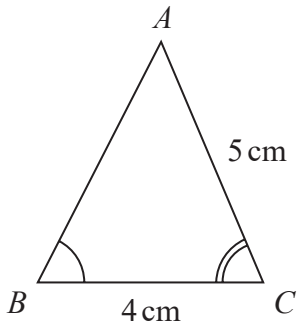
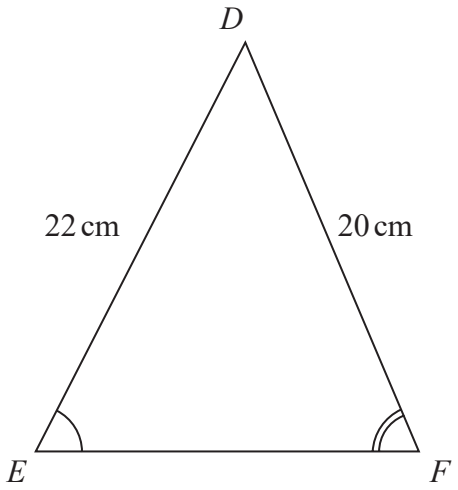
1 Triangle *ABC* and triangle *DEF* are similar.





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

..... cm

(2)

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

..... cm

(2)

(Total for Question 1 is 4 marks)

2 *ABC* and *DEF* are similar triangles.

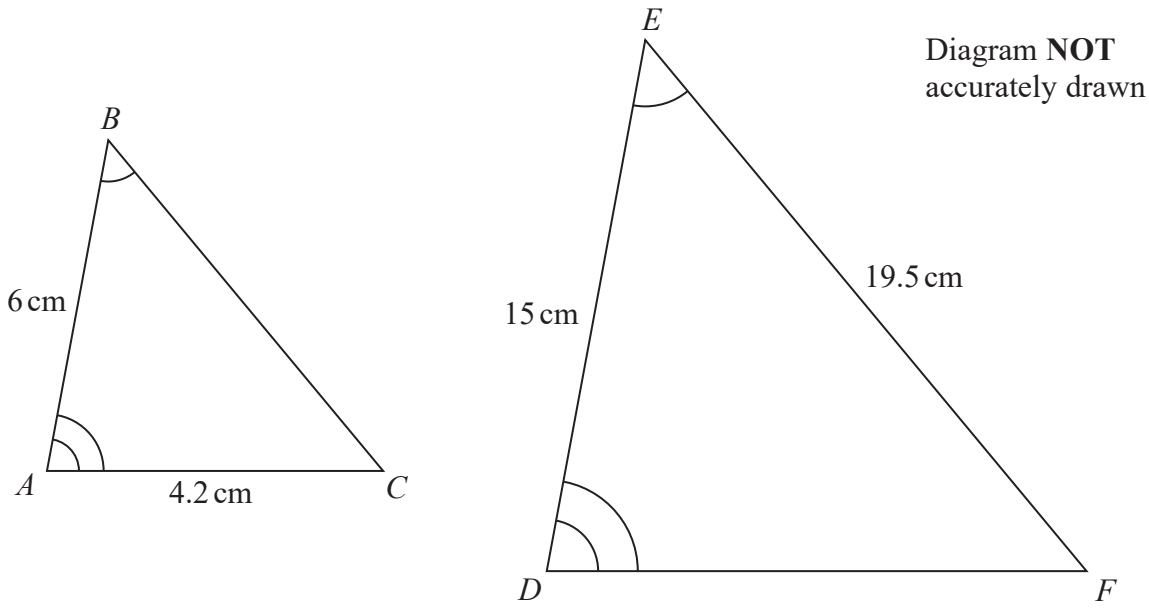


Diagram **NOT** accurately drawn

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

.....cm

(2)

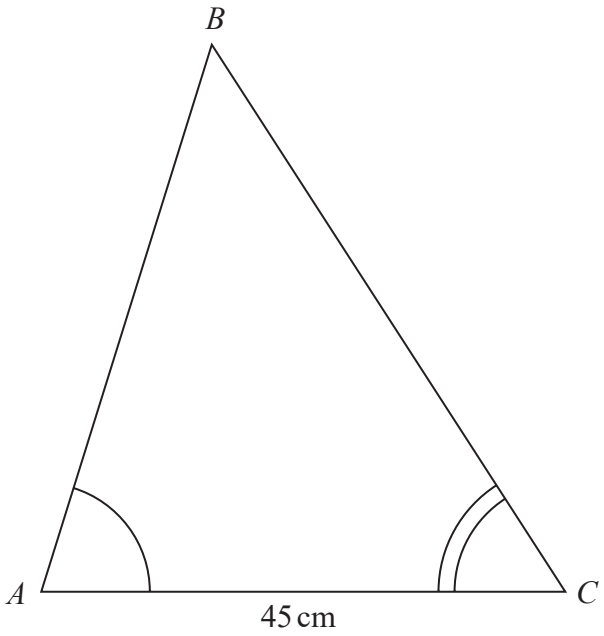
(b) Work out the length of *BC*.

.....cm

(2)

(Total for Question 2 is 4 marks)

3 *ABC* and *DEF* are similar triangles.



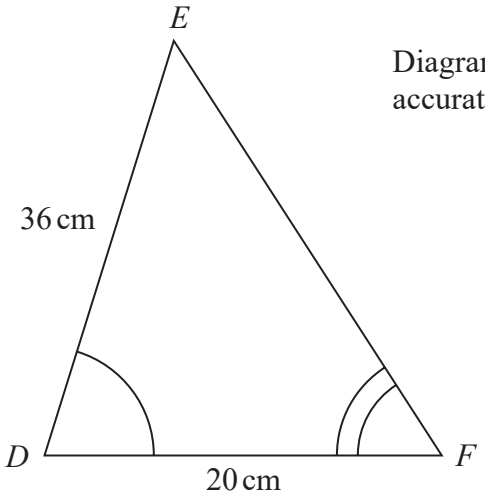


Diagram **NOT** accurately drawn

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

..... cm

(2)

Given that *BC* = 54 cm,

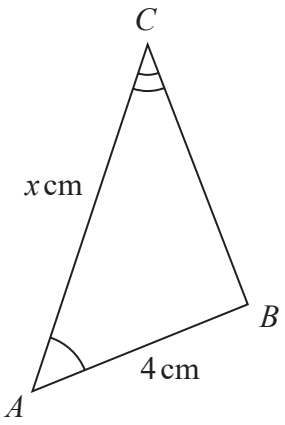
(b) work out the length of *EF*.

..... cm

(2)

(Total for Question 3 is 4 marks)

4



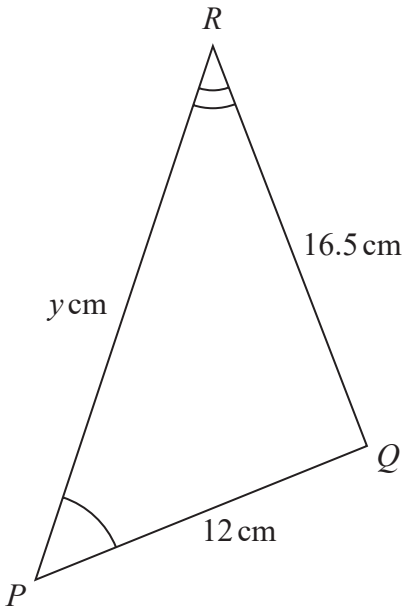


Diagram **NOT** accurately drawn

Triangle ABC is similar to triangle PQR

$AB = 4\,\text{cm}$ $PQ = 12\,\text{cm}$ $RQ = 16.5\,\text{cm}$ $AC = x\,\text{cm}$ $PR = y\,\text{cm}$

(a) Calculate the length of BC

..... cm

(2)

(b) Write down an expression for y in terms of x

$y =$ .....

(1)

(Total for Question 4 is 3 marks)

5 *ABC* and *DEF* are similar triangles.

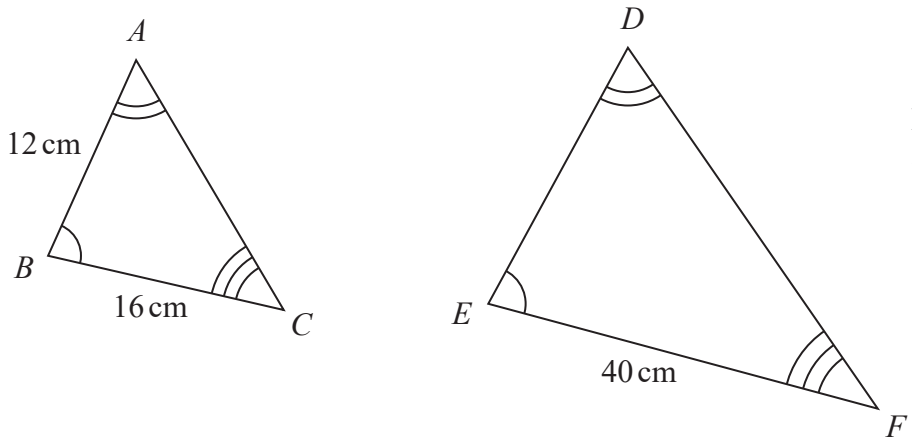


Diagram **NOT** accurately drawn

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

..... cm

(2)

The area of triangle *DEF* is 525 cm^2

(b) Find the area of triangle *DEF* in m^2

..... m^2

(2)

(Total for Question 5 is 4 marks)

6

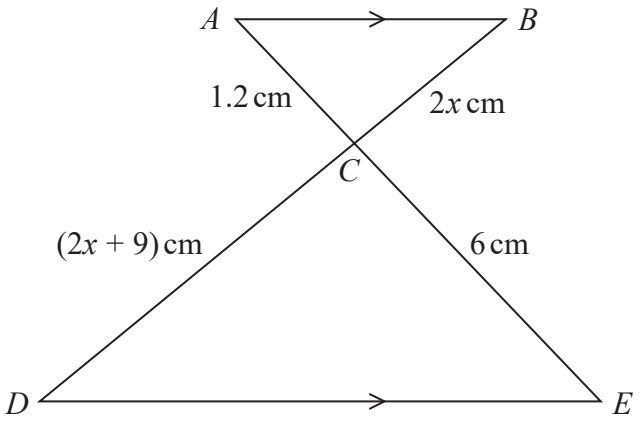


Diagram **NOT** accurately drawn

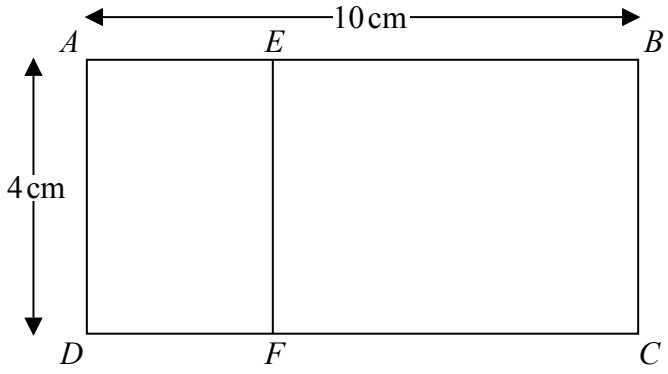
ACE and *BCD* are straight lines.
AB is parallel to *DE*

Work out the value of x

$x =$ .....

(Total for Question 6 is 3 marks)

7 Rectangle *ABCD* is mathematically similar to rectangle *DAEF*.



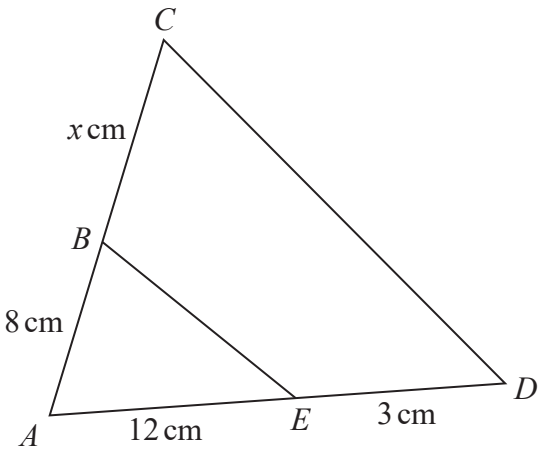
AB = 10 cm.
AD = 4 cm.

Work out the area of rectangle *DAEF*.

..... cm^2

(Total for Question 7 is 3 marks)

8 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 8 is 5 marks)