Ms. Lo
Math 8
Name: $\qquad$

## The Pythagorean Theorem - Lesson 2

## 1. Labelling Triangles

Please label the hypotenuse and the legs of the following right triangles with $a, b$, and $c$.


## 2. The Pythagorean Theorem

In a right triangle, the $\qquad$ of the areas of the squares attached to the $\qquad$ equals the area of the square attached to the $\qquad$ .

## Why is this useful?

The $\qquad$
$\qquad$ is one of math's oldest and most famous
formulas. This formula allows us to determine any missing side length of a $\qquad$ triangle provided we know $\qquad$ side lengths.

The formula is $\qquad$ . It can be rearranged in two ways:

1. $\qquad$
2. $\qquad$


For the unknown squares, can you find the area and side length of each square?
a)

b)


## 3. Examples: Using the Pythagorean Theorem to Find Missing Lengths

Find the unknown length. Represent your answer as a square root and a decimal to one decimal place.
a)

b)


## 4. Practice: Find the Missing Side

a)

b)


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