

Trigonometry is especially useful in physics to measure things that are:

The 4 relationships we need to know are: Sine, Cosine, Tangent and Pythagorean's theorem. Their formulas can be summed up with the word:

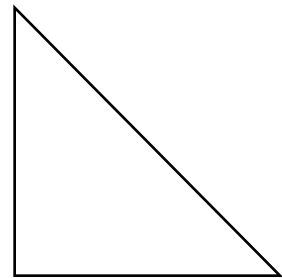
SohCahToa!

$\sin \theta = \frac{\text{Opposite Side}}{\text{Hypotenuse}}$	$\cos \theta = \frac{\text{Adjacent Side}}{\text{Hypotenuse}}$	$\tan \theta = \frac{\text{Opposite Side}}{\text{Adjacent Side}}$
Pythag =		

Opposite means _____

Adjacent means _____

Hypotenuse means _____



We're given Angle M is 41 and the adjacent side R is 132. Obviously, angle B will be 90° and that leaves angle Y to be 90° - 41° = 49°.

To solve for P, we know the angle and the _____ side, but now our unknown is the _____ side, so we'll use _____



To find hypotenuse H, we have to use _____, since we know the angle and the _____ side, making the _____ our unknown.

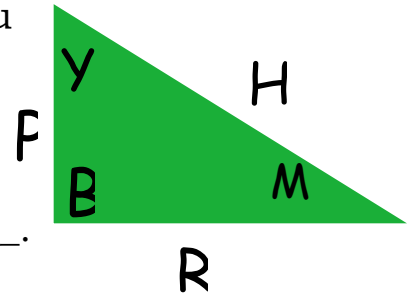


To check yourself, use pythagorean's theorem:
 $115^2 + 132^2 = 175^2$, which it does. :)

If you have 2 sides, but your unknown is the angle, you have to plug it in differently on your calculator.

Let's say $P = 168$ and $H = 242$

Getting side R involves _____.



What about angles?

Compared to angle Y, P is _____, and H is the _____, so we'll use _____.

Angle B is of course 90° , so going to angle M, side P is now _____, so we'll use _____.

To check, add the angles and you should get 90.0° !

Remember: Be in the DEGREE mode every time we use SohCahToa!

If you KNOW the angle, you just hit the Sin, Cos or Tan button.

If you are LOOKING for the angle, you'll have to hit 2nd Tan, or Inv Sin, etc.

GET TO WORK ON:
Probs C!

