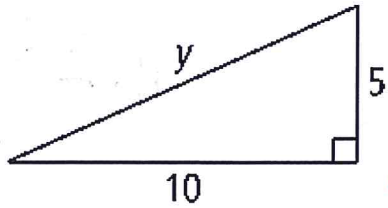


## 8.1-8.3 Review

Algebra Find the value of  $y$ . Express in simplest radical form

1.



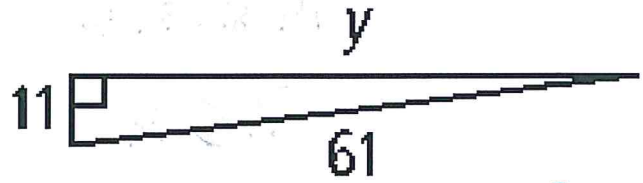
$$5^2 + 10^2 = y^2$$

$$25 + 100 = y^2$$

$$\sqrt{125} = \sqrt{y^2}$$

$\begin{matrix} 125 \\ \swarrow \downarrow \searrow \\ 25 \ 5 \end{matrix}$

$\begin{matrix} 55 \\ \swarrow \searrow \\ 5\sqrt{5} = y \end{matrix}$



$$11^2 + y^2 = 61^2$$

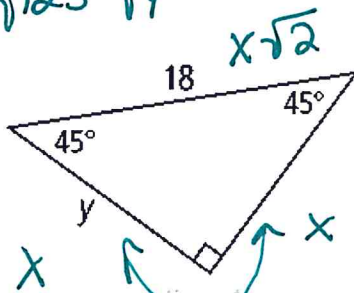
$$121 + y^2 = 3721$$

$$\sqrt{y^2} = \sqrt{3600}$$

$$y = 60$$

$$x\sqrt{3} = 4\sqrt{3}$$

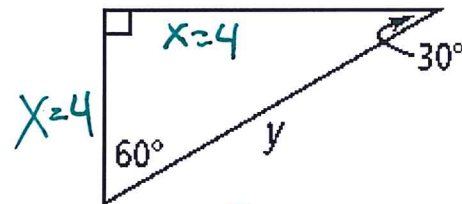
2.



$$18 = x\sqrt{2}$$

$$\frac{\sqrt{2} \cdot 18}{\sqrt{2}} = x$$

$$\frac{18\sqrt{2}}{2} = 9\sqrt{2}$$

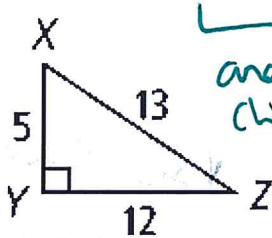


$$2x$$

$$2(4) = 8$$

Write the ratios for  $\sin Z$ ,  $\cos X$ , and  $\tan X$ .

9.



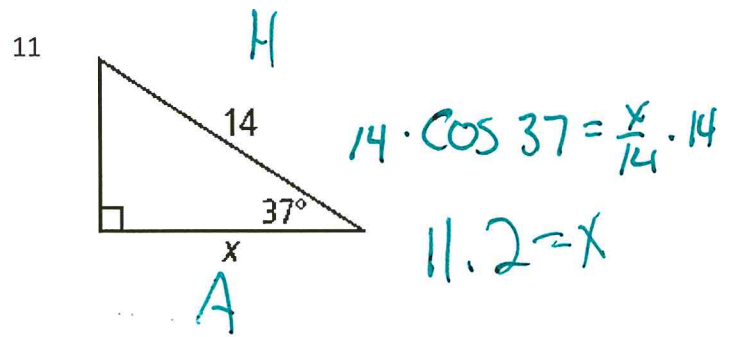
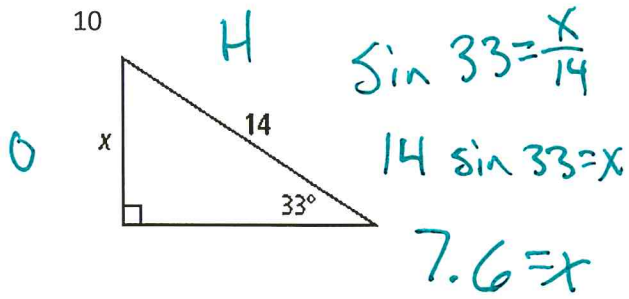
angles change

$$\sin Z = \frac{5}{13}$$

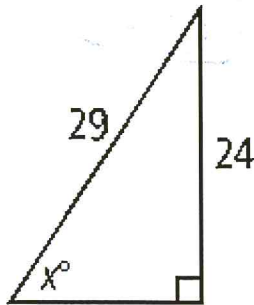
$$\cos X = \frac{5}{13}$$

$$\tan X = \frac{12}{5}$$

Find the value of  $x$ . Round to the nearest tenth.



12.

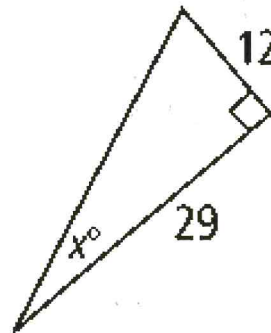


Handwritten work:

$$\sin^{-1} \left( \frac{24}{29} \right)$$

$$x = 55.9^\circ$$

13.



Handwritten work:

$$\tan^{-1} \left( \frac{12}{29} \right)$$

$$x = 22.5^\circ$$

Be careful  
if  $x$  is on the bottom  
 $\cos(30) = \frac{2}{x}$   
 $x = \frac{2}{\cos(30)}$