately drawn

(c) Work out the area of this rectangle.

70 cm²
(2)

(Total for Question = 5 marks)

Q6.

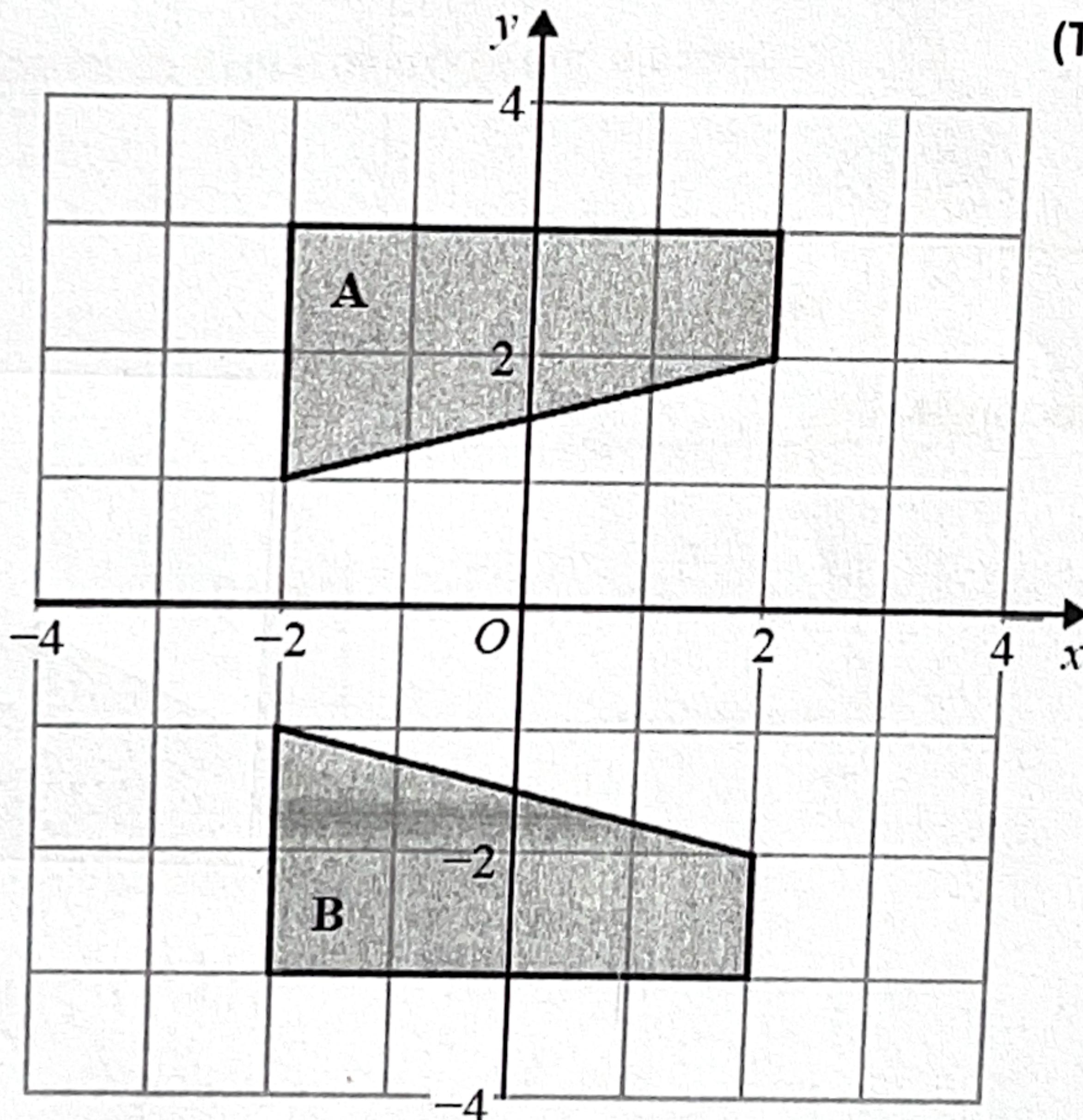


Describe fully the single transformation that maps shape P onto shape Q.

~~Shape P to Shape Q is enlarged~~
by the scale factor 3 and the centre of enlargement is $(0,0)$

Q7.

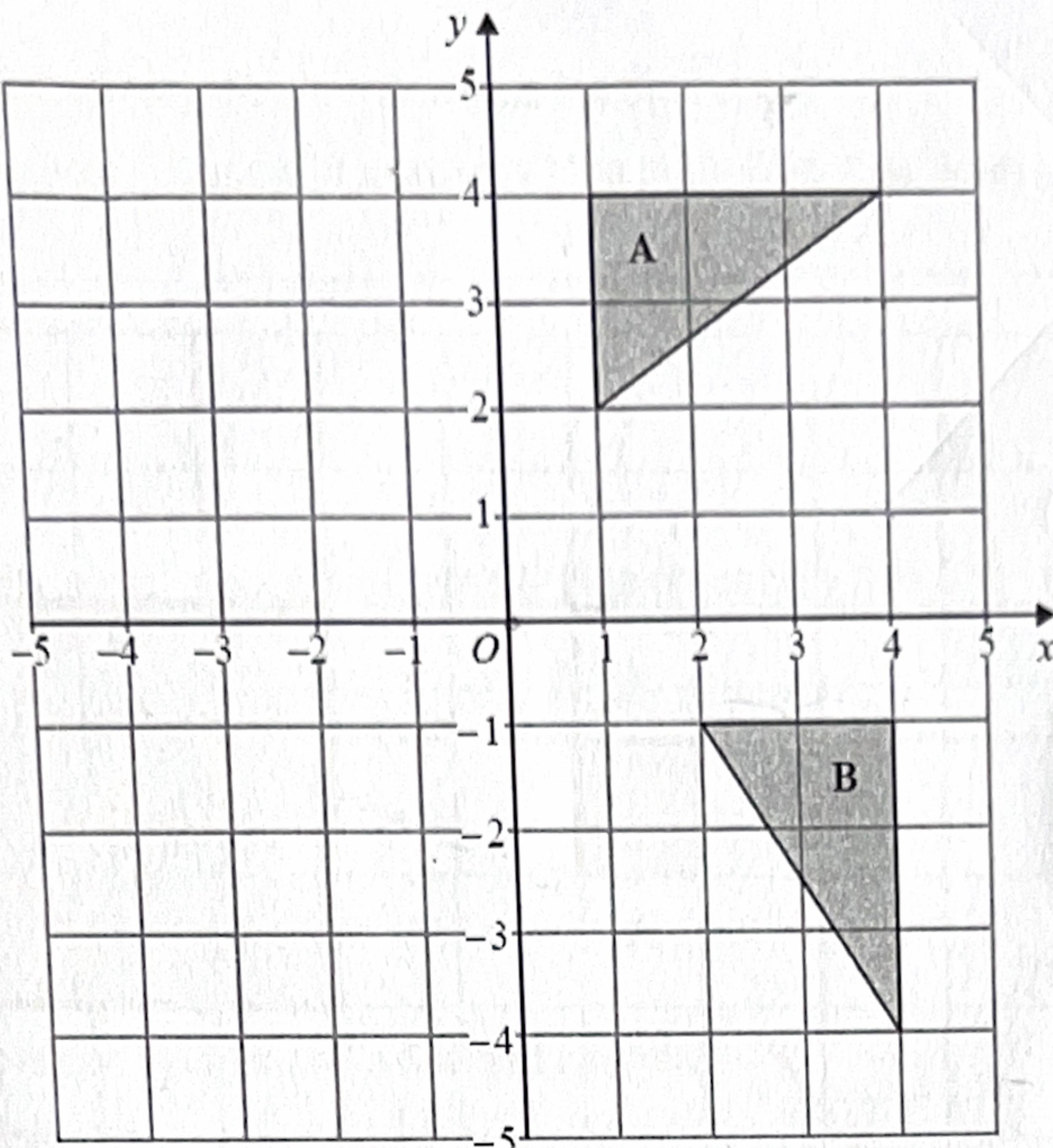
(Total for Question = 3 marks)



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

It's reflected on the x axis.

(Total for question = 2 marks)

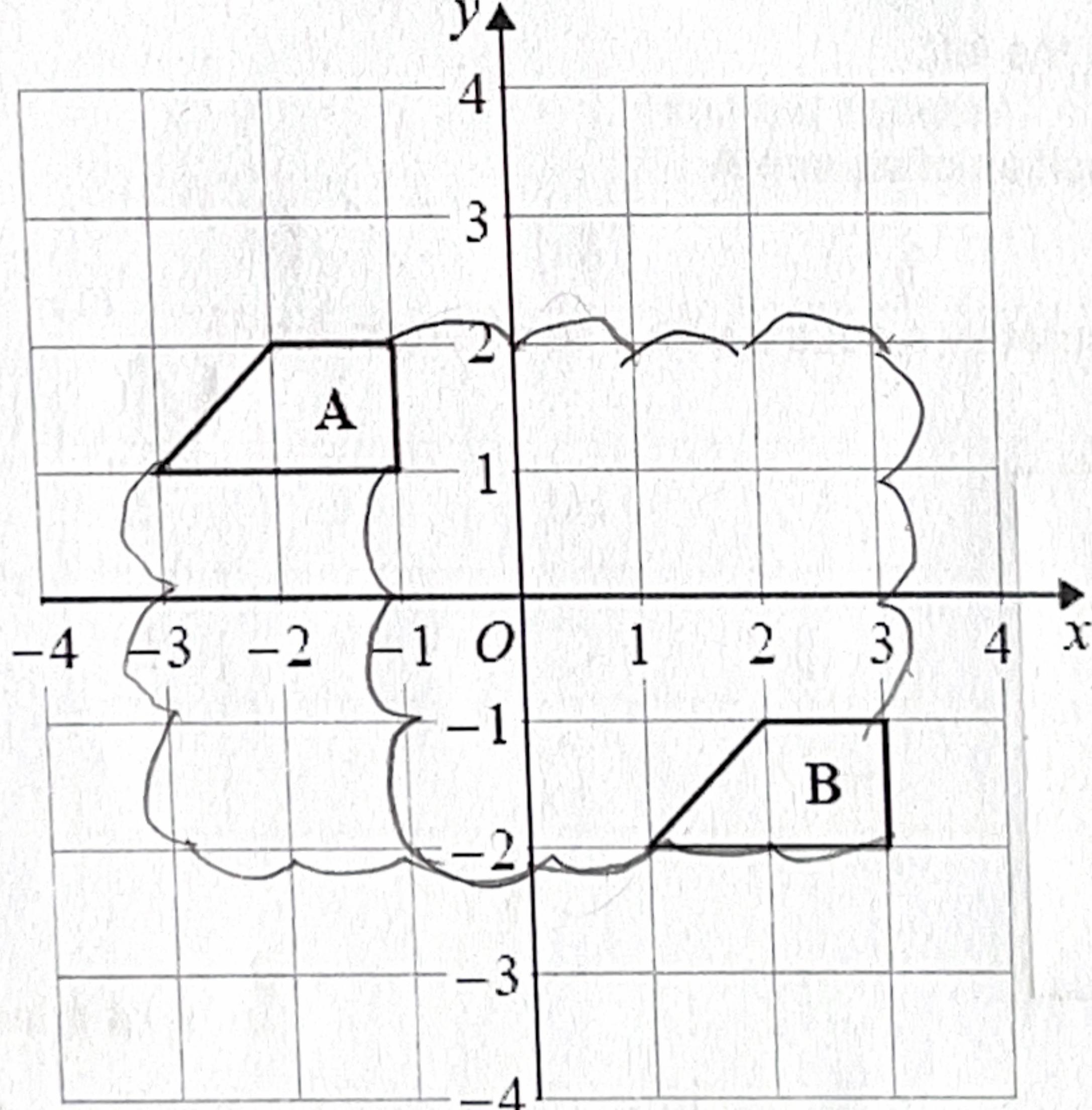


Describe fully the single transformation that maps triangle A onto triangle B.

Triangle A to triangle B is rotated ~~anti-clockwise~~ clockwise and the centre of rotation is $(0,0)$.

Q9.

(Total for question = 2 marks)



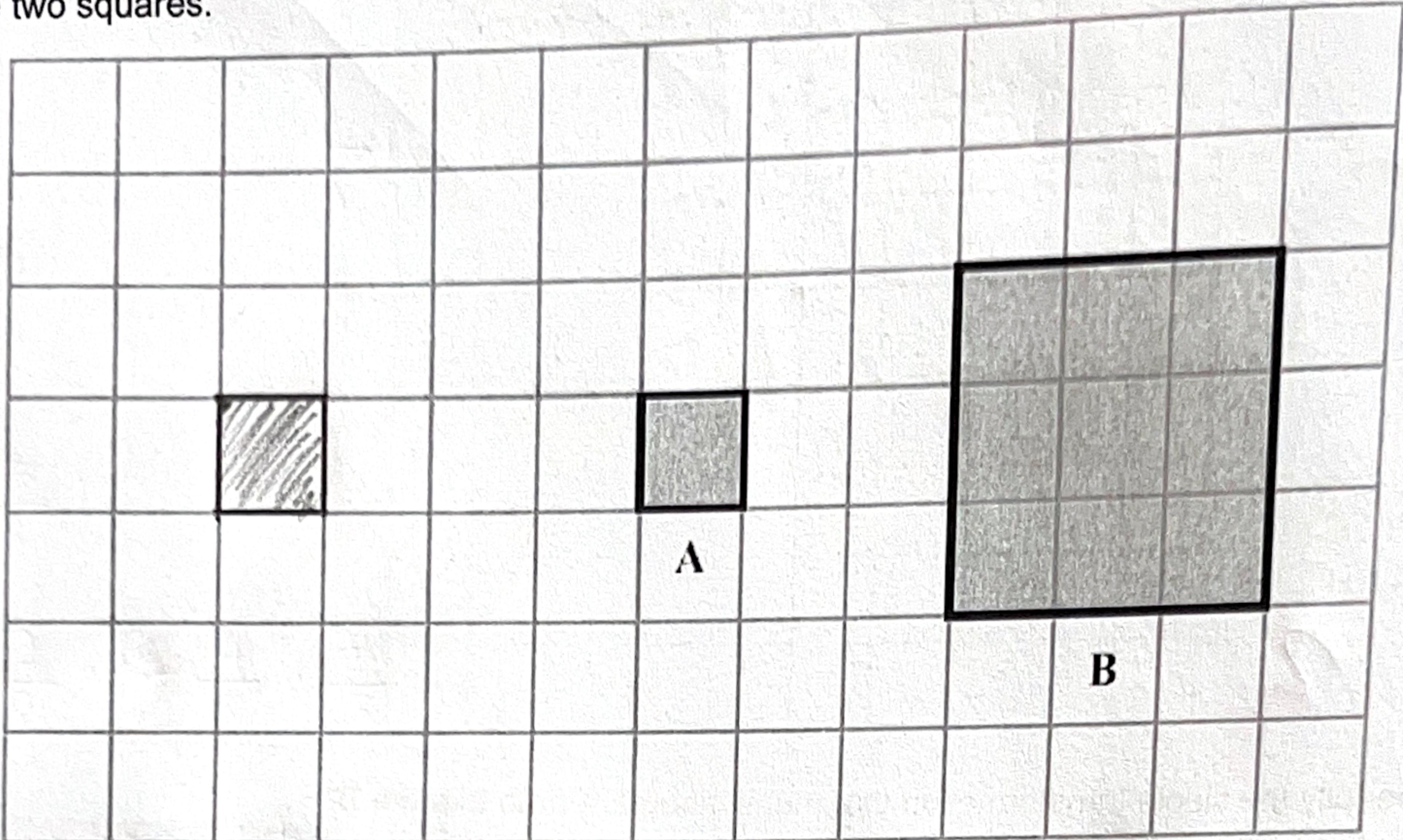
Describe the single transformation that maps shape A onto shape B.

Shape A to shape B is translated on the vector $(-4, -3)$.

(Total for question = 2 marks)

Q10.

Here are two squares.



Square **B** is an enlargement of square **A**.

- (a) What is the scale factor of the enlargement?

The scale factor is 3

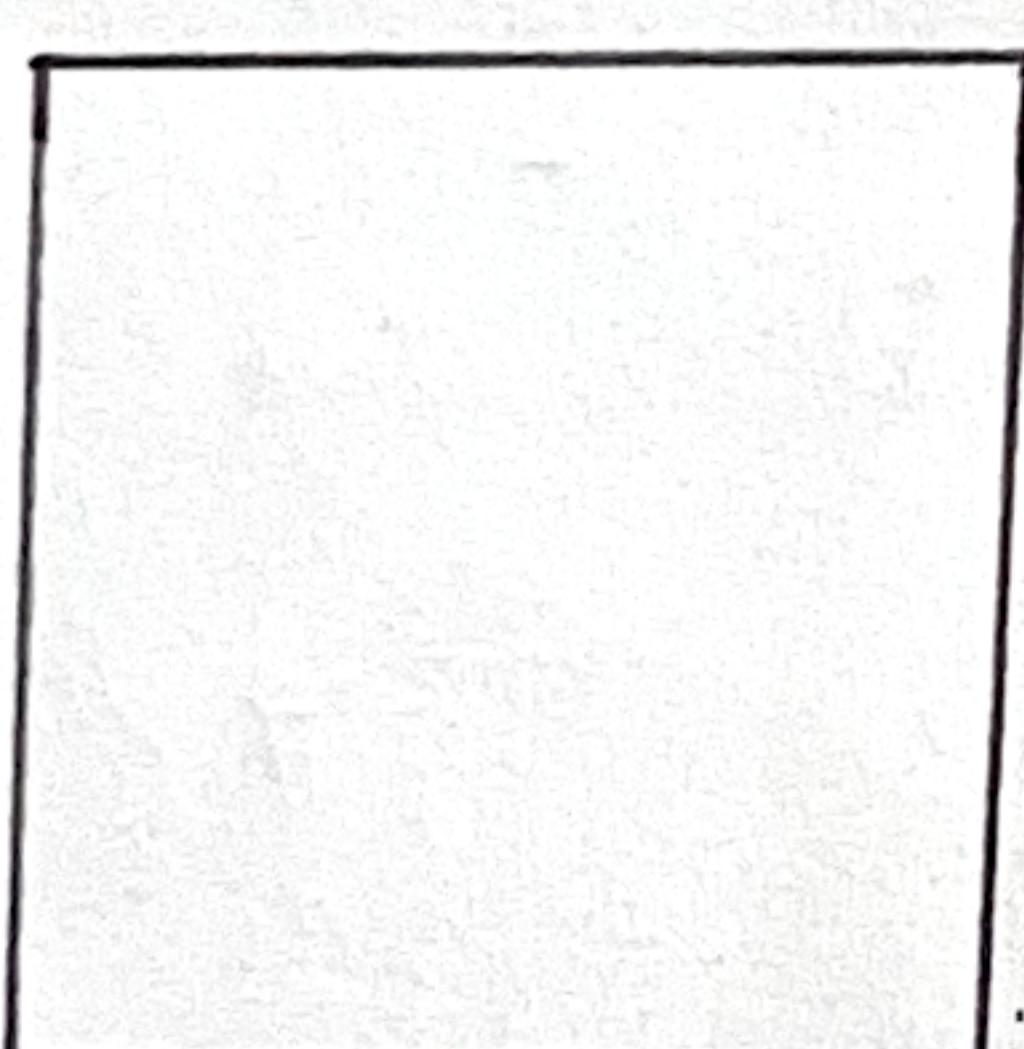
(1)

Square **A** is moved 4 squares to the left.

- (b) On the grid, draw the new position of square **A**.

(1)

- (c) In the space below, draw accurately a square with side of length 4 cm.

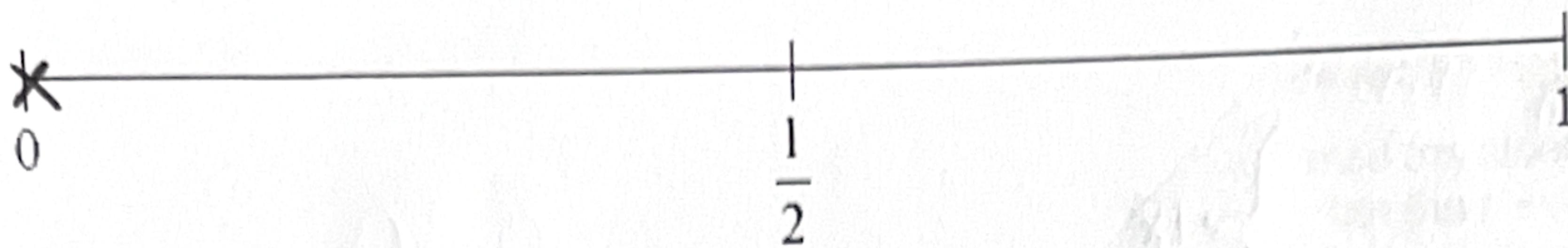


(2)

(Total for Question = 4 marks)

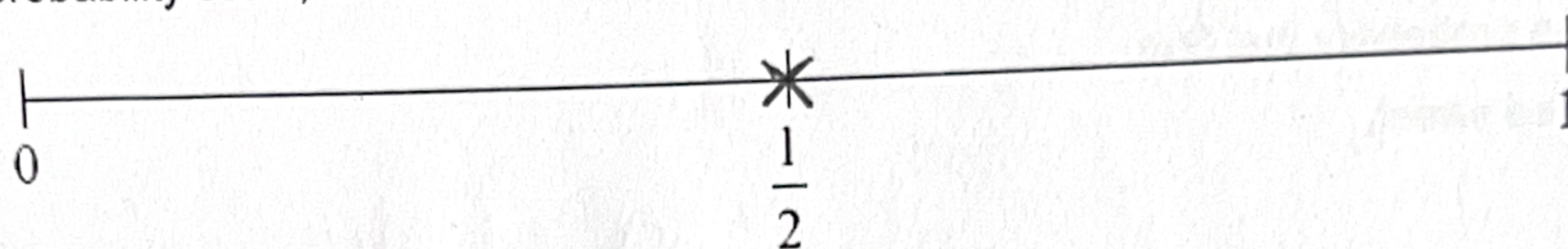
11. Shari has a fair ordinary dice. She rolls the dice once.

(a) On the probability scale, mark with a cross (x) the probability that Shari gets the number 7



(1)

(b) On the probability scale, mark with a cross (x) the probability that Shari gets an even number.

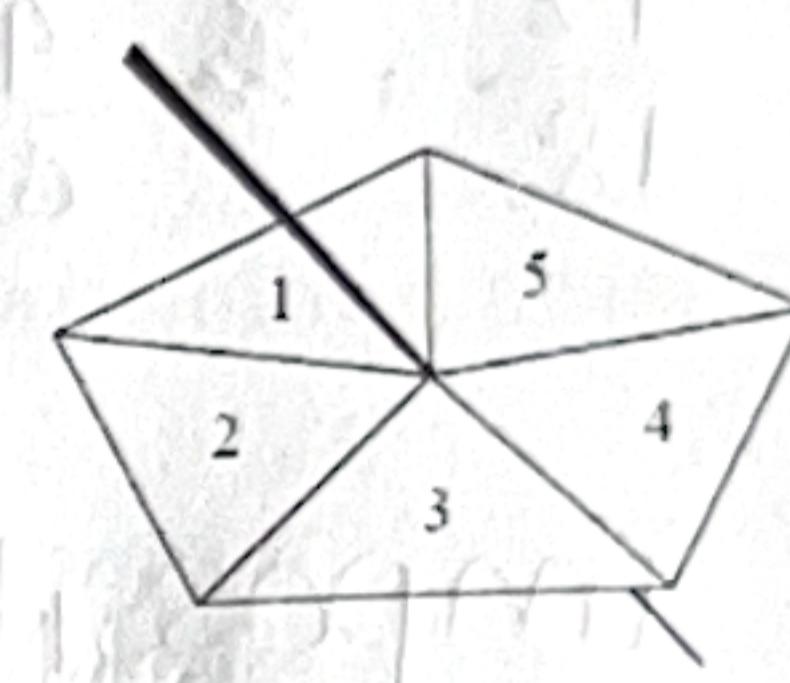
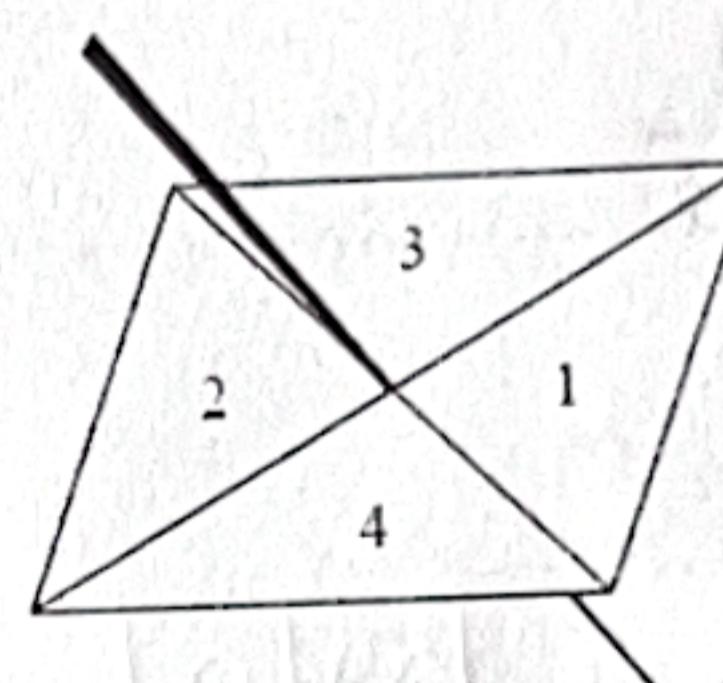


(1)

(Total for question = 2 marks)

Q12. Here are a 4-sided spinner and a 5-sided spinner.

The spinners are fair.



Jeff is going to spin each spinner once.

Each spinner will land on a number.

Jeff will get his score by adding these two numbers together.

(a) Complete the possibility space diagram for each possible score.

5-sided spinner

4-sided spinner

	1	2	3	4	5
1	2	3	4	5	6
2	3	4	5	6	7
3	4	5	6	7	8
4	5	6	7	8	9

(1)

Jeff spins each spinner once.

(b) Find the probability that Jeff gets

(i) a score of 3

$$\frac{3}{20}$$

(ii) a score of 5 or more.

$$\frac{14}{20} = \frac{7}{10}$$

(2)

(Total for question = 3 marks)

Q13.

Sue has a bag of 18 sweets.

5 of the sweets are blue
7 of the sweets are red
6 of the sweets are green

} 18

Sue takes at random a sweet from the bag.

Write down the probability that Sue

- (i) takes a red sweet,

$$\frac{7}{18}$$

- (ii) does **not** take a green sweet,

$$\frac{12}{18} = \cancel{\frac{4}{6}} = \frac{2}{3}$$

- (iii) takes a yellow sweet.

.....impossible.....

(Total for Question = 3 marks)

Q14. Write 478 to the nearest hundred.

.....480.....

(Total for question = 1 mark)

Q15. (a) Write 2530 correct to 2 significant figures.

.....2500.....

(1)

- (b) Write 0.0874 correct to 1 significant figure.

.....0.09.....

(1)

(Total for question = 2 marks)

16.

(a) Write 7357 correct to 3 significant figures.

7360

(1)

(b) Work out $\frac{\sqrt{17 + 4^2}}{7.3^2}$

Write down all the figures on your calculator display.

0.1077981356

(2)

(Total for question = 3 marks)

Q17. Emily drives 186 miles in 3 hours.

(a) What is her average speed?



62

mph

(2)

Sarah drives at an average speed of 58 mph for 4 hours.

(b) How many miles does Sarah drive?

232

miles

(2)

(Total for question = 4 marks)

Q18. Change 53 centimetres to millimetres.

$$\begin{array}{c} \times 10 \\ \text{cm mm} \\ \hline \div 10 \end{array}$$

..... 530 millimetres

(Total for question = 1 mark)

Q19. Polly has a full 5 kg sack of rice.

She pours the rice from this sack into bags.
She fills as many bags as possible.

Each full bag contains 350 g of rice.

(a) How many bags did Polly fill from this sack of rice?

$$\begin{array}{c} \times 1000 \\ \text{kg g} \\ \hline \div 1000 \end{array}$$

$$\begin{array}{r} 5000 \div 350 \\ = 14 \text{ remainder } 200 \end{array}$$

$$\begin{aligned} & 5 - 0.35 \\ & = 4.65 \\ & \text{(round)} \end{aligned}$$

..... 5

(3)

Polly assumes that the rice from two sacks will fill twice as many bags as the rice from one sack.

(b) Is Polly correct?

You must give a reason for your answer.

Yes, because $5 \times 2 = 10$.

~~But~~

(1)

(Total for question = 4 marks)