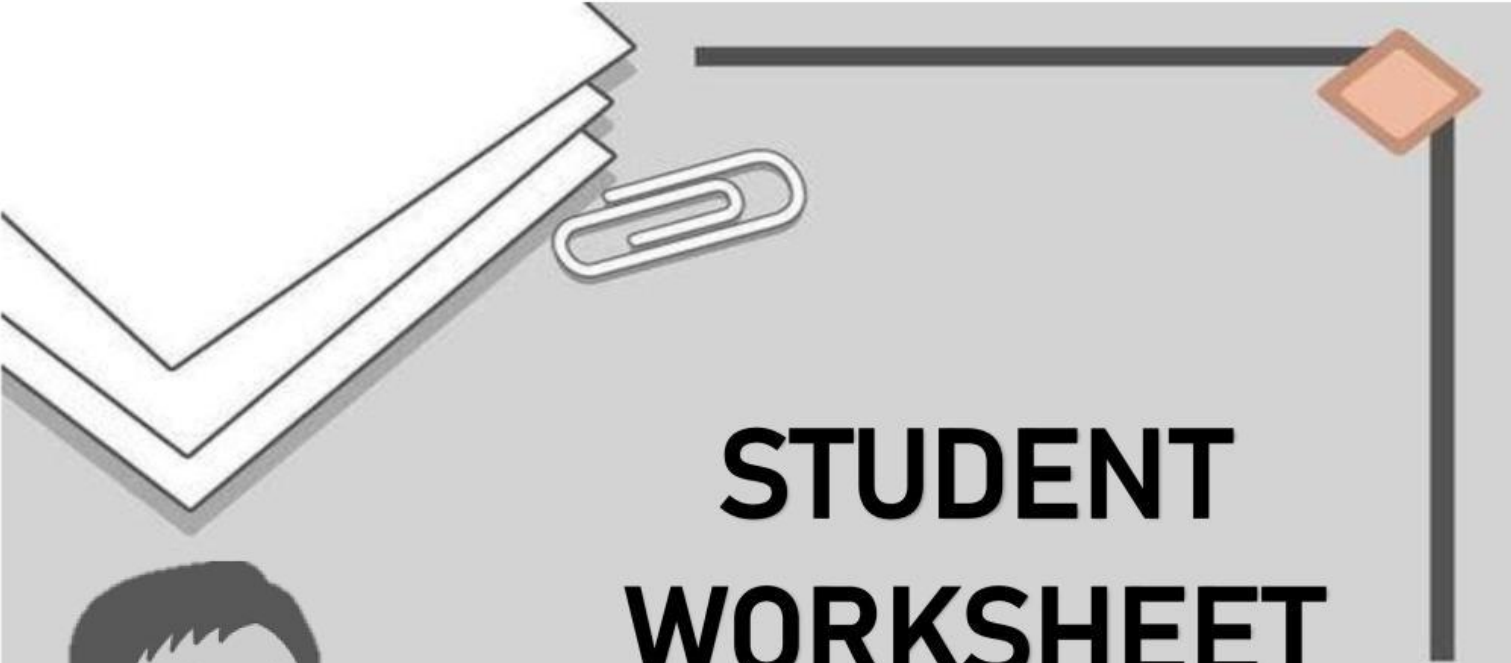
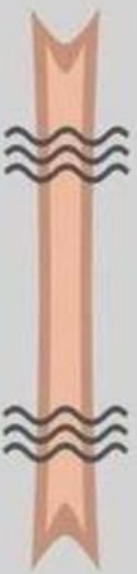




STUDENT WORKSHEET



PHYTAGOREAN THEOREM

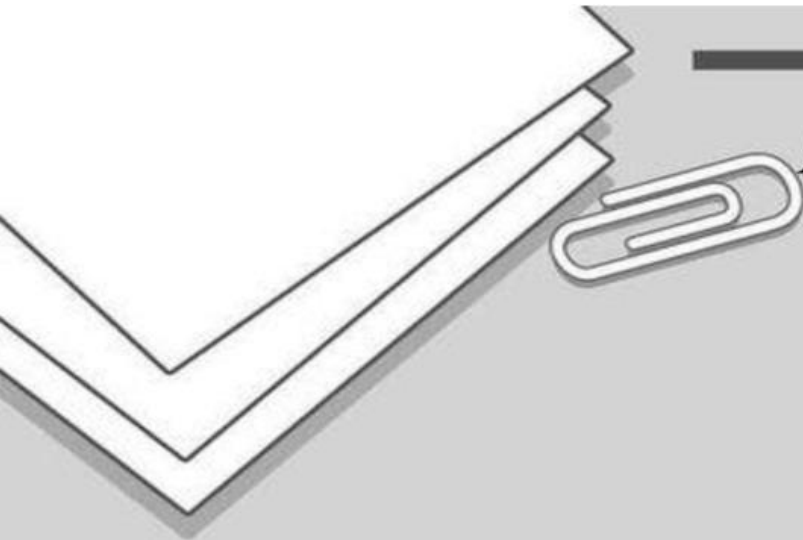


NAME :

GRADE :

NO :





INTRODUCTION

INDICATOR

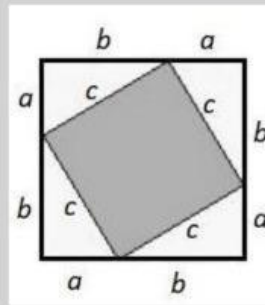
- a. Demonstrating the Pythagorean Theorem
 - b. Using the Pythagorean Theorem to find the length of a side in a right triangle.
 - c. Working out problem based on the Pythagorean Theorem.
- 

The Purpose

- a. Student will be able to demonstrating the Pythagorean Theorem
- b. Student will be able to using the Pythagorean Theorem to find the length of a side in a right triangle
- c. Student will be able to working out problem based on the Pythagorean Theorem



Pythagorean Theorem

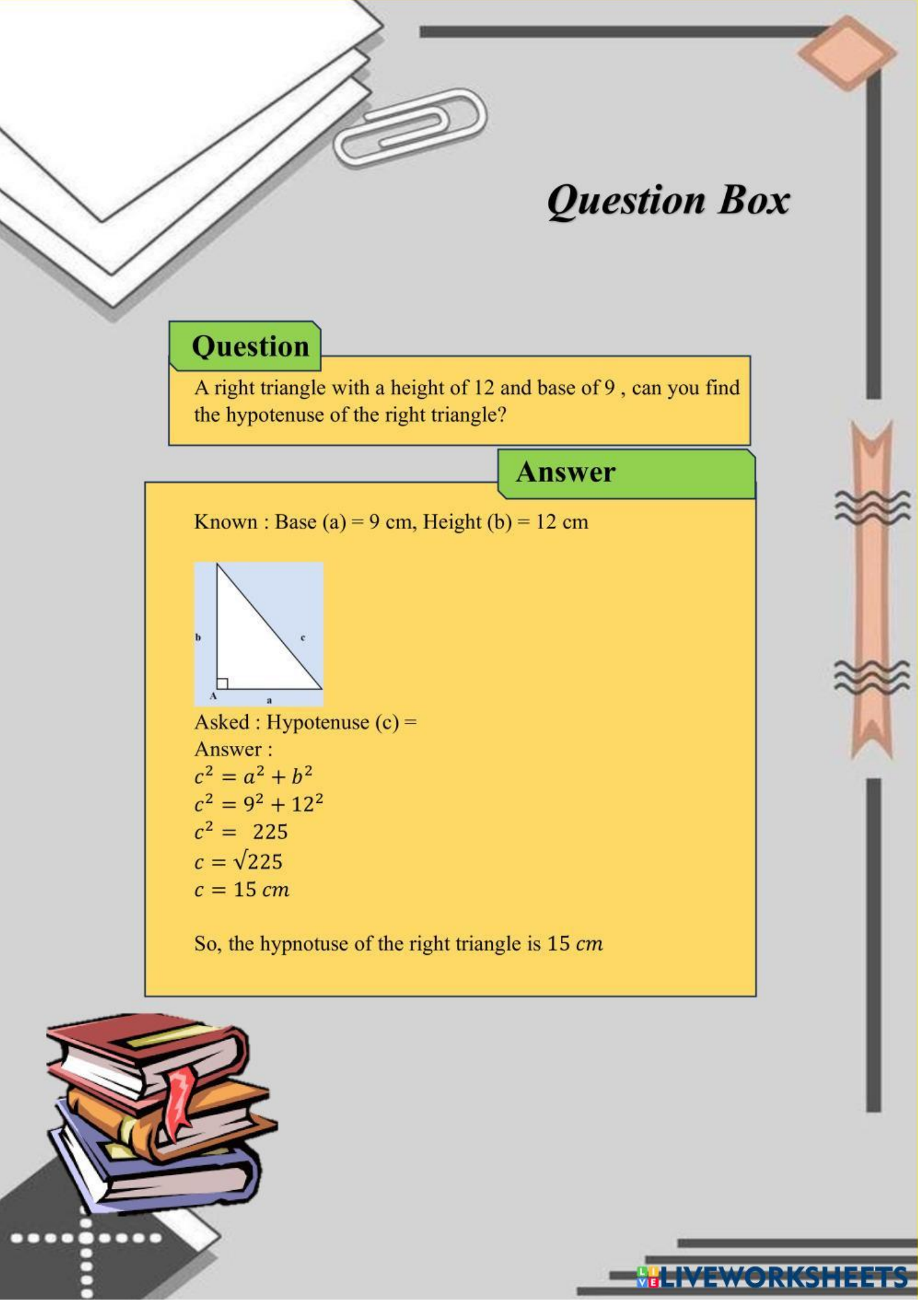


Figures 1

Lets consider a right-angled triangle with sides of length a , b and the hypotenuse is c as show in the first image. And from the triangle we can create a larger square by arranging 4 of these triangles, with a side length of $a+b$ and area of $(a+b)^2$, inside the larger square, a small square is also formed with a side length c and the area is c^2 .

So from the first pictured we get the hypnotused of a right triangle is :

$$c^2 = a^2 + b^2$$



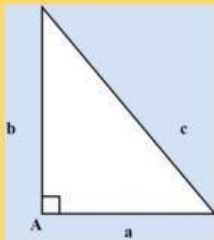
Question Box

Question

A right triangle with a height of 12 and base of 9 , can you find the hypotenuse of the right triangle?

Answer

Known : Base (a) = 9 cm, Height (b) = 12 cm



Asked : Hypotenuse (c) =

Answer :

$$c^2 = a^2 + b^2$$

$$c^2 = 9^2 + 12^2$$

$$c^2 = 225$$

$$c = \sqrt{225}$$

$$c = 15 \text{ cm}$$

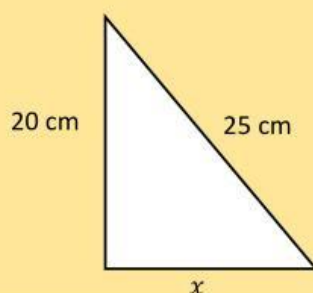
So, the hypotenuse of the right triangle is 15 cm



Question Box

QUESTION

With the Pythagorean Theorem , find “x” from this right triangle :



SOLVED

solved :

$$x^2 = 25^2 - 20^2$$

$$x^2 = 625 - 400$$

$$x^2 = 225$$

$$x = \sqrt{225}$$

$$x = 15$$

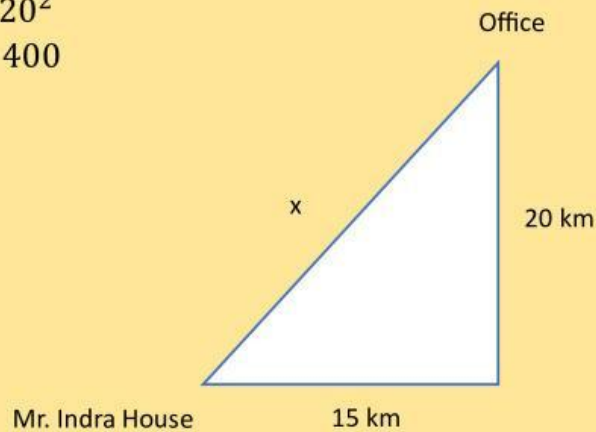


Question Box

Mr Indra leaves the house for the office riding his motorbike. From the house, Mr Indra goes east as far as 15 km. and then towards the north as far as 20 km. What is the shortest distance between Mr. Indra's house to his office?

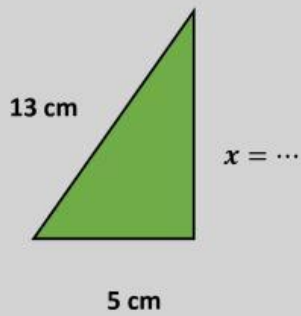
ANSWER

$$\begin{aligned}x^2 &= 15^2 + 20^2 \\x^2 &= 225 + 400 \\x^2 &= 625 \\x &= 25\end{aligned}$$

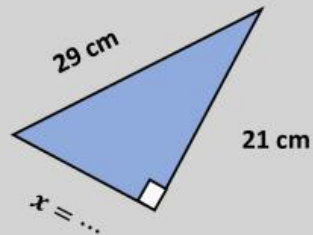


Question Box

- Find the "x" from the right triangle, with Pythagorean Theorem.
(Drag and drop the right answered)

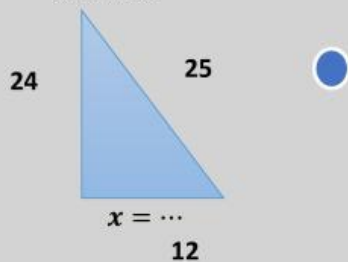


$x = 20$

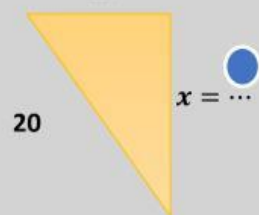


$x = 15$

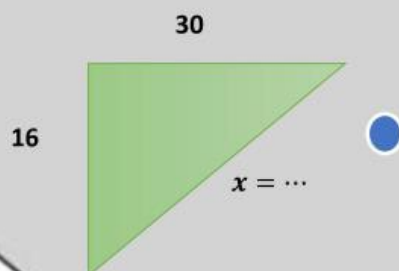
- Draw a line from the right to left so that it becomes the correct answer.



16



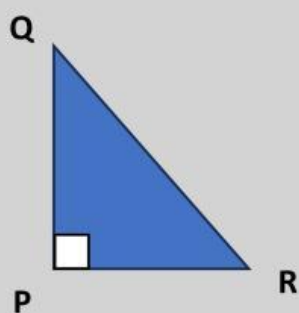
34



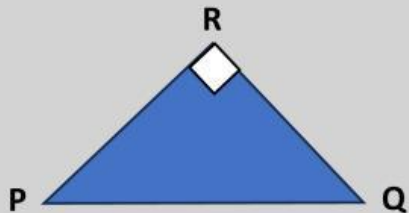
7

Question Box

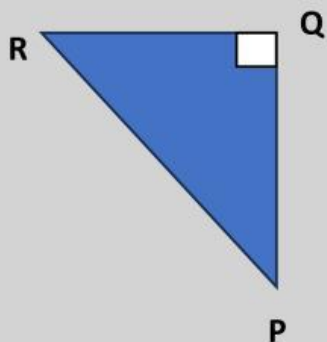
3. Draw the line according to the correct pair.



$$PQ^2 = PR^2 + RQ^2$$



$$PR^2 = PQ^2 + QR^2$$



$$QR^2 = PQ^2 + PR^2$$

