

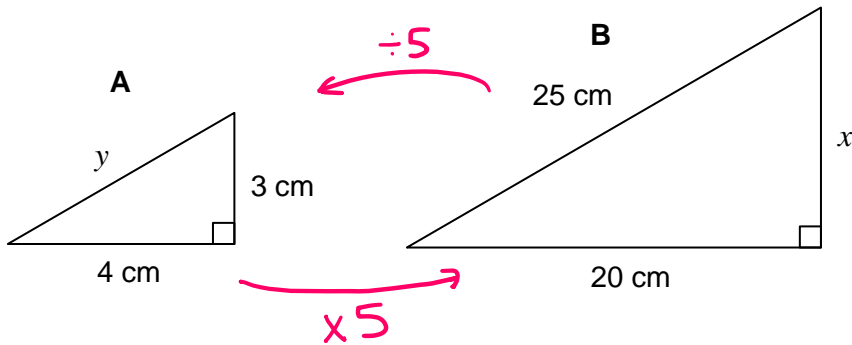


Similar Shapes



REVISE THIS TOPIC

1 Triangle A and Triangle B are similar.



Not drawn accurately

1 (a) Write down the scale factor of enlargement from triangle A to triangle B. [1 mark]

$20 \div 4$

5

Answer _____

1 (b) Work out the value of x [2 marks]

3×5

15

Answer _____ cm

1 (c) Work out the value of y [2 marks]

$25 \div 5$

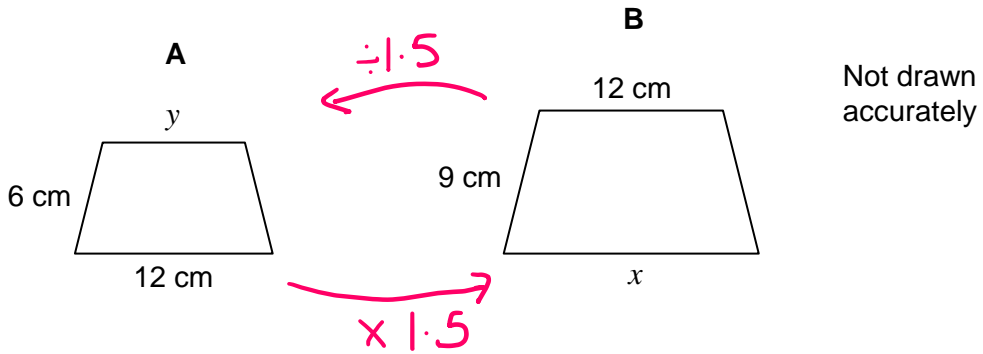
5

Answer _____ cm

$\frac{\quad}{5}$



2 Shape **A** and Shape **B** are similar.



2 (a) Write down the scale factor of enlargement from shape A to shape B. [1 mark]

$$9 \div 6$$

$$1.5$$

Answer _____

2 (b) Work out the value of x [2 marks]

$$12 \times 1.5$$

Answer _____ 18 _____ cm

2 (c) Work out the value of y [2 marks]

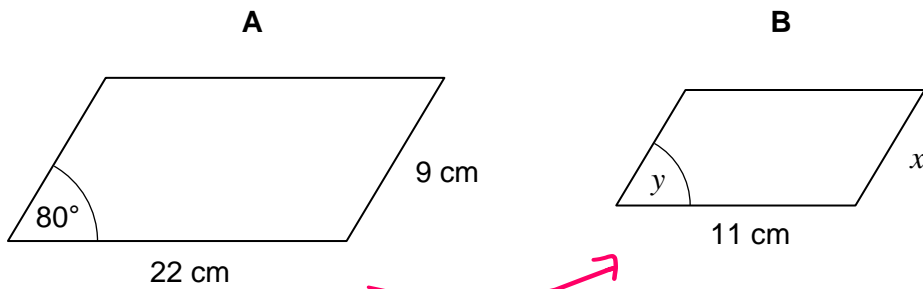
$$12 \div 1.5$$

Answer _____ 8 _____ cm



3 Shape **A** and Shape **B** are similar.

Not drawn accurately



3 (a) Write down the scale factor of enlargement from shape A to shape B. [1 mark]

$$11 \div 22$$

Answer 0.5

3 (b) Work out the value of x [2 marks]

$$9 \times 0.5 \quad (\text{or } 9 \div 2)$$

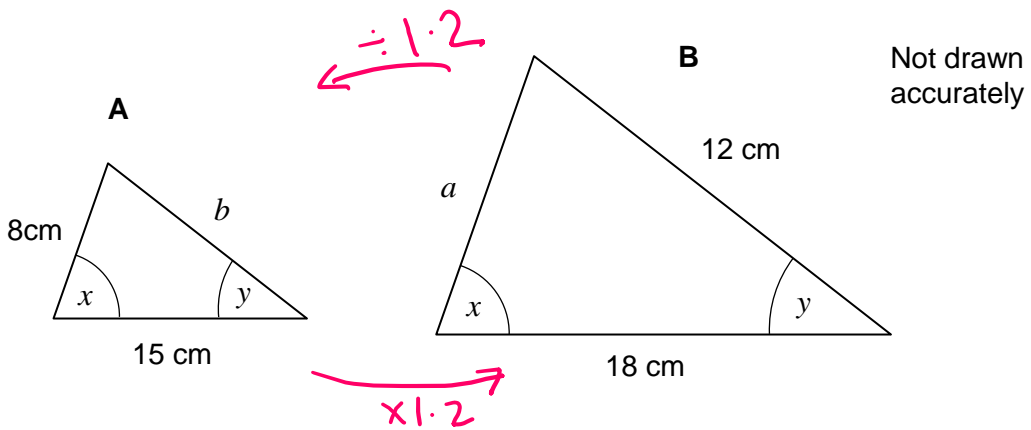
Answer 4.5 cm

3 (c) Write down the value of y [1 mark]

Answer 80 °



4 Triangle A and Triangle B are similar.



4 (a) Write down the scale factor of enlargement from triangle A to triangle B. [1 mark]

$$18 \div 15$$

Answer 1.2

4 (b) Work out the value of a [2 marks]

$$8 \times 1.2$$

Answer 9.6 cm

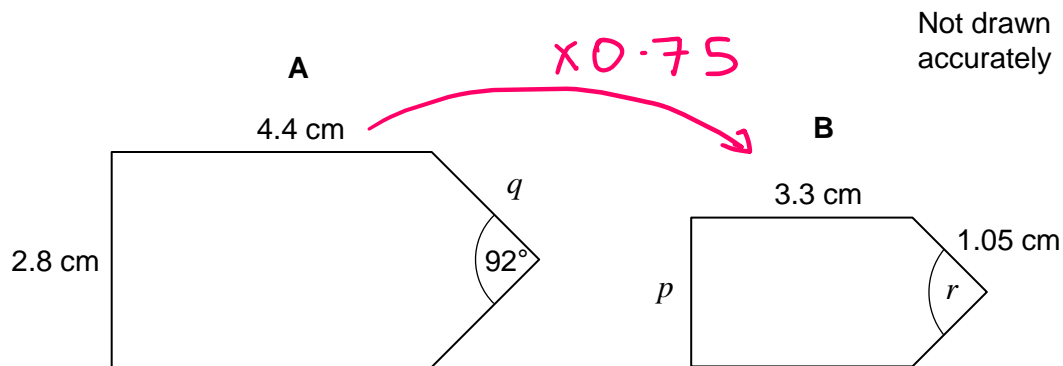
4 (c) Work out the value of b [2 marks]

$$12 \div 1.2$$

Answer 10 cm



5 Shape **A** and Shape **B** are similar.



5 (a) Work out the value of p [2 marks]

$$3.3 \div 4.4 = 0.75$$

$$2.8 \times 0.75 = 2.1$$

Answer 2.1 cm

5 (b) Work out the value of q [2 marks]

$$1.05 \div 0.75 = 1.4$$

Answer 1.4 cm

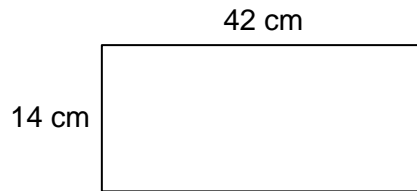
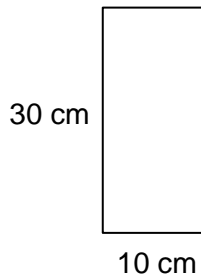
5 (c) Write down the value of r [1 mark]

Answer 92 °



6 Here are two rectangles.

Not drawn accurately



Show that the rectangles are mathematically similar.

[2 marks]

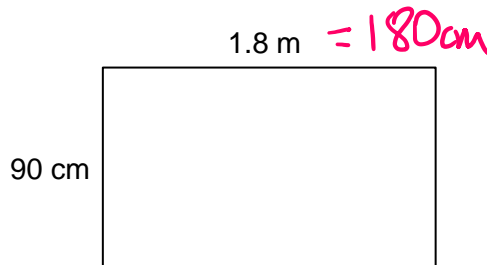
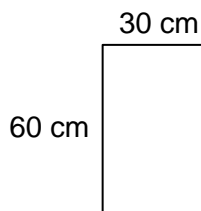
$$14 \div 10 = 1.4$$

$$42 \div 30 = 1.4$$

All sides have been enlarged by the same scale factor so the shapes are similar.

7 Here are two rectangles.

Not drawn accurately



Show that the rectangles are mathematically similar.

[2 marks]

$$90 \div 30 = 3$$

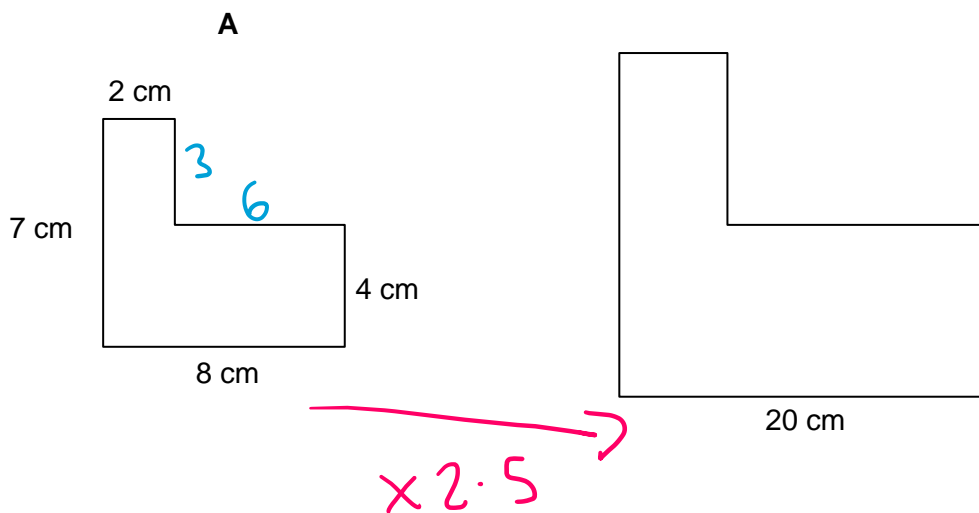
$$180 \div 60 = 3$$

All sides have been enlarged by the same scale factor so the shapes are similar.



8 Shape **A** and Shape **B** are similar.

Not drawn accurately



Work out the perimeter of shape B.

[4 marks]

$$20 \div 8 = 2.5$$

$$8 - 2 = 6$$

$$7 - 4 = 3$$

Perimeter of A

$$= 8 + 4 + 6 + 3 + 2 + 7$$

$$= 30 \text{ cm}$$

$$30 \times 2.5 = 75$$

Answer 75 cm

