

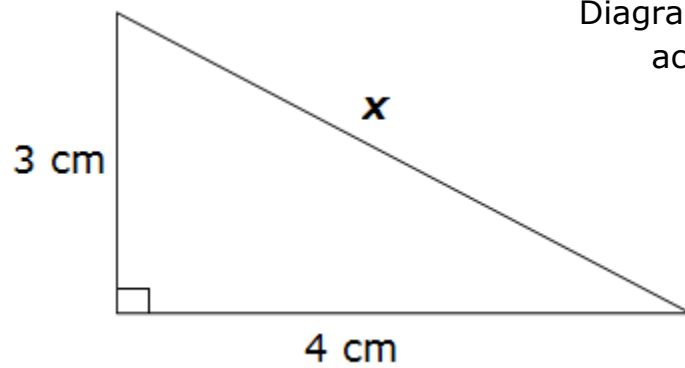


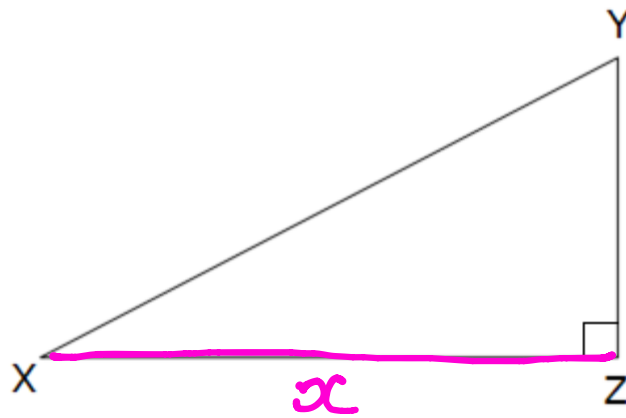
Diagram not drawn accurately

Calculate x.

$$\begin{aligned} x^2 &= 3^2 + 4^2 \\ &= 9 + 16 \\ &= 25 \\ x &= \sqrt{25} = 5 \text{ cm} \end{aligned}$$

The most common mistake is to forget this step

(3)



XYZ is a right-angle triangle.

$$XY = 26 \text{ cm}$$

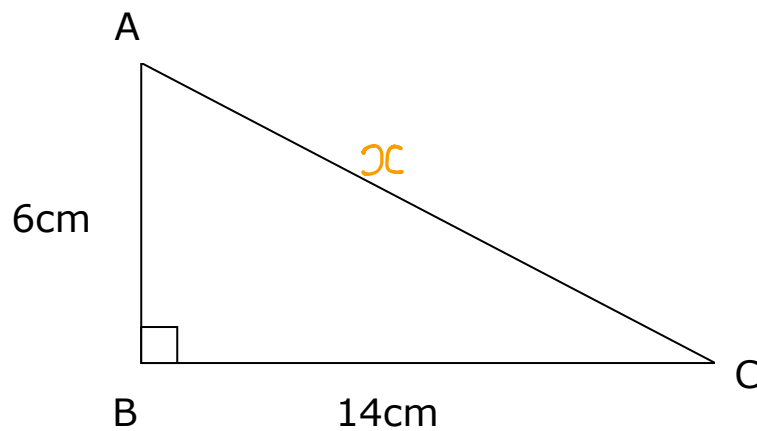
$$YZ = 19 \text{ cm.}$$

Find XZ correct to 3 significant figures.

$$\begin{aligned} x^2 &= 26^2 - 19^2 \\ &= 676 - 361 \\ &= 315 \end{aligned}$$

$$\begin{aligned} x &= \sqrt{315} \\ &= 17.74823935 \\ &= \underline{\underline{17.7 \text{ cm}}} \end{aligned}$$

(3)



ABC is a right-angle triangle.

$$AB = 6\text{cm}$$

$$BC = 14\text{cm}$$

(a) Work out the area of the triangle ABC .

*don't just assume
it's Pythagoras... read
the question!*

$$= \frac{6 \times 14}{2} = \frac{84}{2} = 42$$

$$\underline{42} \text{ cm}^2$$

(2)

(b) Calculate the length of AC .

Give your answer correct to 2 decimal places.

$$\begin{aligned} x^2 &= 6^2 + 14^2 \\ &= 36 + 196 \\ &= 232 \end{aligned}$$

$$\begin{aligned} x &= \sqrt{232} \\ &= 17.23154621 \end{aligned}$$

$$\underline{17.23} \text{ cm}$$

(3)

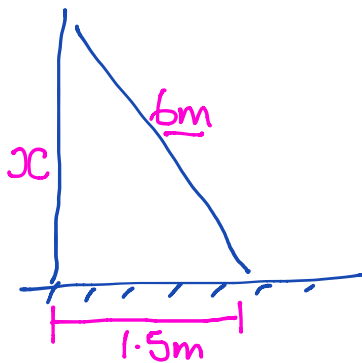
A ladder is 6m long.

The ladder is placed on horizontal ground, resting against a vertical wall.

The instructions for using the ladder say that the bottom of the ladder must not be closer than 1.5m from the bottom of the wall.

How far up the wall can the ladder reach?

Give your answer correct to 1 decimal place.



$$\begin{aligned} x^2 &= 6^2 - 1.5^2 \\ &= 36 - 2.25 \\ &= 33.75 \end{aligned}$$

$$\begin{aligned} x &= \sqrt{33.75} \\ &= 5.809475019 \\ &= \underline{\underline{5.8\text{m}}} \end{aligned}$$

(3)