

Math 2

Trigonometric Ratios:

Sine (abbreviated sin)

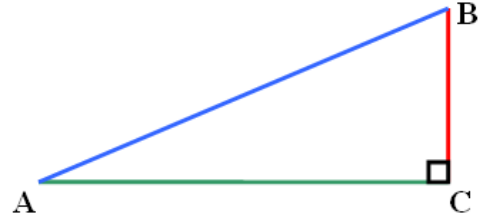
$$\sin \angle A = \frac{\text{length of leg opposite } \angle A}{\text{length of hypotenuse}} =$$

Cosine (abbreviated cos)

$$\cos \angle A = \frac{\text{length of leg adjacent } \angle A}{\text{length of hypotenuse}} =$$

Tangent (abbreviated tan)

$$\tan \angle A = \frac{\text{length of leg opposite } \angle A}{\text{length of leg adjacent } \angle A} =$$



Note: The word cosine is derived from the words **complement's sine**.

How to Remember Trig Ratios:

SOH-CAH-TOA

$$\sin x = \frac{\text{opp.}}{\text{hyp.}}$$

$$\cos x = \frac{\text{adj.}}{\text{hyp.}}$$

$$\tan x = \frac{\text{opp.}}{\text{adj.}}$$

1. $\sin \angle P =$

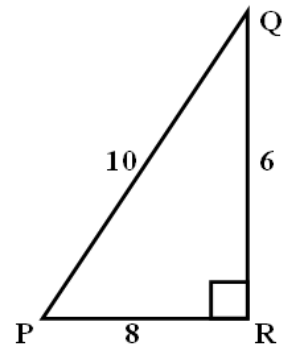
4. $\sin \angle Q =$

2. $\cos \angle P =$

5. $\cos \angle Q =$

3. $\tan \angle P =$

6. $\tan \angle Q =$



Using a Calculator to find Trigonometric Ratios

Step 1: Be sure your calculator is in **DEGREE Mode**. For the TI graphing calculators, press MODE, arrow down to the Radian/Degree choice row, right arrow over to Degree, and press ENTER. The degree choice should be dark. Exit by pressing 2nd MODE which is QUIT.

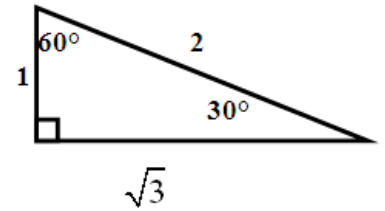
Step 2: Find the trig ratio by selecting the correct trig function, located beside the ^ button, followed by the angle measure.

Example: Find the sine of a 30° angle Enter: SIN 30, then press ENTER.

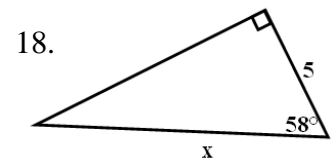
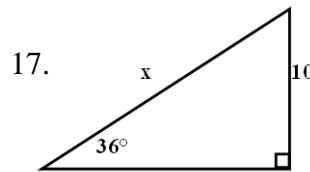
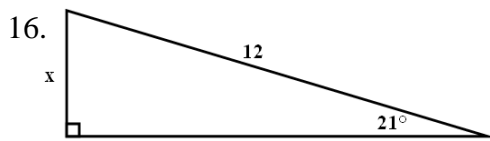
If using a standard scientific calculator, most will work if you enter:

Enter: 30 SIN

In either case, the result should be **.5**



Find the value of x to the nearest tenth.



Determine which trig function would be appropriate to use to find the value of “x”. Be prepared to explain your answer. Now, find the value of “x” to the nearest tenth.

