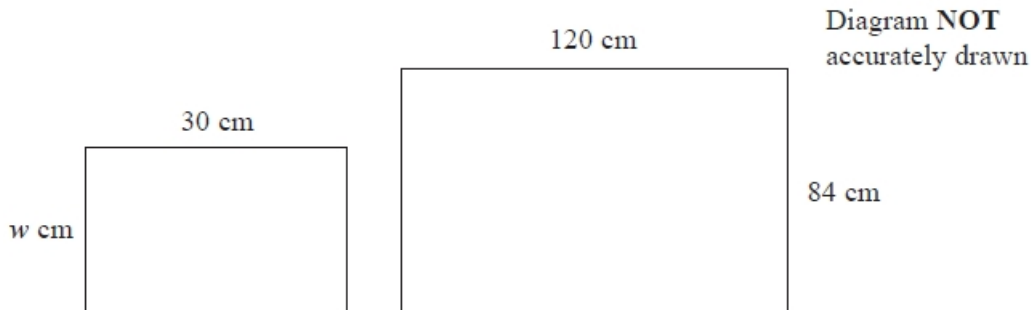


G195 Similar shapes 1

Q1.

The diagram shows two rectangles.

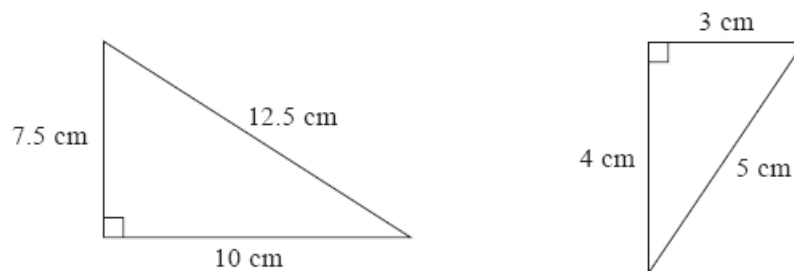


The rectangles are similar.

Work out the value of w .

.....
(Total for question = 2 marks)

Q2.



Show that these two triangles are mathematically similar.

(Total for question = 2 marks)

Q3.

A small photograph has a length of 4 cm and a width of 3 cm.
Shez enlarges the small photograph to make a large photograph.

The large photograph has a width of 15 cm.

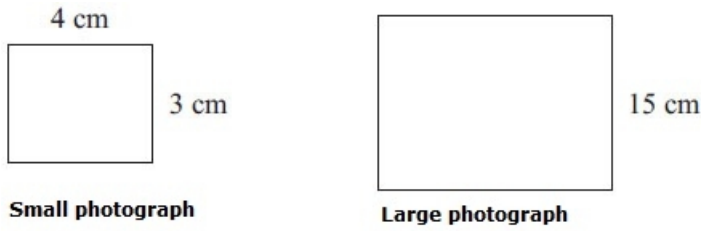


Diagram **NOT** accurately drawn

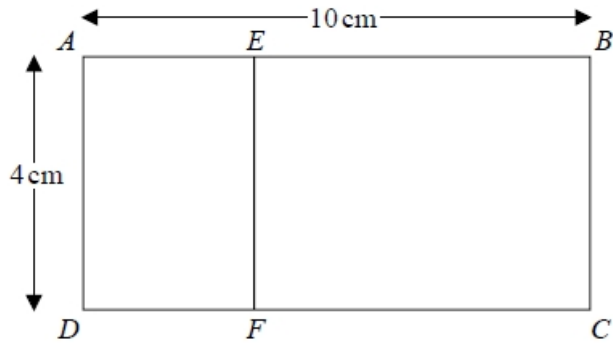
The two photographs are similar rectangles.
Work out the length of the large photograph.

.....

(Total for Question is 3 marks)

Q4.

Rectangle $ABCD$ is mathematically similar to rectangle $DAEF$.



$AB = 10$ cm.
 $AD = 4$ cm.

Work out the area of rectangle $DAEF$.

..... cm²

(Total for question = 3 marks)

Q5.

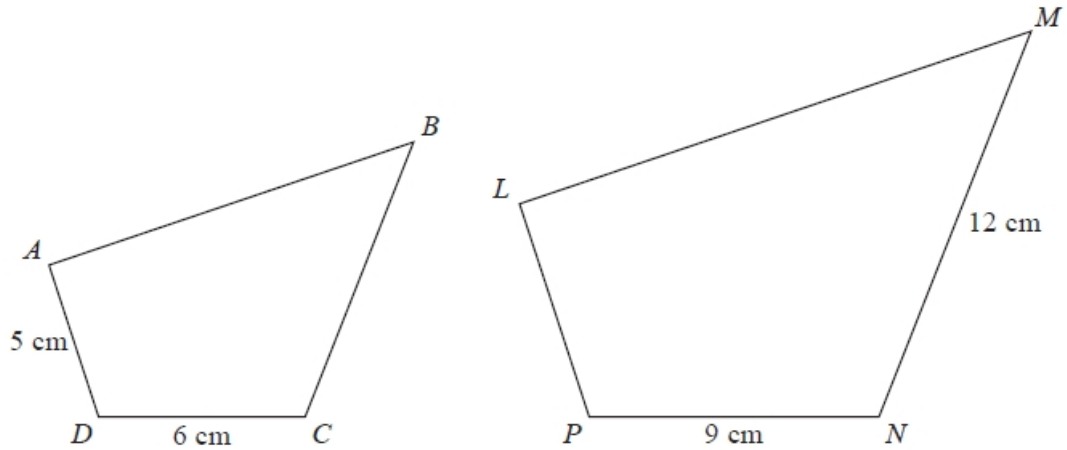


Diagram **NOT** accurately drawn

Quadrilaterals $ABCD$ and $LMNP$ are mathematically similar.

Angle A = angle L

Angle B = angle M

Angle C = angle N

Angle D = angle P

(a) Work out the length of LP .

.....cm
(2)

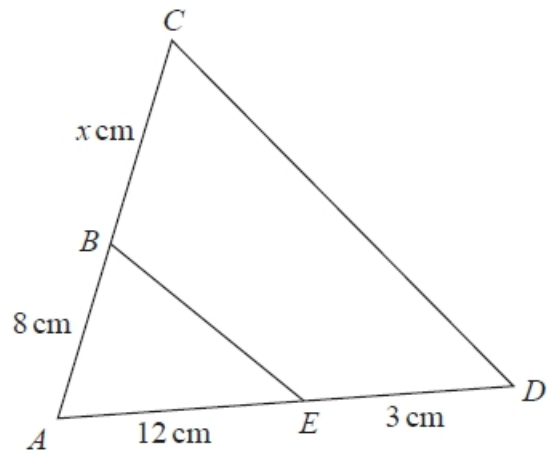
(b) Work out the length of BC .

.....cm
(2)

(Total for Question is 4 marks)

Q6.

The two triangles in the diagram are similar.



There are two possible values of x .

Work out each of these values.

State any assumptions you make in your working.

(Total for question = 5 marks)

Q7.

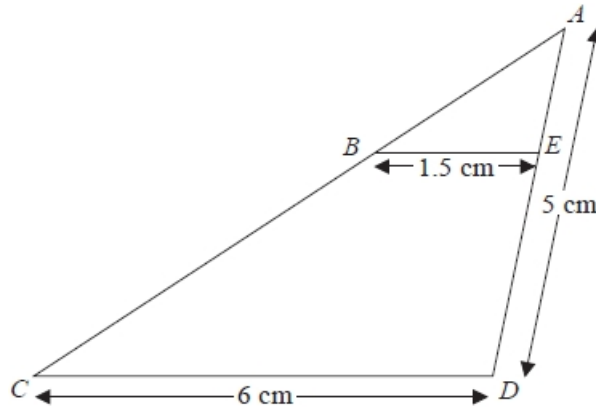


Diagram NOT
accurately drawn

ABC and *AED* are straight lines.

BE and *CD* are parallel.

BE = 1.5 cm.

CD = 6 cm.

AD = 5 cm.

Calculate the length of *ED*.

..... cm

(Total for question = 3 marks)

Q8.

ABC is a triangle.

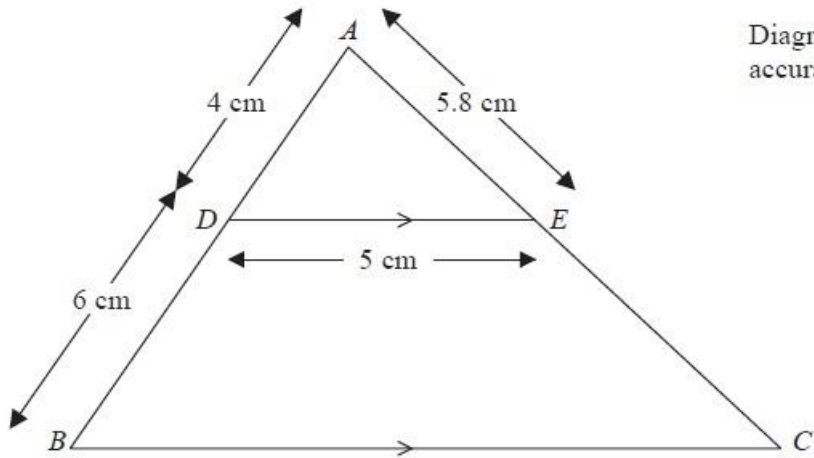


Diagram NOT
accurately drawn

D is a point on AB and E is a point on AC .

DE is parallel to BC .

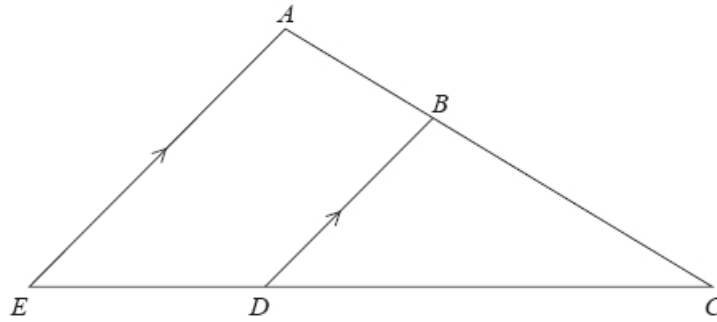
$AD = 4$ cm, $DB = 6$ cm, $DE = 5$ cm, $AE = 5.8$ cm.

Calculate the perimeter of the trapezium $DBCE$.

..... cm

(Total for Question is 4 marks)

Q9.



ABC and *EDC* are straight lines.
EA is parallel to *DB*.

EC = 8.1 cm.

DC = 5.4 cm.

DB = 2.6 cm.

(a) Work out the length of *AE*.

..... cm
(2)

AC = 6.15 cm.

(b) Work out the length of *AB*.

..... cm
(2)

(Total for question = 4 marks)

Q10.

* $ABCD$ and $PQRS$ are two rectangles.

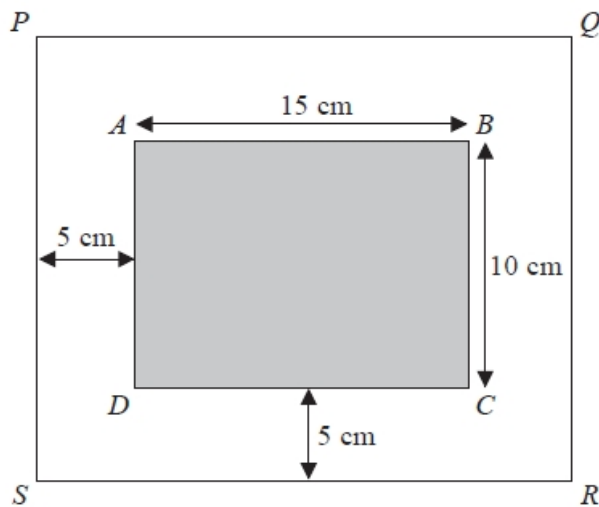


Diagram NOT
accurately drawn

Rectangle $ABCD$ is 15 cm by 10 cm.

There is a space 5 cm wide between rectangle $ABCD$ and rectangle $PQRS$.

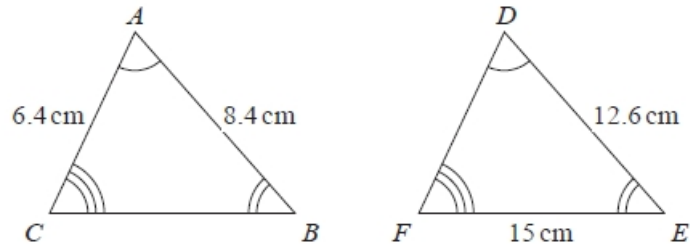
Are rectangle $ABCD$ and rectangle $PQRS$ mathematically similar?

You must show how you got your answer.

(Total for question = 3 marks)

Q11.

Triangle ABC and triangle DEF are similar.



(a) Work out the length of DF .

.....cm
(2)

(b) Work out the length of CB .

.....cm
(2)

(Total for question = 4 marks)