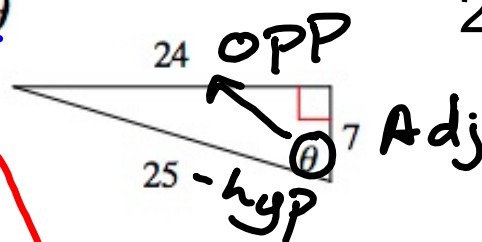


## Warm Up

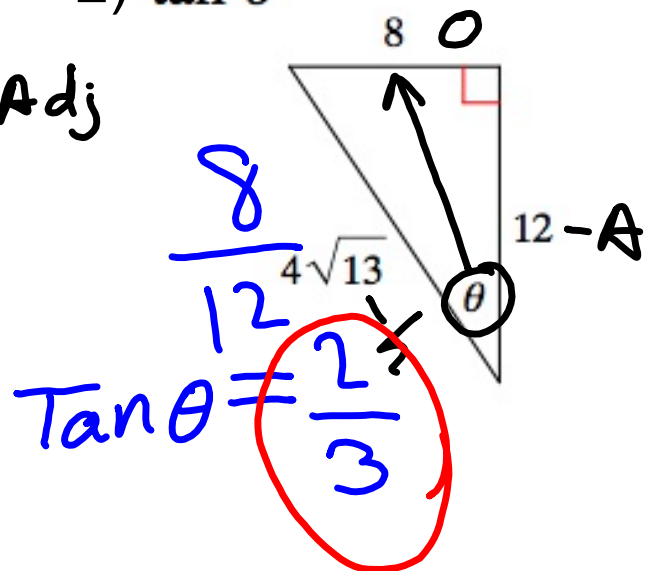
Find the value of the trig function indicated.

1) cos  $\theta$



$$\frac{7}{25} = \cos \theta$$

2) tan  $\theta$



$$\tan \theta = \frac{2}{3}$$

## 9-3

### Finding Sides of Right Triangles Using Trig

- Given an angle I can find the side length on a right triangle using trig.
- Given an angle and a trig function I can calculate it's value.

Use a calculator to find each.

$\cos 130 = -0.64$   $\cos 268 = -0.03$   $\sin 25 =$

$.422$

$\sin 280 =$

$-.98$

$\tan 219 = .809$

$\sin 40 = .64$

$\cos 110 =$

$-.34$

$\sin 20 =$

$.3420201433$

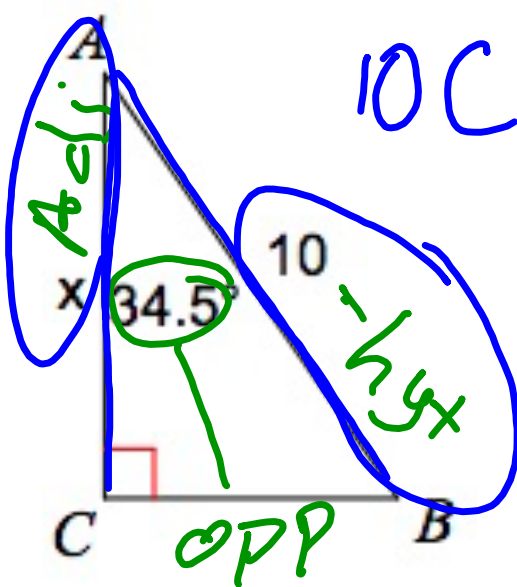
$\tan 54 =$

$1.37$

Gett'in Triggly with it

[https://www.youtube.com/watch?  
v=t2uPYYLH4Zo](https://www.youtube.com/watch?v=t2uPYYLH4Zo)

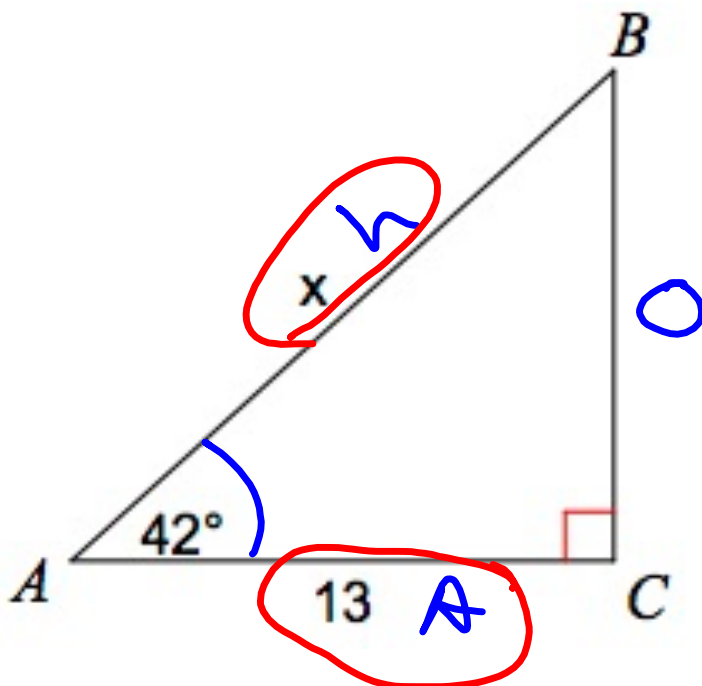
Find the measure of each side indicated.



$$10 \cos 34.5 = \frac{x}{10}$$

$$x = 8.24$$

Find the measure of each side indicated.

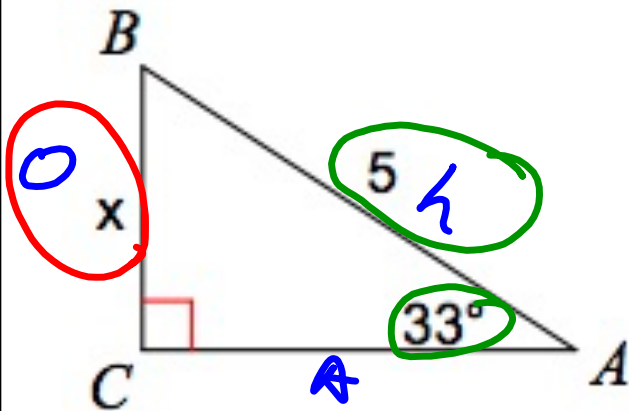


$$\cos 42 = \frac{13}{x}$$

$$x = \frac{13}{\cos 42}$$

$$x = 17.4$$

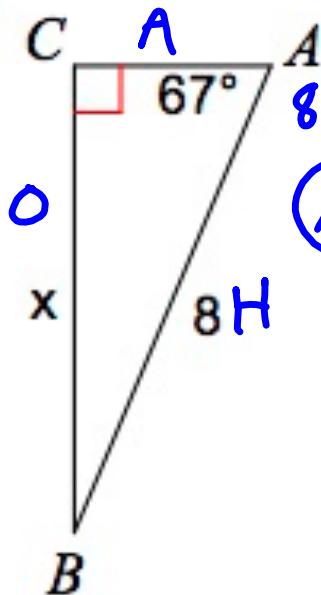
Find the measure of each side indicated.



$$\sin 33 = \frac{x}{5} \cdot 5$$

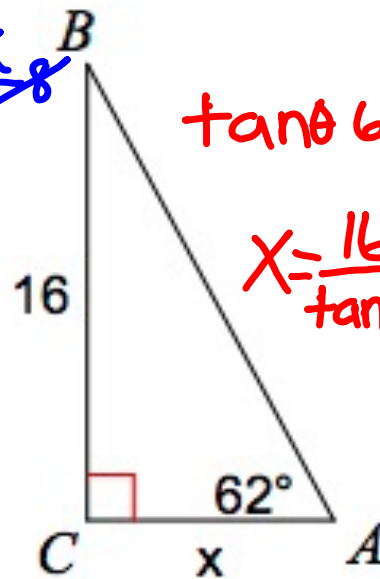
$$x = 2.72$$

Find the measure of each side indicated.



$$8 \sin 67 = \frac{x}{8}$$

$$x = 7.36$$

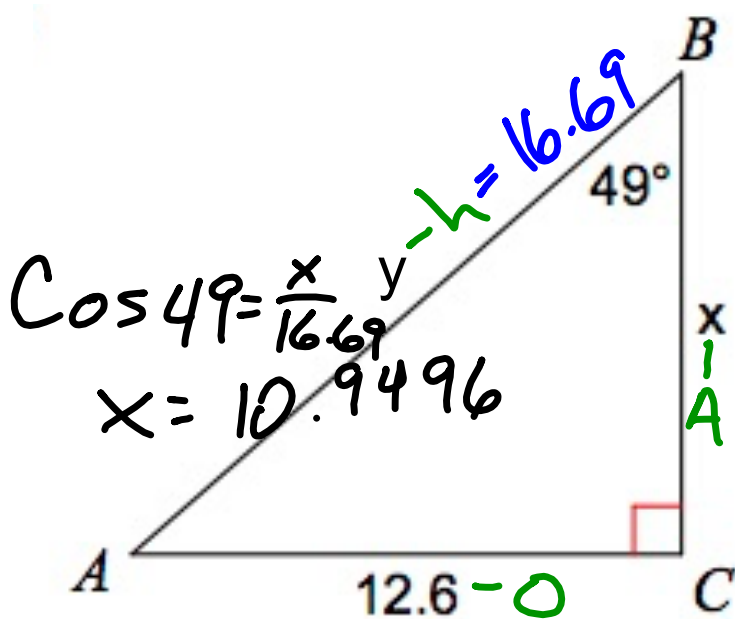


$$\tan 62^\circ = \frac{16}{x}$$

$$x = \frac{16}{\tan(62)} = 8.50$$



Find the measure of  $x$  and  $y$ .



$$\cos 49 = \frac{x}{16.69}$$

$$x = 10.9496$$

$$\sin 49 = \frac{12.6}{y} =$$

$$\frac{12.6}{\sin 49}$$

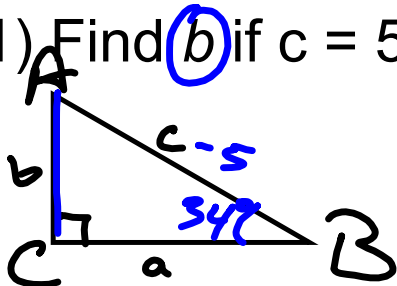
$$y = 16.69$$

$$\tan 49 = \frac{12.6}{x}$$

$$x = 10.95$$

In each problem, Angle C is a right angle. Find the side indicated to the nearest tenth.

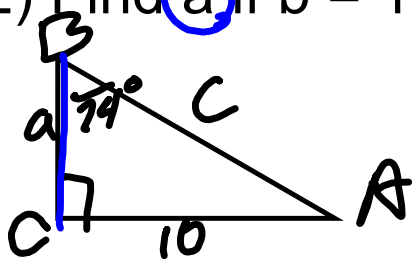
- 1) Find  $b$  if  $c = 5$ ,  $m\angle B = 34^\circ$



$$\sin 34 = \frac{b}{5}$$

$$b = 2.8$$

- 2) Find  $a$  if  $b = 10$ ,  $m\angle B = 74^\circ$



$$\tan 74 = \frac{10}{a}$$

$$a = \frac{10}{\tan 74}$$

Soh  
Soh  
P  
A

Cah  
Cah  
S  
U  
A

Top  
Top  
na  
P  
U

