



EXAMPLE

- a. Determine the length of hypotenuse c in the given right triangle.

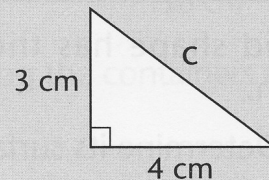
$$c^2 = 3^2 + 4^2 \text{ (Pythagorean Theorem)}$$

$$= 9 + 16$$

$$= 25$$

$$c = \sqrt{25} = 5$$

Answer : The length of hypotenuse c is 5 cm.



- b. Determine the length of side a in the given right triangle.
(correct to 0.1 m)

$$10^2 = a^2 + 4^2 \text{ (Pythagorean Theorem)}$$

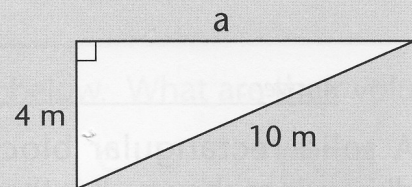
$$a^2 = 10^2 - 4^2$$

$$= 100 - 16$$

$$= 84$$

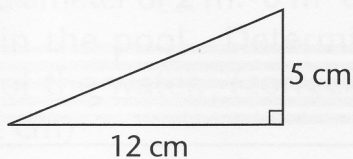
$$a = \sqrt{84} = 9.2$$

Answer : The length of side a is 9.2 m.



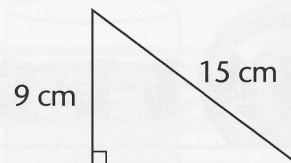
Solve the problems. Show your work. Write the answers to 2 decimal places.

- ① Determine the perimeter of a right triangle having 2 sides of 5 cm and 12 cm.



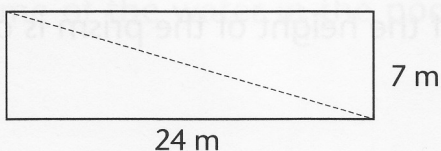
Answer : _____

- ③ Determine the length of the missing side in the given right triangle.



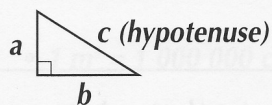
Answer : _____

- ② Determine the length of a diagonal path across a rectangular field having dimensions 7 m x 24 m.



Answer : _____

Pythagorean Theorem



$$c^2 = a^2 + b^2 \rightarrow c = \sqrt{a^2 + b^2}$$

$$a^2 = c^2 - b^2 \rightarrow a = \sqrt{c^2 - b^2}$$

$$b^2 = c^2 - a^2 \rightarrow b = \sqrt{c^2 - a^2}$$

Read this first.

