Warm-Up November 8, 2016

Find the Benchmarks!

a) $\sqrt{36}$ $\sqrt{42.6}$ $\sqrt{49}$

6 7

b) $\sqrt{\frac{23}{46}} \div \sqrt{\frac{25}{49}}$ (Benchmarks)

about $\frac{5}{7}$

c) $\sqrt{0.85}$

$\sqrt{\frac{81}{100}}$ $\sqrt{\frac{85}{100}}$ $\sqrt{\frac{100}{100}}$

9/10 10/10

d) $\sqrt{0.7} \div \sqrt{\frac{7}{10}}$

$\sqrt{\frac{64}{100}}$ $\sqrt{\frac{70}{100}}$ $\sqrt{\frac{81}{100}}$

8/10 9/10

e) $\sqrt{53.5}$

$\sqrt{49}$ $\sqrt{64}$

7 8

f) $\sqrt{\frac{8}{10}}$

$\sqrt{\frac{64}{100}}$ $\sqrt{\frac{80}{100}}$ $\sqrt{\frac{1}{1}}$

8/10 9/10

g) $\sqrt{\frac{7}{13}} \div \sqrt{\frac{9}{16}}$

about $\frac{3}{4}$

h) $\sqrt{\frac{795}{10}}$

$\sqrt{7950}$ / 100

$\sqrt{64}$ $\sqrt{79.5}$ $\sqrt{81}$

8 9

i) $\sqrt{\frac{95}{10}}$

$\sqrt{9}$ $\sqrt{9.5}$ $\sqrt{16}$

3 4

Pythagorean Theorem

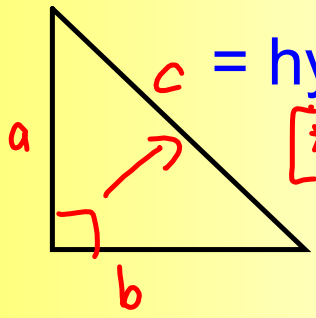
"In any right triangle, the square of the length of the hypotenuse is equal to the sum of the squares of the lengths of the other two sides."

The side that is opposite the right angle in a right triangle. = hypotenuse.

This relationship can be stated as:

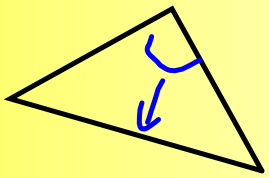
$$c^2 = a^2 + b^2$$

hypotenuse, side, side



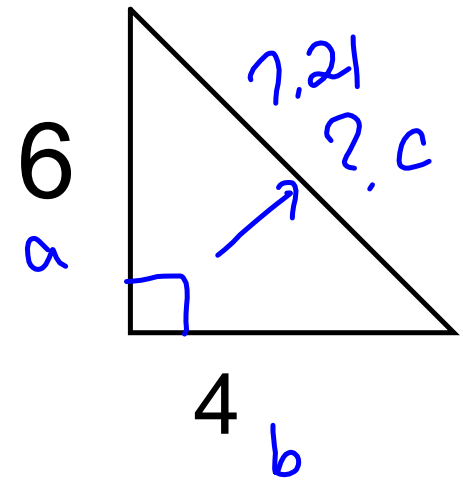
c = hypotenuse.

[* always going to be the longest side *]



Find the length of the hypotenuse

Sketch



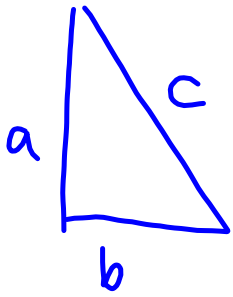
$c^2 = a^2 + b^2$

$c^2 = 6^2 + 4^2$

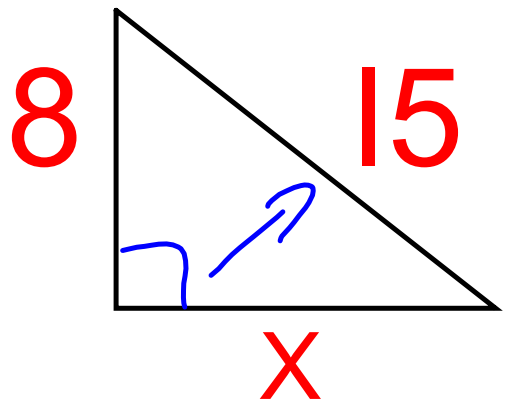
$c^2 = 36 + 16$

$\sqrt{c^2} = \sqrt{52}$

$c = 7.21$



$25 = -+4$



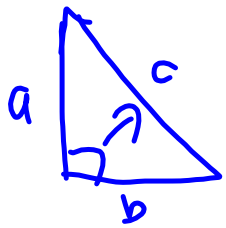
$c^2 = a^2 + b^2$

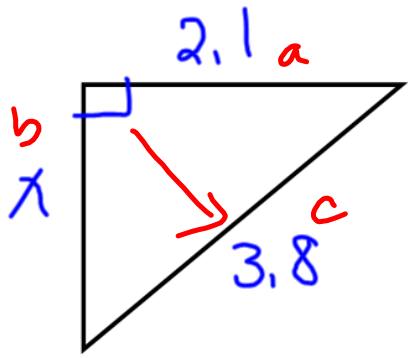
$15^2 = a^2 + 8^2$

$225 = a^2 + 64$

$\sqrt{a^2} = \sqrt{161}$

$a = 12.69$





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

$3.8^2 = 2.1^2 + b^2$

$14.44 = 4.41 + b^2$

$\sqrt{b^2} = \sqrt{10.03}$

$b = 3.17$

Classwork
Homework

1. **Page 19**

13 → sketch 

2. **page 21**

2 [a,b]
3 [a,b,c]
5
8
9 [sketch]

mid Unit Review

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