

$$\cos 60 = \frac{x}{11}$$

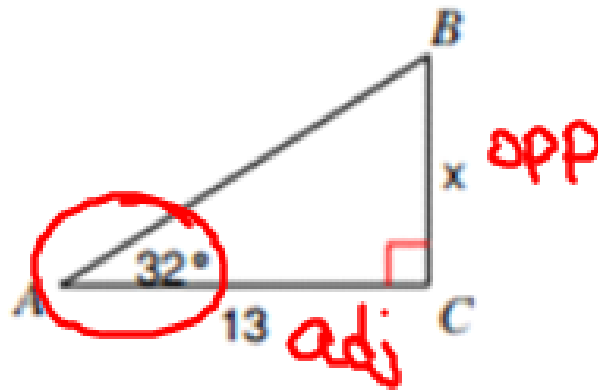
$$11 \cos 60 = x$$

$$11 * 0.5 = 5.5$$

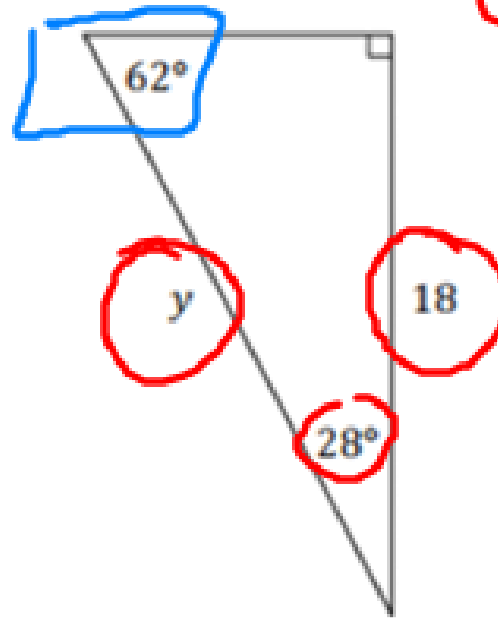
$$\tan 32 = \frac{x}{13}$$

$$13 \tan 32 = x$$

$$13 * 0.62 \tan = 8.1$$



Consider the figure below.



$$\cos 28 = \frac{18}{y}$$

$$18 \div \cos 28 = y$$
$$18 \div 0.8829 = 20.4$$

$$\sin 62 = \frac{18}{y}$$
$$y = \frac{18}{\sin 62}$$
$$18 \div \sin 62 = 20.4$$

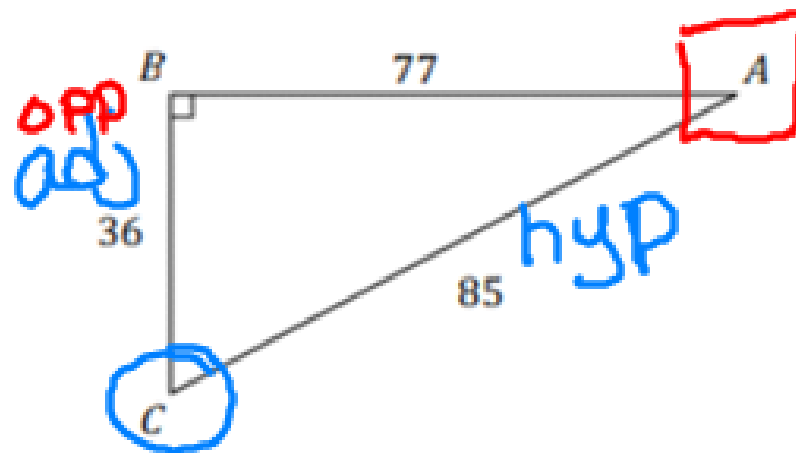
Determine the value of y .

Given the lengths of sides, we can use "trig" functions to find missing angles by using their inverses:

\sin^{-1} , \cos^{-1} , \tan^{-1}

Let's Practice!

1. Consider the triangle below.



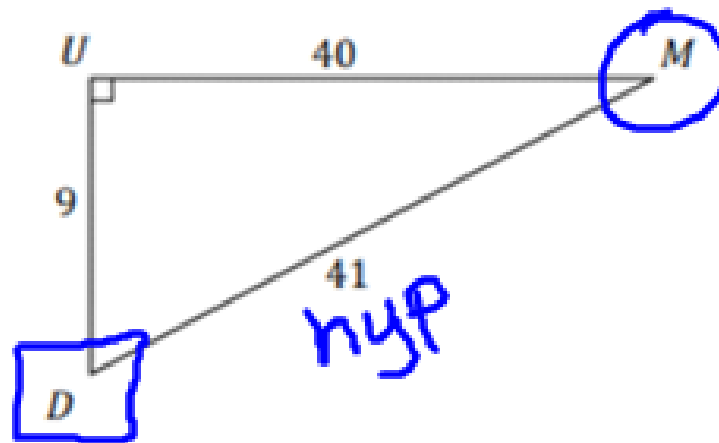
Find $\cos C$, $\sin A$, $m\angle A$ and $m\angle C$ for the triangle.

$$\cos C = \frac{36}{85} \\ = 0.4235$$

$$\sin A = \frac{36}{85}$$

$$\angle A = 25.1^\circ \\ \angle C = 64.9^\circ$$

2. Consider the triangle below.



Find $\tan M$, $\cos D$, $m\angle D$ and $\sin M$ for the triangle.

$$\tan M = \frac{9}{40} \\ = .2250$$

$$\cos D = \frac{9}{41} \\ = .2195$$

$$\sin M = \frac{9}{41} \\ = .2195$$

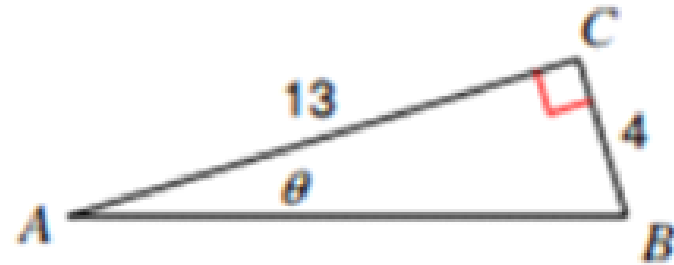
$$m\angle D = 77.3^\circ$$



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

$$\cos^{-1} \theta = .9230$$

$$\theta = 22.4$$



$$\tan \theta = \frac{4}{13}$$

$$= .3077$$

$$\theta = 17.1$$

