What am I learning today?

Learning Objective 3.2

How to use the basic trig ratios to solve for a missing side

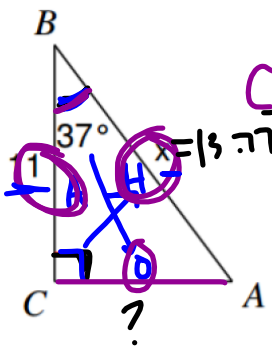
Jul 31-6:18 PM

To solve for a missing **SIDE:** sin cos tan

1. **LABEL** all the sides from the given angle.
2. Determine the correct trig **RATIO** to use.

Solve for x.

1.



SOH
$\sin = \frac{opp}{h}$

CAH
$\cos(37^\circ) = \frac{11}{x}$

CAH
$\cos = \frac{A}{H}$

$11 = x \cdot \cos(37^\circ)$

TOA
$\tan = \frac{O}{A}$

$\frac{11}{\cos(37^\circ)} = \frac{x \cdot \cos(37^\circ)}{\cos(37^\circ)}$

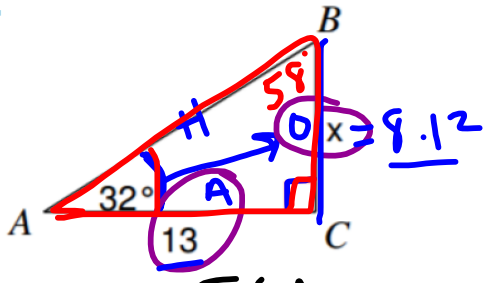
$x = \frac{11}{\cos(37^\circ)}$

$x = 13.77$

Sep 18-7:40 AM

Solve for x.

2.



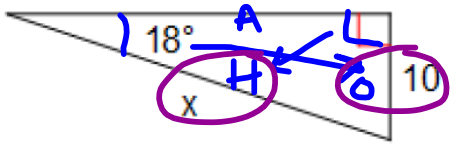
TOA

$\frac{\tan(32^\circ)}{1} = \frac{x}{13}$

$x = 13 \cdot \tan(32^\circ)$

$x = 8.12$

3.



SOH

$\frac{\sin(18^\circ)}{1} = \frac{10}{x}$

$10 = x \cdot \sin(18^\circ)$

$\frac{10}{\sin(18^\circ)} = \frac{\sin(18^\circ)}{\sin(18^\circ)}$

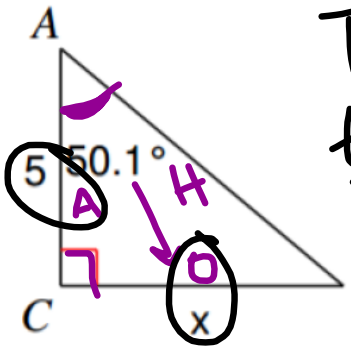
$x = \frac{10}{\sin(18^\circ)}$

$x = 32.36$

Mar 11-8:15 AM

Solve for x.

4.



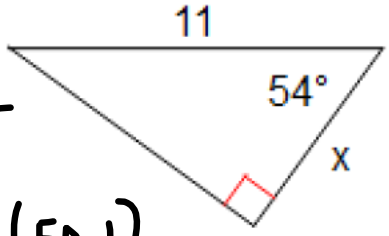
TOA

$\frac{\tan(50.1^\circ)}{1} = \frac{x}{5}$

$x = 5 \cdot \tan(50.1^\circ)$

$x = 5.98$

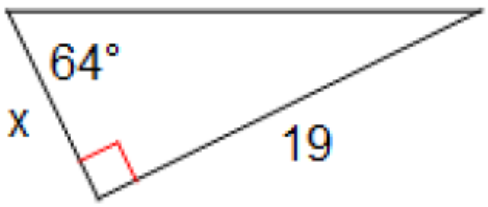
5.



Mar 11-8:16 AM

Solve for x.

6.



Mar 11-8:16 AM

Learning Objective 3.3

How to use the inverses of basic trig ratios to solve for a missing angle

Sep 18-7:42 AM

To solve for a missing **ANGLE**:

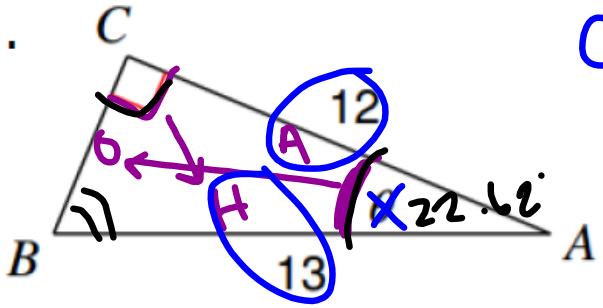
1. **LABEL** all the sides from the wanted angle.
2. Determine the correct trig **RATIO** to use.
3. Use the **INVERSE** of the trig ratio to solve for the angle! $\sin^{-1}$ $\cos^{-1}$ $\tan^{-1}$

MAKE SURE YOUR CALC. IS IN DEGREE MODE!!!

Sep 18-9:23 AM

Solve for the missing angle.

1.



CAH

$\cos^{-1}$

$\cos(\theta) = \frac{12}{13}$

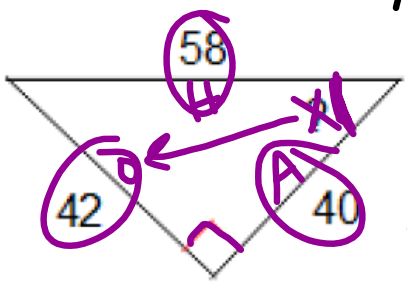
$\theta = \cos^{-1}\left(\frac{12}{13}\right)$

$\theta = 22.62°$

Sep 18-9:09 AM

Solve for the missing angle.

2.



$\sin(x) = \left(\frac{42}{58}\right)$ $\cos(x) = \left(\frac{40}{58}\right)$

$x = 46.4°$ $x = 46.4°$

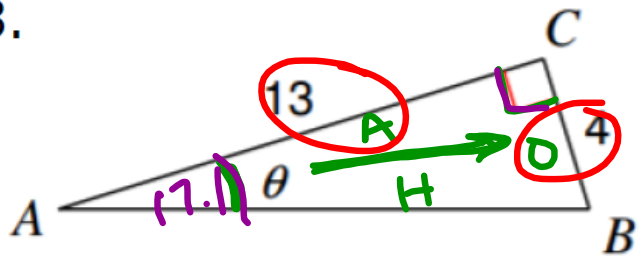
$\tan(x) = \left(\frac{42}{40}\right)$

$x = 46.4°$

Mar 11-1:24 PM

Solve for the missing angle.

3.



TOA

$\tan(\theta) = \left(\frac{4}{13}\right)$

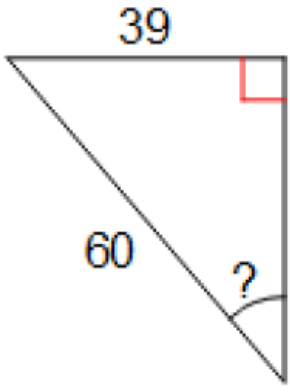
$\theta = \tan^{-1}\left(\frac{4}{13}\right)$

$\theta = 17.1°$

Mar 11-1:24 PM

Solve for the missing angle.

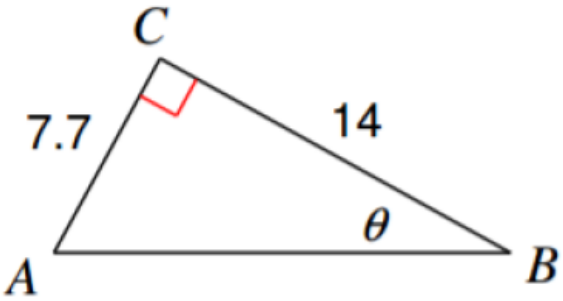
4.



Mar 11-1:24 PM

Solve for the missing angle.

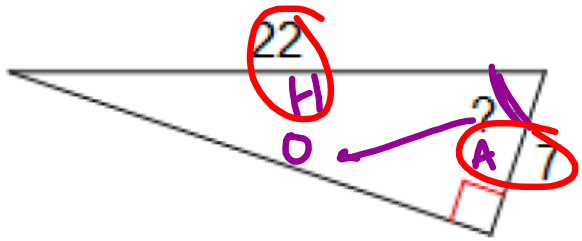
5.



Mar 11-1:25 PM

Solve for the missing angle.

6.



CAH
cos-1 cos(x) = 7/22 cos'
X = cos'(7/22)
X = 71.45°

Mar 11-1:25 PM

Classwork/Homework:

The blank HW is on the blog, along with the answer key.

Be sure to finish your DeltaMath Unit 3 Assignment by 11:59p Friday.

Jul 31-9:12 PM