Date: 3/17/2016 Lesson number: P.T. #1

Lesson Title: Pythagorean Theorem

Learning Target: Apply the Pythagorean Theorem to determine the unknown side lengths of a right triangle.

Success Criteria:
1. I can use the Pythagorean Theorem to find the unknown side lengths of right triangles.

IN:
1) How do you "undo" a perfect square?
2) Name the square root of 144, 100, and 49.

before

after

Questions:

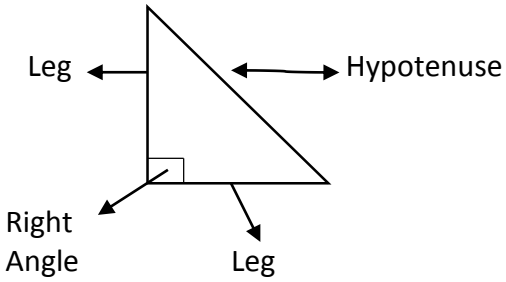
Notes:

Pythagorean Theorem:

- Tells us how the sides of a right triangle are related to one another.
- Used to find the missing side length of a right triangle.

Right Triangles:

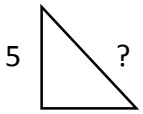
- A triangle containing a right angle.
- The legs are the two sides that come together to create the right angle.
- Hypotenuse is the longest side of the triangle and is across from the right angle.



The Rule: $a^2 + b^2 = c^2$

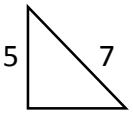
- The legs are always labeled *a* and *b*.
- The hypotenuse is always labeled *c*.
- Use the square root ($\sqrt{\ }$) to find the value of a, b, or c

Finding "c": a=5, b=4, c=?



$5^2 + 4^2 = c^2$
$25 + 16 = c^2$
$41 = c^2$
$\sqrt{41 = c^2}$
C = 6.40

Finding "a" or "b", when "c" is given:



$5^2 + b^2 = 7^2$
$25 + b^2 = 49$
-25 -25

$b^2 = 24$
$\sqrt{24 = b^2}$
B = 4.90

Summary: _____

Out: Explain, in words, how to find the unknown side length of a right triangle given the two legs. Give an example.

HW: 1) P.T. WS (classwork)
2) IMB Entry (HW)