SOHCAHTOA - Solving
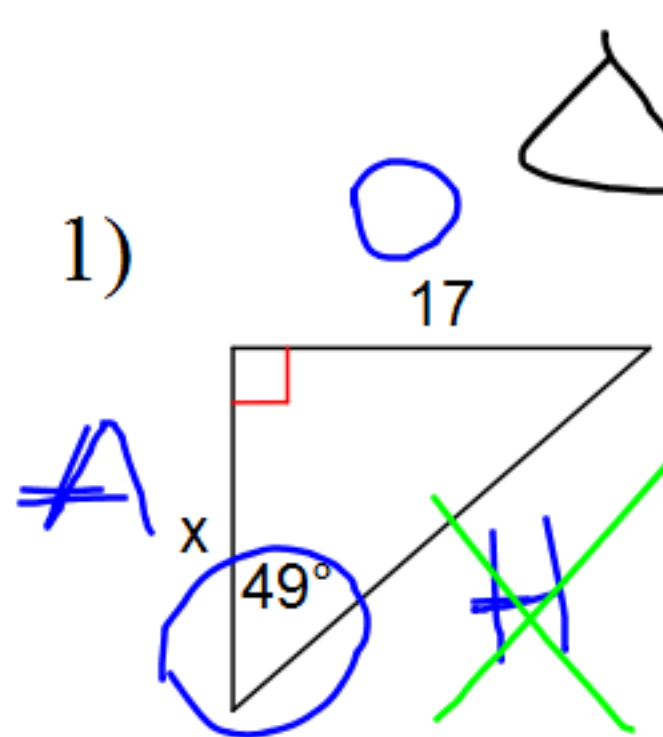# For a Side Using an Angle

March 7, 2017

Find the missing side. Round to the nearest tenth.

$$\triangle = 180°$$

SOHCAHTOA

1)

17

x

$49°$

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

① $\tan 49° = \dfrac{17}{x}$ (x)

$$\frac{\tan 49}{\quad} \qquad \frac{}{\tan 49}$$

$$x = \frac{17}{\tan 49°}$$

② $\dfrac{\tan 49°}{1} = \dfrac{17}{x}$

$(x)(\tan 49) = 17$

$$\frac{}{\tan 49} \qquad \frac{}{\tan 49}$$

$$x = \frac{17}{\tan 49°}$$

③ $\tan 49° = \dfrac{17}{x}$

$$x = \frac{17}{\tan 49°}$$

This will only work when unknown is on the bottom

Find the missing side. Round to the nearest tenth.

SOHCAHTOA

2)

$\cos \theta = \dfrac{A}{H}$

$\cos 22° = \dfrac{15}{x}$

$\cos 22 = \dfrac{15}{x}$

$\cos 22 = \dfrac{15}{x}$

$(x)\cos 22 = 15$

$\dfrac{(x)\cos 22}{\cos 22} = \dfrac{15}{\cos 22}$

$x = \dfrac{15}{\cos 22}$

$x = 16.2$

$\cos 22 = \dfrac{15}{x}$

$x = \dfrac{15}{\cos 22}$

$x = 16.2$
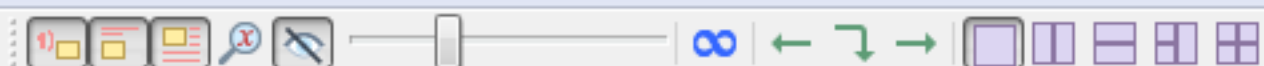
Find the missing side. Round to the nearest tenth.

SOH CAH TOA

3)
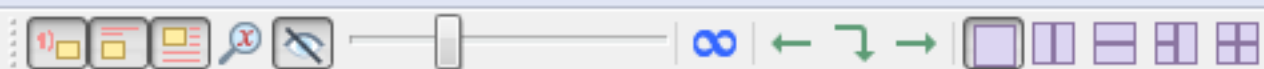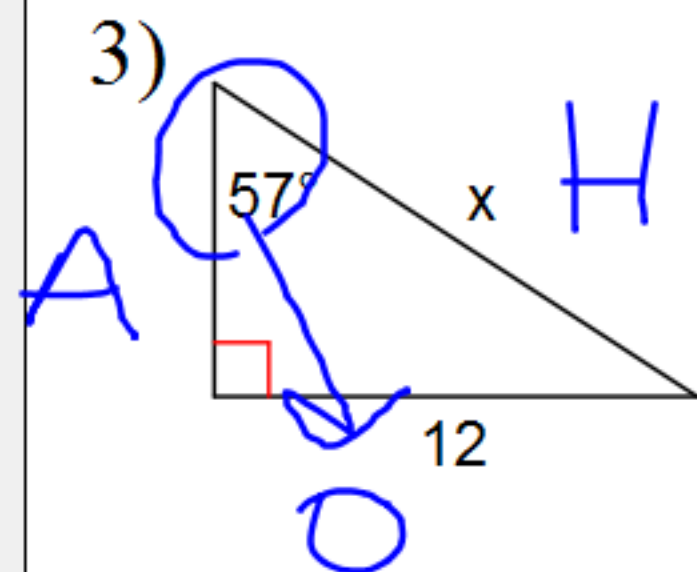
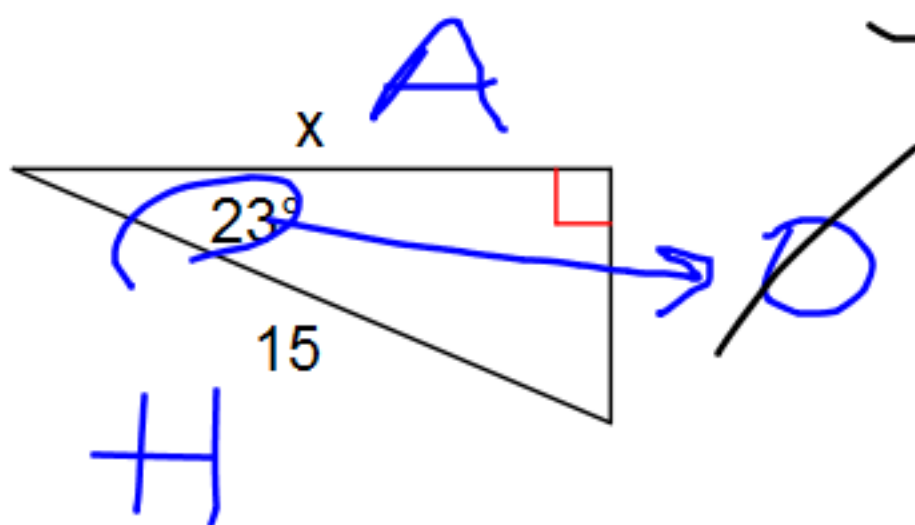$$\sin\theta = \frac{O}{H}$$

$$\sin 57° = \frac{12}{x}$$

$$x = \frac{12}{\sin 57°}$$

$$x = 14.3$$

Find the missing side. Round to the nearest tenth.

SOHCAHTOA

4)

$$\cos \theta = \dfrac{A}{H}$$

$$\cos 23° = \dfrac{x}{15}$$

$$x = \cos 23(15)$$

$$x = 13.8 \text{ units}$$

Brackets
= x
multiply