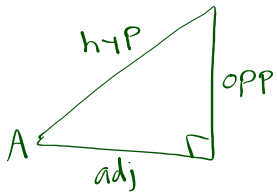
7-2 Solving for Angles

Objectives:

I can use inverse trig functions to find missing angles of right triangles.



$\sin A = \frac{opp}{hyp}$

$\cos A = \frac{adj}{hyp}$

$\tan A = \frac{opp}{adj}$

Feb 23-9:10 AM

To find measures of angles use inverse trig ratios

$$m\angle A = \sin^{-1}\left(\frac{opp}{hyp}\right)$$

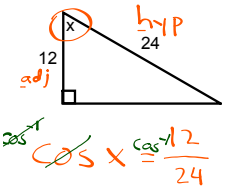
$$m\angle A = \cos^{-1}\left(\frac{adj}{hyp}\right)$$

$$m\angle A = \tan^{-1}\left(\frac{opp}{adj}\right)$$

Make sure your calculator is in Degrees

Oct 20-4:58 PM

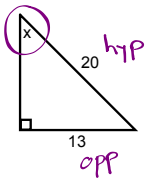
Find the measure of the indicated angle to the nearest **degree**



$\cos x = \frac{12}{24}$

$x = \cos^{-1}(12/24)$

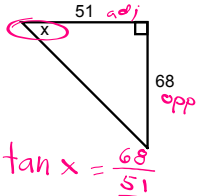
$x = 60°$



$\sin x = \frac{13}{20}$

$x = \sin^{-1}(13/20)$

$x = 41°$

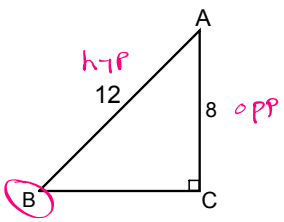


$\tan x = \frac{68}{51}$

$x = 53°$

Oct 27-3:24 PM

Find the measure of angle B. Round to the nearest **degree.**

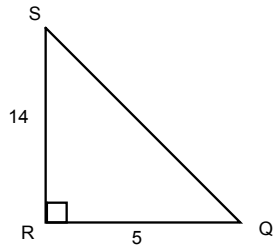


$\sin B = \frac{8}{12}$

$B = 42°$

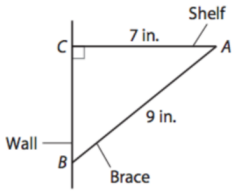
Feb 23-9:46 AM

Find the measure of angle S . Round to the nearest **degree.**



Feb 17-2:19 PM

A shelf extends perpendicularly 7 in. from a wall. You want to place a 9-in. brace under the shelf, as shown. To the nearest degree, what angle will the brace make with the wall? What angle will the brace make with the shelf?



Feb 23-9:57 AM