Name : _____ Score : _____

Teacher : _____ Date : _____

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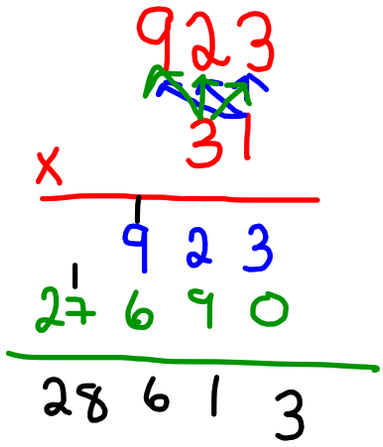
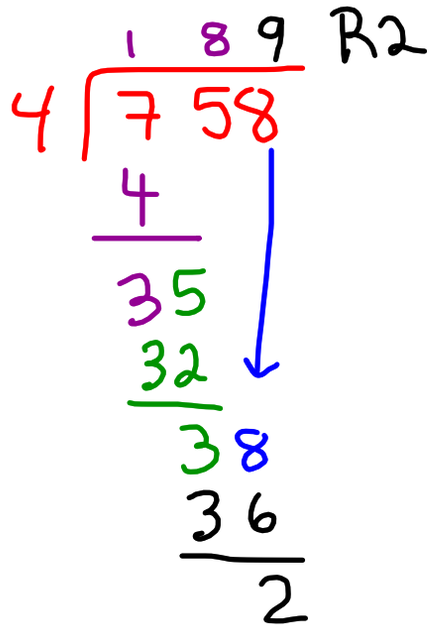
| | | | | | |
|---|---|---|---|---|---|
| 936 + 441 | 769 + 194 | 191 + 153 | 888 + 284 | 782 + 975 | 381 + 466 |
| 509 - 426 | 701 - 247 | 940 - 203 | 757 - 315 | 944 - 116 | 794 - 502 |
| 151 x 91 | 320 x 17 | 552 x 83 | 412 x 70 | 925 x 49 | 205 x 20 |
| $4\overline{)8698}$ | $7\overline{)3250}$ | $7\overline{)6595}$ | $9\overline{)7758}$ | $7\overline{)7693}$ | $4\overline{)3416}$ |


923
31
x
923
1
27690
28613


189 R2
4 | 758
4
35
32
38
36
2


**Without a calculator**

1) Find the perfect square whose square root is

a) 16 b) $\frac{9}{4}$

2)Are the following fractions or decimals perfect squares? Explain

a) 1.69 b) 0.025 c) $\frac{32}{18}$ d) $\frac{1}{3}$


**Without a calculator**

1) Find the perfect square whose square root is $\sqrt{x} = 16$

a) 16

b) $\frac{9}{4}$

$(\sqrt{x})^2 = (16)^2$

$x = 256$

$\sqrt{x} = \frac{9}{4}$

$x = \frac{81}{16}$

2)Are the following fractions or decimals perfect squares? Explain

a) 1.69

$\sqrt{\frac{169}{100}}$

$= \frac{13}{10}$

P.S

b) 0.025

$\sqrt{\frac{25}{1000}}$

$= \frac{5}{?}$

Not P.S

c) $\frac{32}{18}$ ÷2 ÷2

$\sqrt{\frac{16}{9}}$

$= \frac{4}{3}$

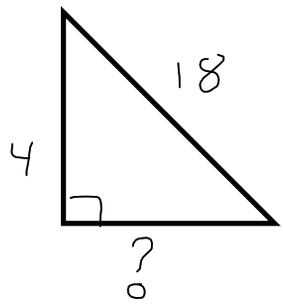
P.S

d) $\sqrt{\frac{1}{3}}$

$= \frac{1}{?}$

Not P.S

- Estimate the Unknowns (show all work)




$b^2 = c^2 - a^2$

$b^2 = 18^2 - 4^2$

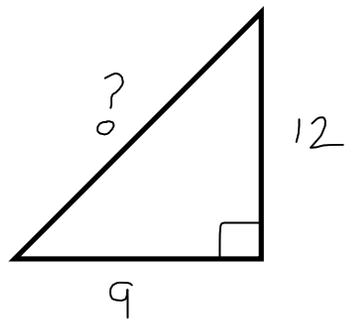
$b^2 = 324 - 16$

$\sqrt{b^2} = \sqrt{308}$

$\sqrt{289}$ $\sqrt{324}$

17 18

17.6




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

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

$c^2 = 81 + 144$

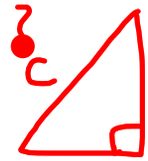
$\sqrt{c^2} = \sqrt{225}$

$c = 15$

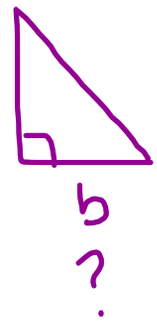
$$\begin{array}{r} 324 \\ -\ 16 \\ \hline \end{array}$$

$$\begin{array}{r} 18 \\ \times\ 18 \\ \hline \end{array}$$

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




leg $b^2 = c^2 - a^2$



# Mid Unit Review

Page: 21
Questions:
2acd,3abcd,4ac,5,6,7, 8ab,9,10, 11ace

Pythagorean Theorem Worksheet

esson 2: Pythagorean Theorem Student Worksheet #2

1) Find the length of the hypotenuse of a right triangle, if one leg is 15 and the other leg is 8.

2) The legs of a right triangle have lengths $a$ and $b$. The hypotenuse has length $c$. Find the unknown length for each triangle.
(a) $b = 18,\ c = 82$ (b) $a = 12,\ c = 37$

3) The measures of three sides of a triangle are 9, 16, and 20. Determine whether the triangle is a right triangle. Explain your answer.

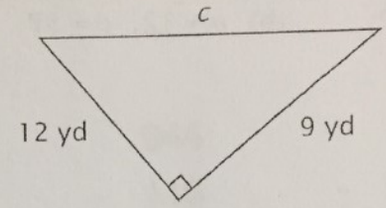
4) The size of a television screen is given by the length of the diagonal of the screen. What size is a television screen that is 21.6 inches wide and 16.2 inches high?

5) If the diagonal of a rectangle measures 60 inches and one side measures 48 inches, what is the length of the other side of the rectangle?

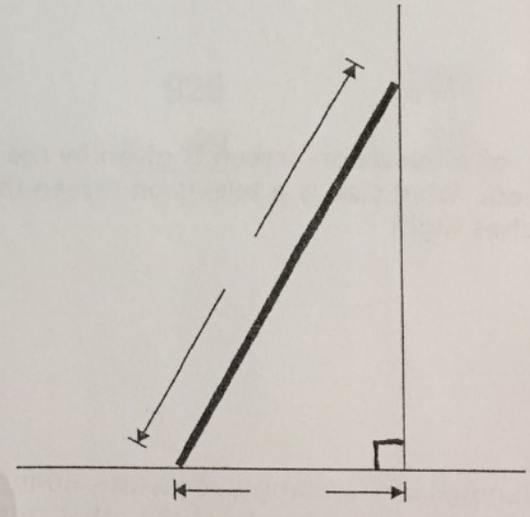
Lesson 2: Pythagorean Theorem Student Worksheet #2

6) A disabled ship radios to shore for help. The Coast Guard determines that the ship is 16 miles east and 43 miles north of the station. What is the direct distance between the ship and the Coast Guard station? Round answer to the nearest whole number.

7) Find the missing side of the triangle.

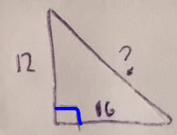



8) Tara leaned a 17 foot ladder against the house. The bottom of the ladder is 8 feet from the house. How high up the side of the house is the top of the ladder?



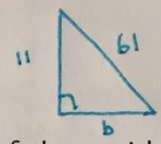
Lesson 2: Pythagorean Theo...

1) If one leg of a right triangle is 12 and the other leg is 16, what is the length of the hypotenuse in this right triangle?



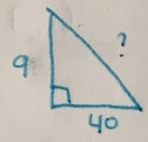

$c^2 = a^2 + b^2$
$c^2 = 16^2 + 12^2$
$c^2 = 256 + 144$
$c^2 = 400$
$c = 20$

2) Find the missing measure if $a$ and $b$ are the legs of the right triangle and $c$ is the hypotenuse, with $a = 11$ and $c = 61$.




$b^2 = c^2 - a^2$
$b^2 = 61^2 - 11^2$
$b^2 = 3721 - 121$
$b^2 = 3600$
$b = 60$

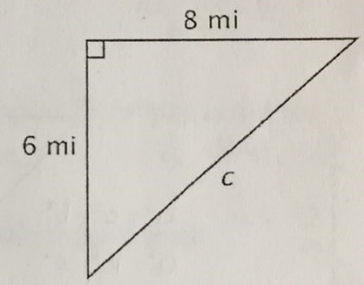
3) The measures of three sides of a triangle are given. Determine whether a triangle with sides 9, 40 and 41 is a right triangle. Explain your answer.




$c^2 = a^2 + b^2$
$c^2 = 9^2 + 40^2$
$c^2 = 81 + 1600$
$c^2 = 1681$
$c = 41$

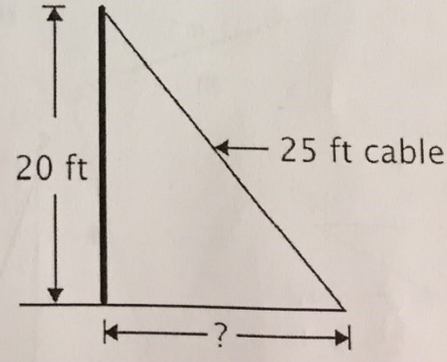
yes it is a right angle triangle

4) Find the missing side of the triangle.




$c^2 = a^2 + b^2$
$c^2 = 8^2 + 6^2$
$c^2 = 64 + 36$
$c^2 = 100$
$c = 10$ mi

A telephone pole support cable attaches to the pole 20 feet high. If the cable is 25 feet long, how far from the bottom of the pole does the cable attach to the ground?




$b^2 = c^2 - a^2$
$b^2 = 25^2 - 20^2$
$b^2 = 625 - 400$
$b^2 = 225$
$b = 15$ ft