Calculate sides in right-angled triangles using Pythagoras' Theorem

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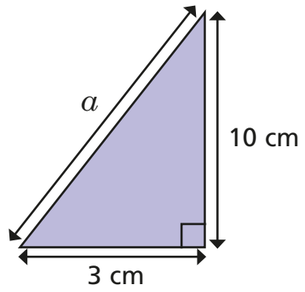
1 Use Pythagoras' Theorem to find the unknown lengths.

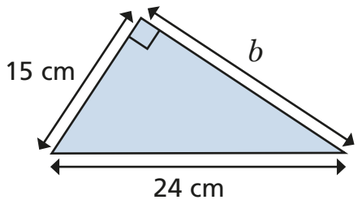
Give your answers to 1 decimal place.

a)



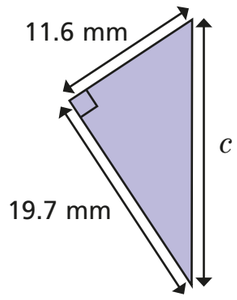
$a =$ ☐ cm

b)



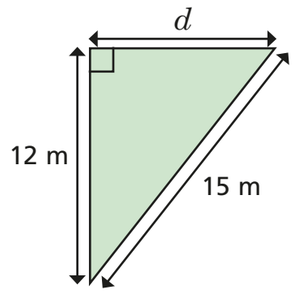
$b =$ ☐ cm

c)



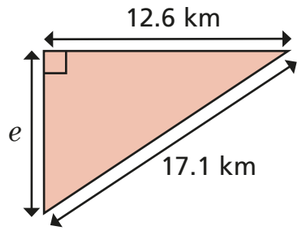
$c =$ ☐ mm

d)



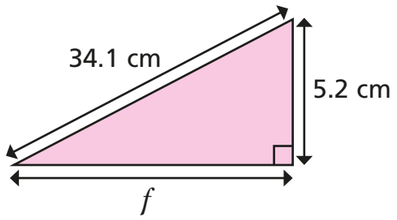
$d =$ ☐ m

e)



$e =$ ☐ km

f)



$f =$ ☐ cm

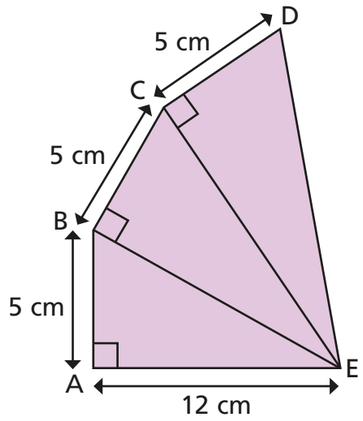
2 A right-angled triangle has sides with lengths of 12 cm and 13 cm.

Find the two possible lengths of the third side.

☐ and ☐

3 This shape is made from three right-angled triangles.

Work out the length of DE.



☐

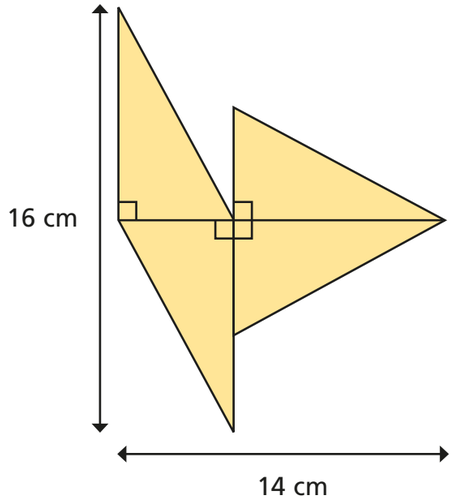
4 The minute hand of the Great Clock of Westminster is 14 feet long.
Its hour hand is 9 feet long.

At 9 o'clock, how far is the tip of the hour hand from the tip of the minute hand?

Give your answer to the nearest foot.

☐ feet

5 A logo is made of four congruent right-angled triangles.

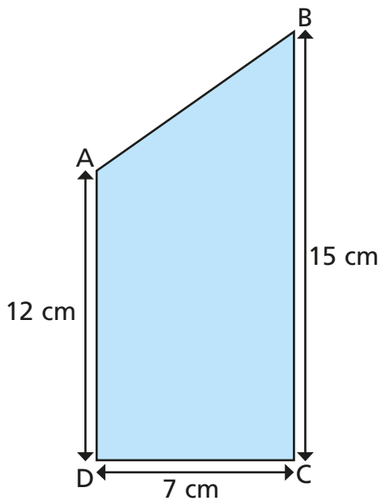


Work out the perimeter of the logo.

6 ABCD is a trapezium.

Find the perimeter of the trapezium.

Give your answer to 1 decimal place.



7 Points P and Q have the coordinates (–12, –19) and (23, 37).

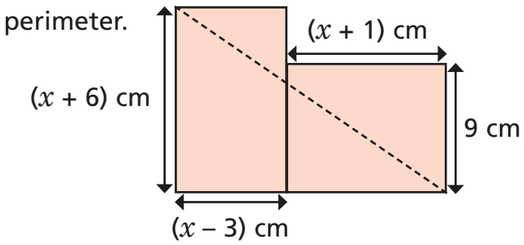
Work out the length of the line segment PQ.

units

8 Two rectangles are joined to form a compound shape.

The two rectangles have the same perimeter.

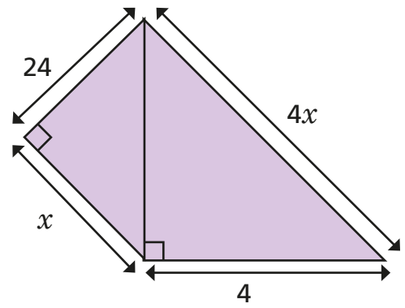
a) Work out the perimeter of the compound shape.



b) Work out the length of the diagonal marked.

9 The diagram shows two right-angled triangles.

Form and solve an equation to find the value of x.



$x =$