

So far we have just used trig to find missing measures of sides. We can also use it to find missing angles when we know two of the sides. You are going to use your calculator a little differently to do this.

When we know the sides, but don't use the angle we have to tell our calculator that we want to know an angle measure. The way we do this is by pressing 2nd, then either sin, cos, or tan. Then the calculator tells us the degree measure. Here is how it works: (round to the nearest degree)

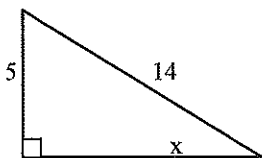
1. $\sin A = 0.4226$ $A = \underline{25^\circ}$ 2. $\cos B = 0.6691$ $B = \underline{48^\circ}$
 3. $\tan R = 0.2679$ $R = \underline{15^\circ}$ 4. $\sin Z = 0.8290$ $Z = \underline{56^\circ}$

There are steps we need to use when we are looking for the missing angle measure in a problem.

1. Mark the angle that you are looking for.
2. Label the given sides *in relation to* the angle that you need to find.
3. Decide which trig function (sin, cos, or tan) you can write with the sides that you have been given.
4. Write out the trig function.
5. Use the 2nd sin, cos, or tan to tell you the missing angle.

Here are a few examples.

EX 1: Find the missing angle, "x"

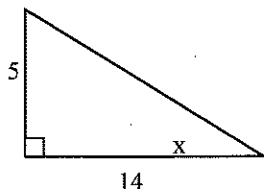


1. Mark the angle that we are looking for, x.
2. Label the given sides *in relation to* x. (opp, hyp)
3. Decide which trig function goes with Opp, Hyp (sin)
4. Write out the trig function.
5. Use your calculator to tell you the degree measure.

$\sin x = 5/14$
 $x = 21^\circ$

$x = \sin^{-1}(5/14)$

EX 2: Find the missing angle, "x"



1. Mark the angle that we are looking for, x.
2. Label the given sides *in relation to* x. (opp, adj)
3. Decide which trig function goes with Opp, Adj (tan)
4. Write out the trig function.
5. Use your calculator to tell you the degree measure.

$\tan x = 5/14$

$x = \tan^{-1}(5/14)$

$x = 20^\circ$