Warm Up Math 9
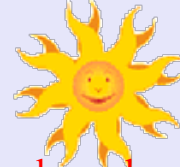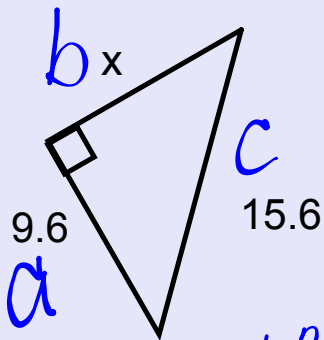
1) Estimate the square root of each of the following using bench marks:

a) $\sqrt{126.8}$

$\sqrt{121}$ $\Big)$ $\sqrt{144}$

$\downarrow$ $\qquad$ $\downarrow$

11 $\quad \sim 11.3$ $\quad 12$

b) $\sqrt{\dfrac{6}{10}} = \sqrt{0.60}$

$\sqrt{0.49}$ $\Big($ $\sqrt{0.64}$

$\downarrow$ $\qquad\qquad$ $\downarrow$

$0.7\_$ $\qquad\quad$ 0.8

~ 0.77

2) Find the missing side

b x

c

9.6 $\quad$ 15.6

a

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

$$(15.6)^2 - (9.6)^2 = b^2$$

$$243.36 - 92.16 = b^2$$

$$\sqrt{151.2} = \sqrt{b^2}$$

$$12.3 \doteq b$$

$\approx$ $\quad$ $\stackrel{\cdot}{=}$

Please Complete
Questions
Pages
18 and 19.

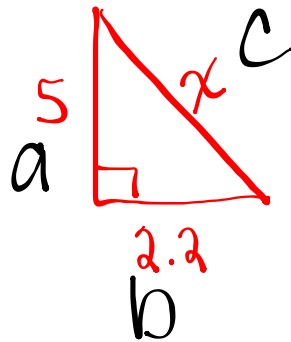ENJOY!

4) a,c,e
5) a,c,e
6a,c
7) a, c, e
9)a, c
10) a, c,e
11) a,b

Another Ladder Question

If the base of a ladder is 2.2 ft away from the wall and the ladder reaches a height of 5 ft up on the wall, how long is the ladder?
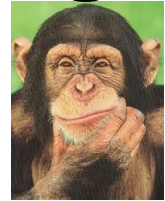
$$a^2 + b^2 = c^2$$
$$5^2 + 2.2^2 = c^2$$
$$25 + 4.84 = c^2$$
$$\sqrt{29.84} = \sqrt{c^2}$$
$$c \doteq 5.5$$

This looks familiar! Scratch my head for me.

Finding a Number with a Square Root between Two Given Numbers.

Find a decimal
that has a square root
between 10 and 11.

Method #1 | Method #2

Identify any decimal first.

Identify the perfect squares first.

10   11

Identify any decimal first.

10   11

↓

10.4

Now square the number.

$(10.4)^2 = 108.16$

100   Choose   121
        any number
        between them...
        and find
        the square root.

$\sqrt{115} \doteq 10.7$

Finding a Number with a Square Root between Two Given Numbers.

Find a decimal
that has a square root
between 17 and 18.

Method #1

Calculator

Identify any decimal first.

17   18

17.5

Now square the number.

$(17.5)^2 = 306.25$

Method #2

Without a Calculator

Identify the perfect squares first.

17   18

289   324

Choose
any number
between them...
and find   like 301.5
the square root.

$\sqrt{301.5} = 17.3637$

Class / Homework

pg 18 - 20

9)a, c
10) a, c,e
11) a,b

12 a c
13 ac
15 (Estimate first then answer the question *Show work*)
19 a c

$\sqrt{4.5}$

$\sqrt{4}$ $\sqrt{9}$