STUDENT WORKSHEET

PHYTAGOREAN THEOREM

NAME :

GRADE :

NO :

INTRODUCTION

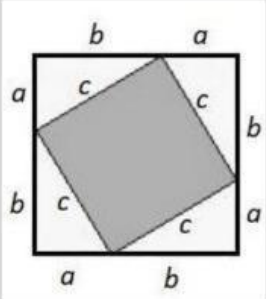
INDICATOR

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

Phytagorean 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 :

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

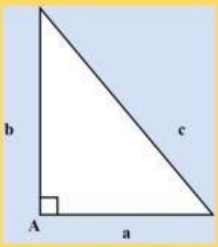
Question Box

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 :

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

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

$c^2 = \ 225$

$c = \sqrt{225}$

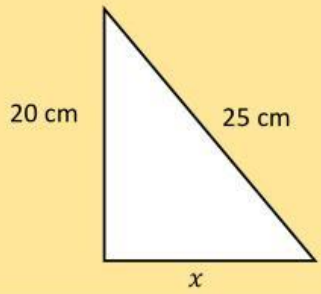
$c = 15\ cm$

So, the hypnotuse of the right triangle is $15\ cm$

Question Box

QUESTION

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



SOLVED

solved :

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

$x^2 = 625 - 400$

$x^2 = 225$

$x = \sqrt{225}$

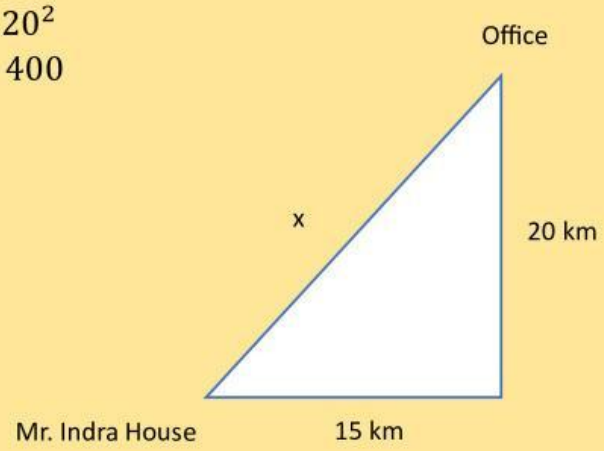
$x = 15$

Question Box

Mr Indra leaves the house for the office riding his motorbike. From the hause, mr indra go to east as far as 15 km. and then towards the north as fas as 20 km.what is the shortes distance between Mr. Indra hause to his office?

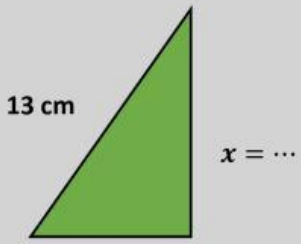
ANSWER

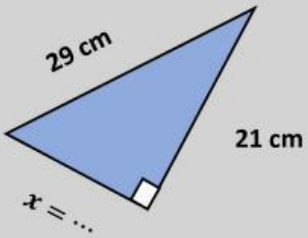
$x^2 = 15^2 + 20^2$
$x^2 = 225 + 400$
$x^2 = 625$
$x = 25$



Question Box

1. Find the “x” from the right triangle, with Pythagorean Theorem. (Drag and drop the right answered)

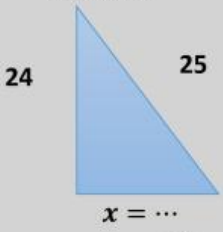




$x = 20$

$x = 15$

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



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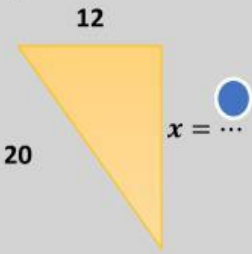

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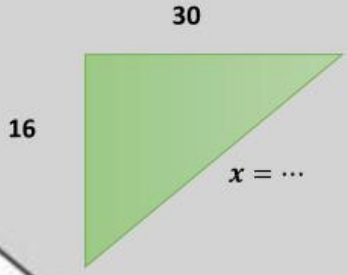

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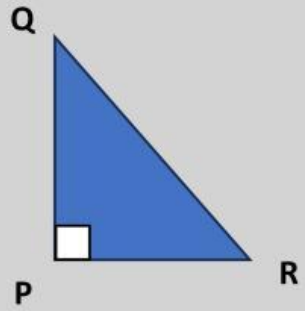
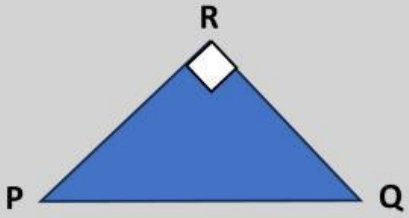
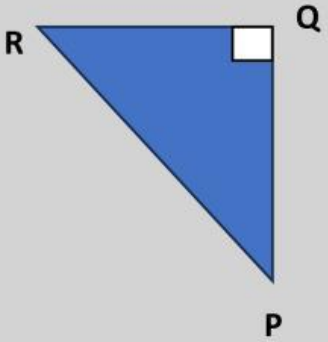
Question Box

3. Draw the line according to the correct pair.







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

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

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