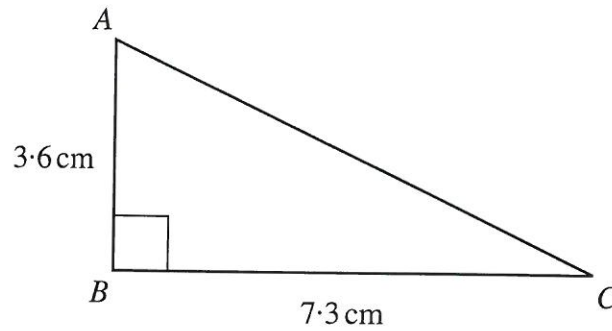


# Pythagoras' Theorem

①



*Diagram not drawn to scale.*

Find the length of AC.  
Give your answer to an appropriate degree of accuracy.

.....

.....

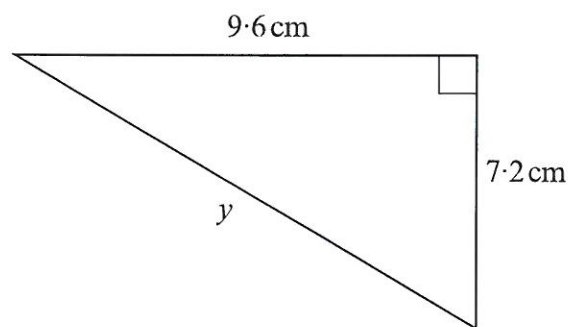
.....

.....

.....

[4]

②



*Diagram not drawn to scale*

Calculate the length of the side marked  $y$ .

.....

.....

.....

.....

.....

[3]

3

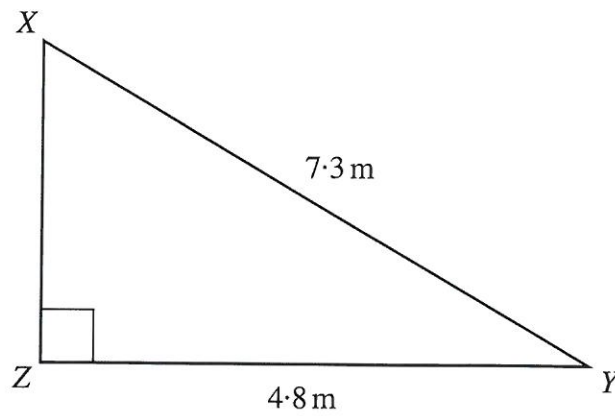


Diagram not drawn to scale.

XYZ is a right-angled triangle in which  $XY = 7.3$  m and  $ZY = 4.8$  m.  
Calculate the length of XZ.

.....

.....

.....

.....

[3]

4

A ladder which is 7.6 m long is placed against a vertical wall. The foot of the ladder rests on a horizontal floor and is 2.4 m away from the bottom of the wall. Calculate how far the top of the ladder is above the floor.

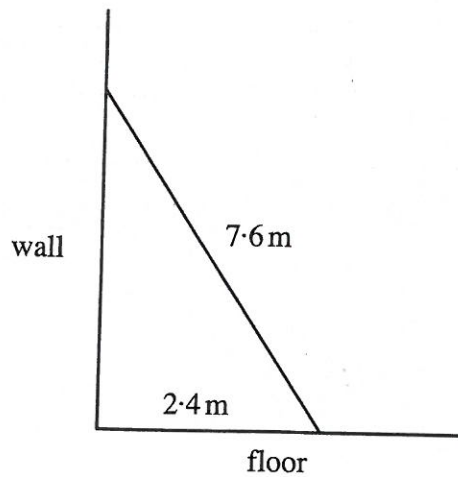


Diagram not drawn to scale.

.....

.....

.....

.....

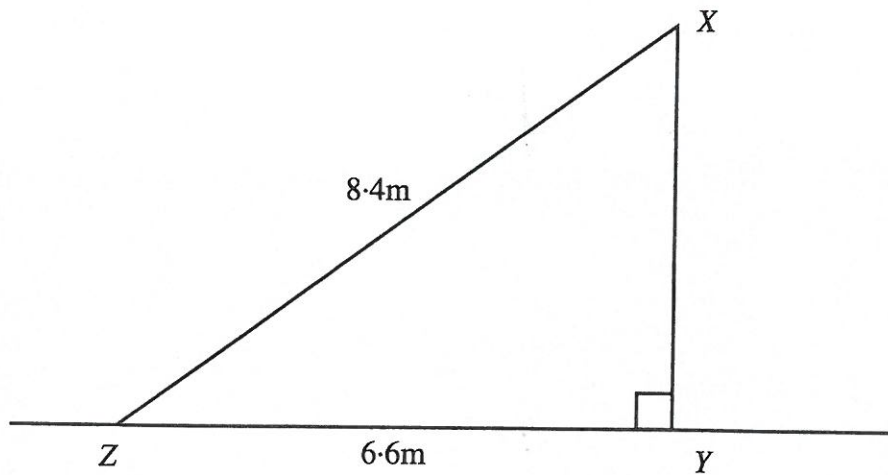
.....

.....

[3]

5

One end of a piece of rope 8.4 m long is tied to the top of a vertical pole  $XY$  and the other end is tied to the ground at the point  $Z$  which is at a horizontal distance of 6.6 m from the foot of the pole. Calculate the height of the pole.




---



---

6

The diameter of a circle,  $AB$ , is of length 8.7 cm,  $BC$  has length 5.4 cm and  $\hat{ACB} = 90^\circ$ . Calculate the length of  $AC$ .

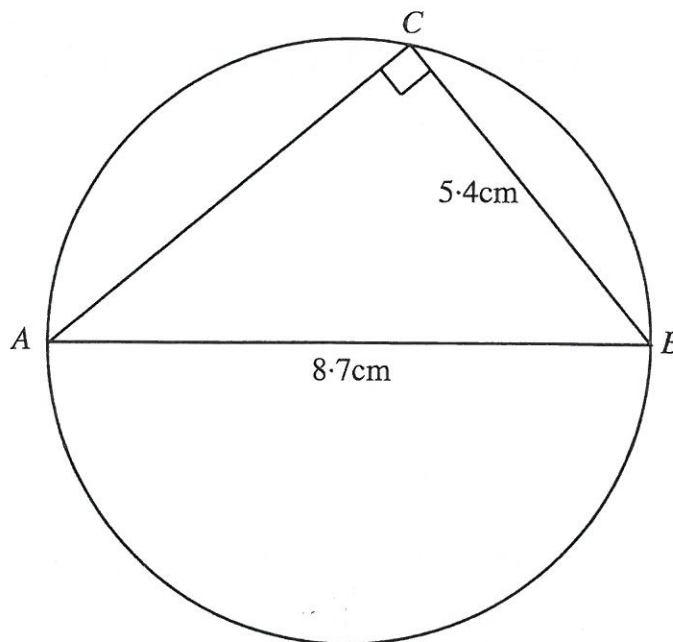


Diagram not drawn to scale.

---



---



---

7

A prism has a uniform cross-section in the shape of a right-angled triangle  $ABC$ .

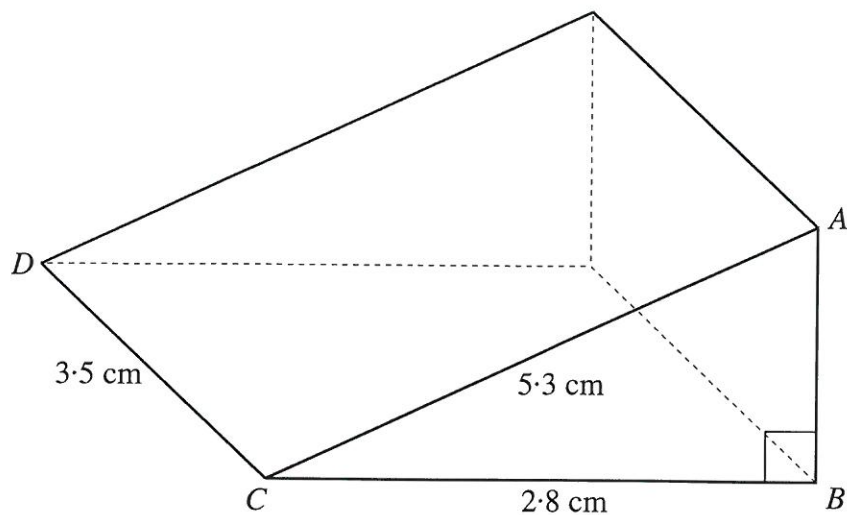


Diagram not drawn to scale.

Given that  $\hat{ABC} = 90^\circ$ ,  $CB = 2.8$  cm,  $CA = 5.3$  cm and that the length,  $CD$ , of the prism is  $3.5$  cm, calculate the volume of the prism.

.....

.....

.....

.....

.....

.....

6

8

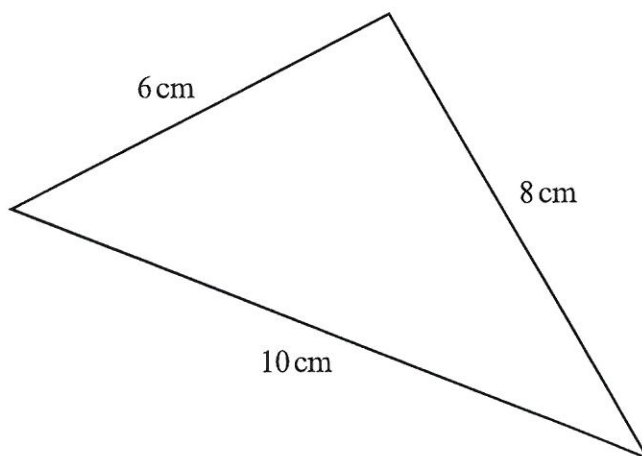


Diagram not drawn to scale

Show, by calculation, that the triangle drawn above is a right-angled triangle.

.....

.....

.....

.....

.....