Using the Calculator
**You must always remember to check your calculator. It needs to be in __Degree__ mode in order to calculate the answers correctly.

Let's make sure you can use your calculator. Round your answers to two decimal places.

sin 48° | .74   tan 22° | .40   cos 52° | .62

How would you solve these equations? Cross Multiply

$$\sin 20° = \frac{a}{12}$$ $12(\sin 20°) = a$ $$\cos 80° = \frac{25}{b}$$ $b \cos 80° = 25$

$a = 4.10$ $b = \frac{25}{\cos 80°}$ $b = 143.97$

When given an acute angle measure and a side length, we can use trig to find another side length of the triangle.
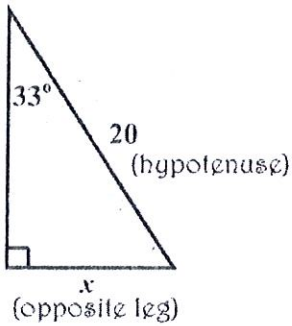
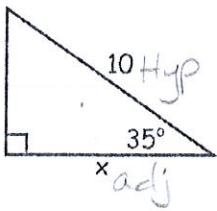Which trig ratio contains "hypotenuse" and "opposite leg"? Sine

Write an equation that would allow us to solve for x. Then, solve for x.

$$\sin 33° = \frac{x}{20}$$

$20 \sin 33 = x$ · $\boxed{x \approx 10.89}$

(33° triangle with hypotenuse 20, opposite leg x)

Let's try another one.

(triangle with 10 Hyp, 35°, x adj)

$$\cos 35 = \frac{x}{10}$$

$10 \cos 35 = x$

$\boxed{x \approx 8.19}$

One More...

(triangle with 6 opp, 48°, x Hyp)
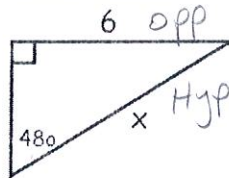
$$\sin 48 = \frac{6}{x}$$

$$x = \frac{6}{\sin 48}$$

$\boxed{x \approx 8.07}$

Work with your neighbor on these problems.
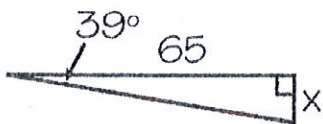
(triangle 39°, 65, x)

$$\tan 39 = \frac{x}{65}$$

$65 \tan 39 = x$

$\boxed{x \approx 52.64}$

(triangle 121, x, 55°)

$$\sin 55 = \frac{121}{x}$$

$x = \frac{121}{\sin 55}$ $\boxed{x \approx 147.71}$

(triangle 42°, 75, x)

$$\sin 42 = \frac{x}{75}$$

$75 \sin 42 = x$

$\boxed{x \approx 50.18}$

(triangle 46, 38°, x)

$$\cos 38 = \frac{x}{46}$$

$46 \cos 38 = x$

$\boxed{x \approx 36.25}$

(triangle 8, x, 52°)

$$\tan 52 = \frac{8}{x}$$
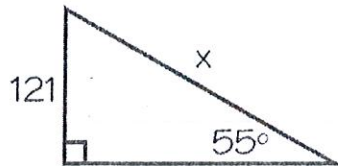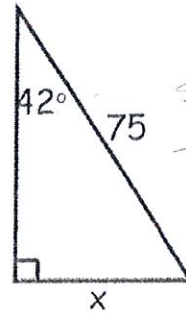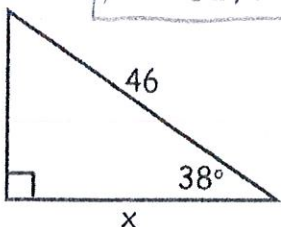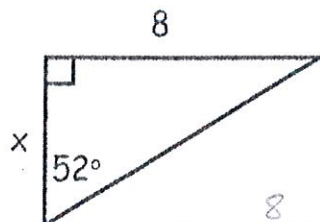
$x = \frac{8}{\tan 52}$

$\boxed{x \approx 6.25}$

Find x and y.

(triangle 5, x, 32°, y)
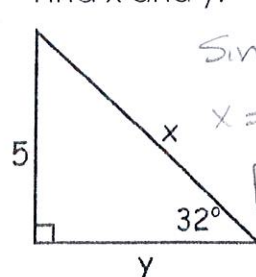
$$\sin 32 = \frac{5}{x}$$

$x = \frac{5}{\sin 32}$

$\boxed{x \approx 9.44}$

$$\tan 32 = \frac{5}{y}$$

$y = \frac{5}{\tan 32}$ $\boxed{y \approx 8.00}$