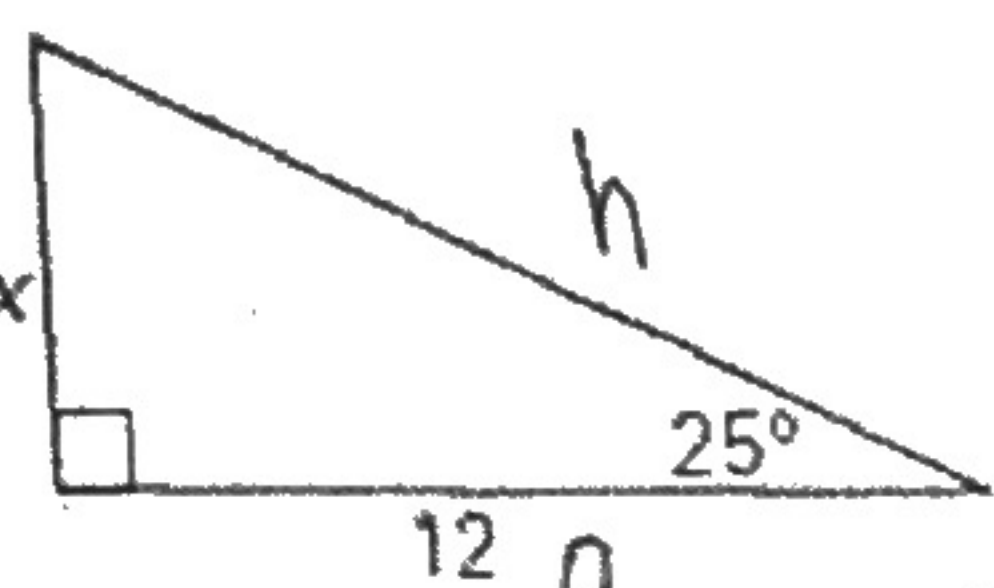


Name: KEY Date: _____

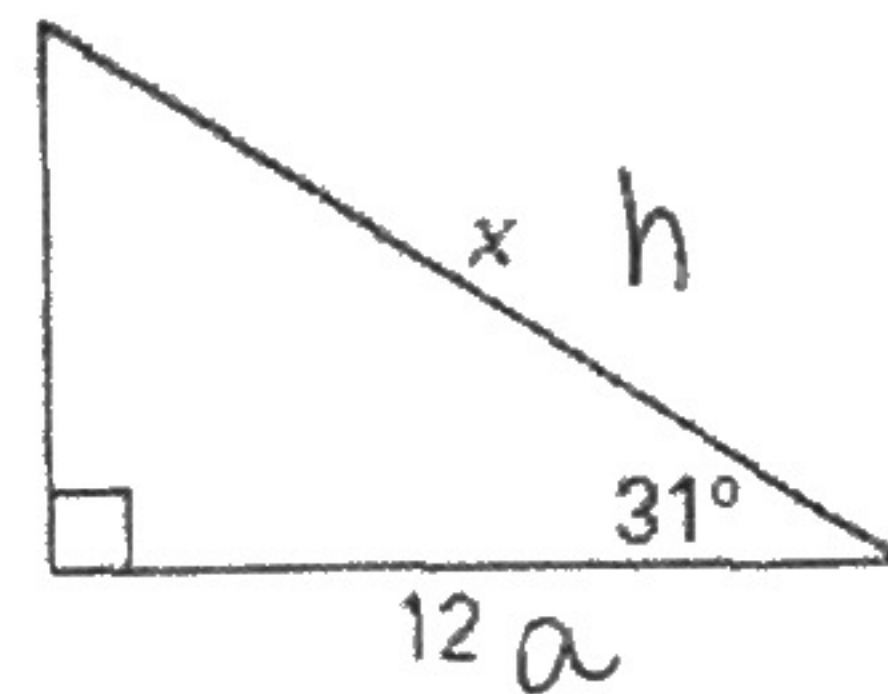
Use Trig Ratios to Find the Missing Side or Angle of a Right Triangle

1. 

$$\tan 25 = \frac{x}{12}$$

$$12 \tan 25 = x$$

$x = 5.6$

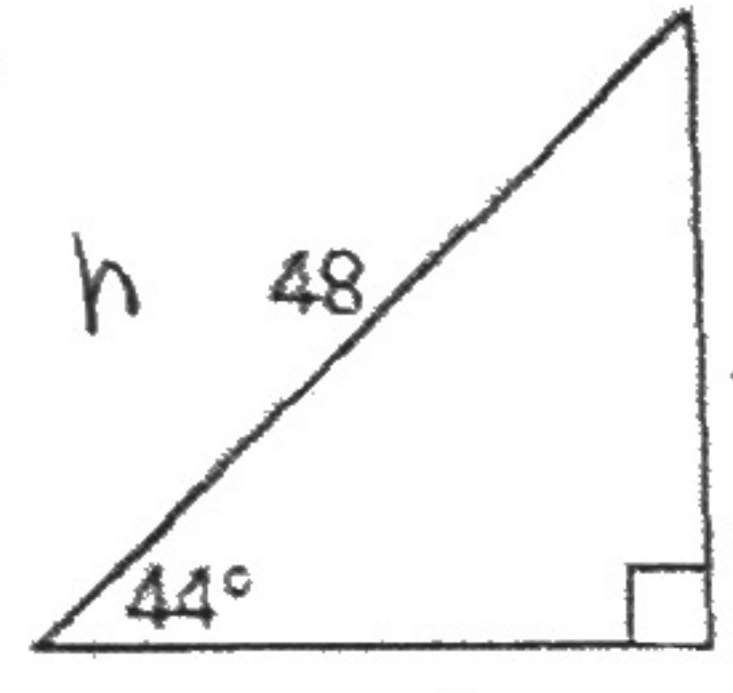
2. 

$$\cos 31 = \frac{12}{x}$$

$$x \cos 31 = 12$$

$$x = \frac{12}{\cos 31}$$

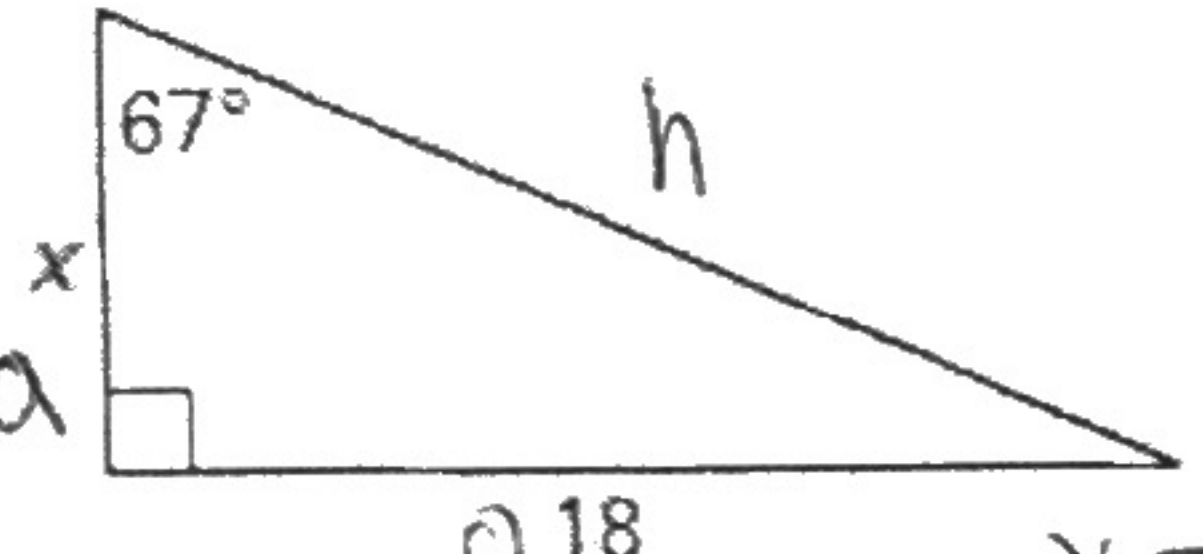
$x = 14.0$

3. 

$$\sin 44 = \frac{x}{48}$$

$$x = 48 \sin 44$$

$x = 33.3$

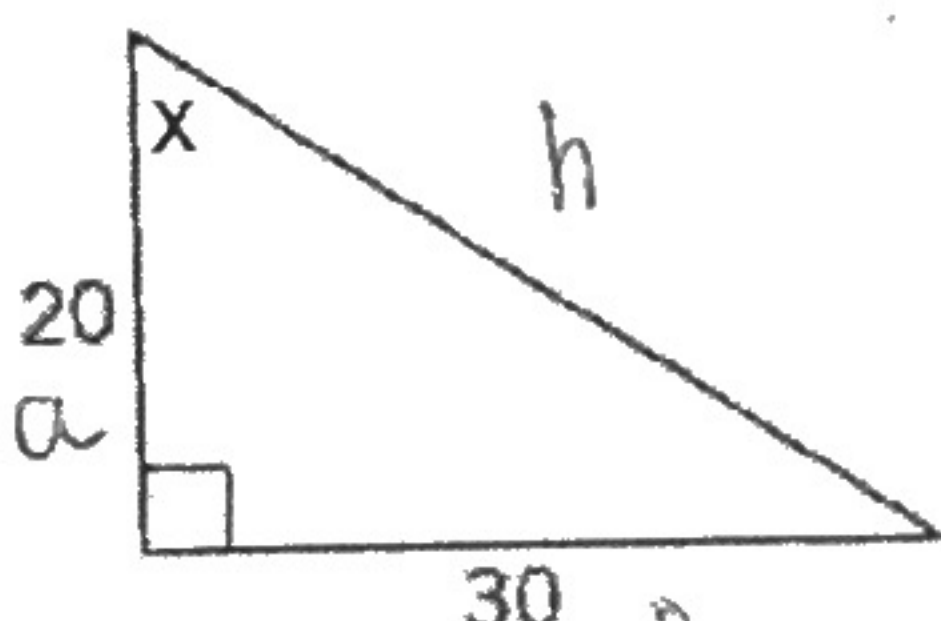
4. 

$$\tan 67 = \frac{x}{18}$$

$$x \tan 67 = 18$$

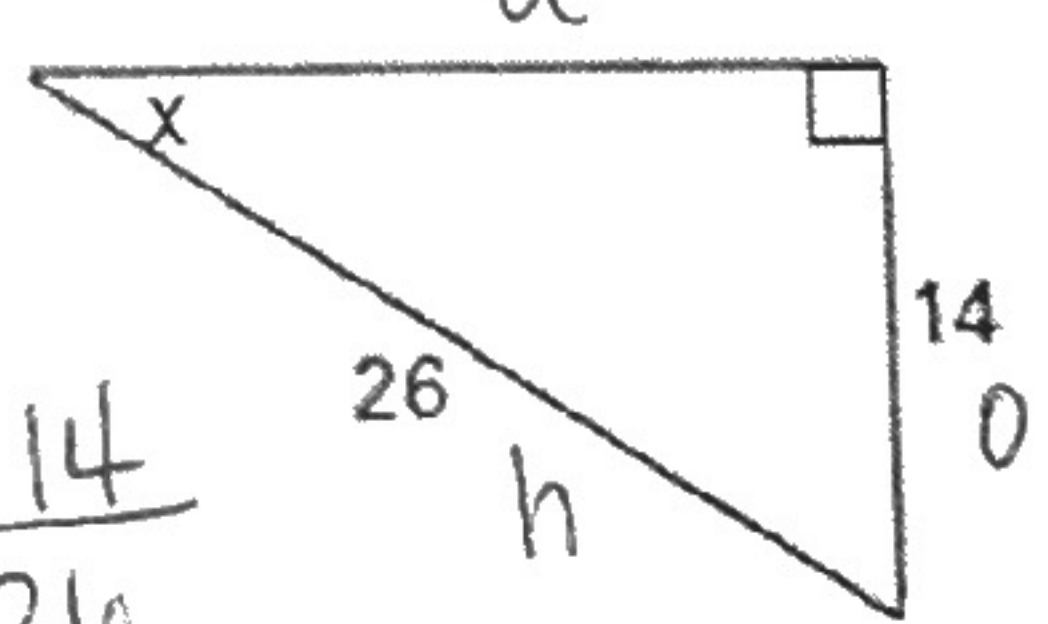
$$x = \frac{18}{\tan 67}$$

$x = 7.6$

5. 

$$\tan x = \frac{30}{20}$$

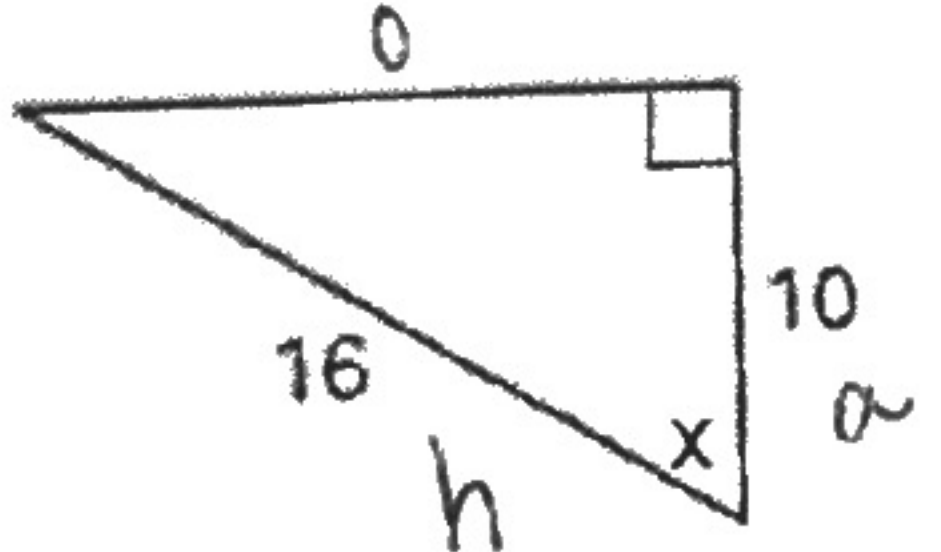
$$x = \tan^{-1}\left(\frac{30}{20}\right) = 56.3^\circ$$

6. 

$$\sin x = \frac{14}{26}$$

$$x = \sin^{-1}\left(\frac{14}{26}\right)$$

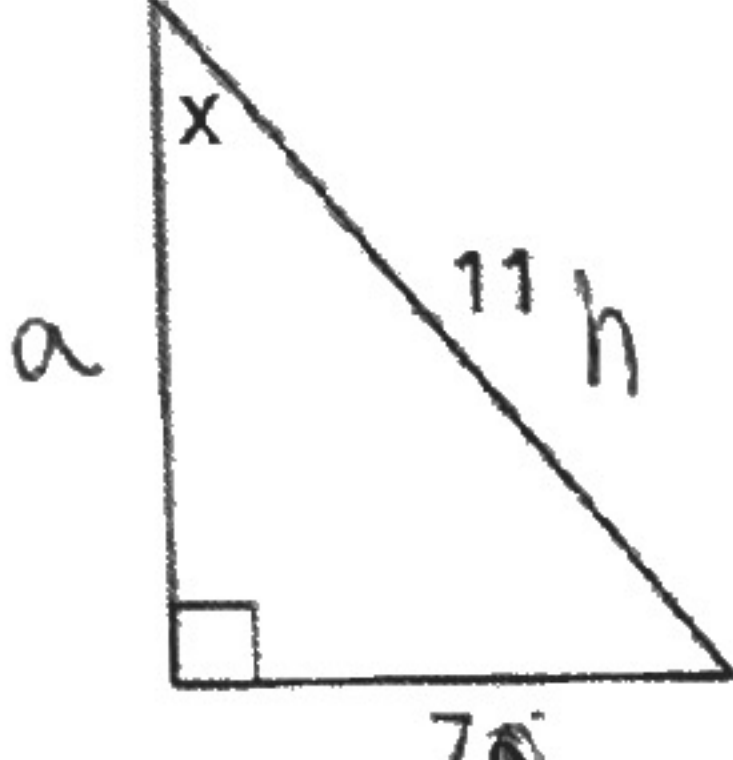
$x = 32.6^\circ$

7. 

$$\cos x = \frac{10}{16}$$

$$x = \cos^{-1}\left(\frac{10}{16}\right)$$

$x = 51.3^\circ$

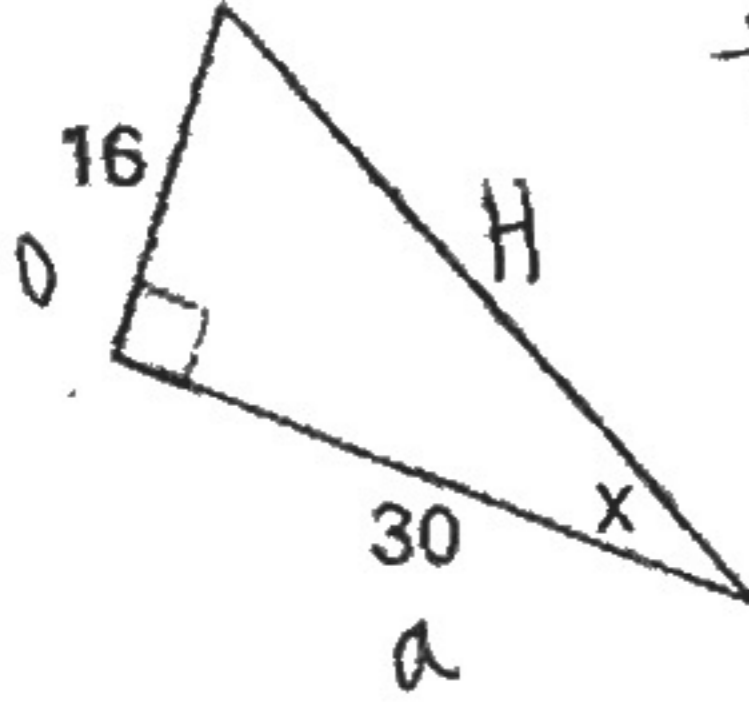
8. 

$$\sin x = \frac{7}{11}$$

$$x = \sin^{-1}\left(\frac{7}{11}\right)$$

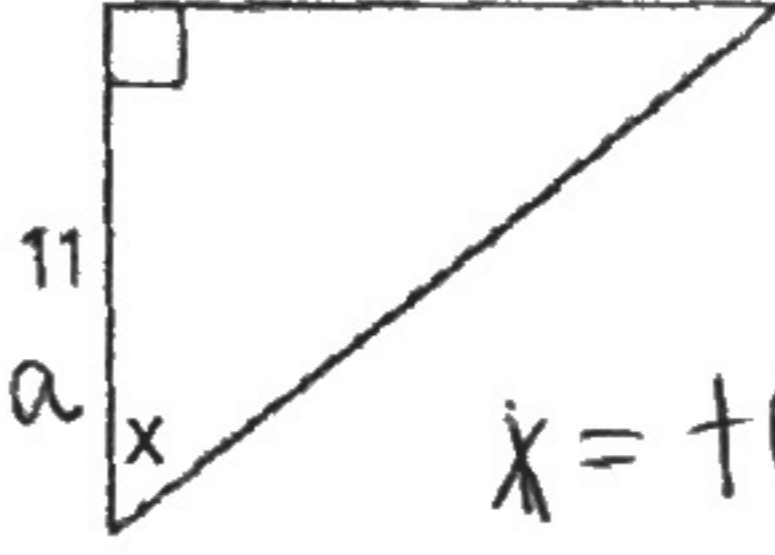
$x = 39.5^\circ$

9.



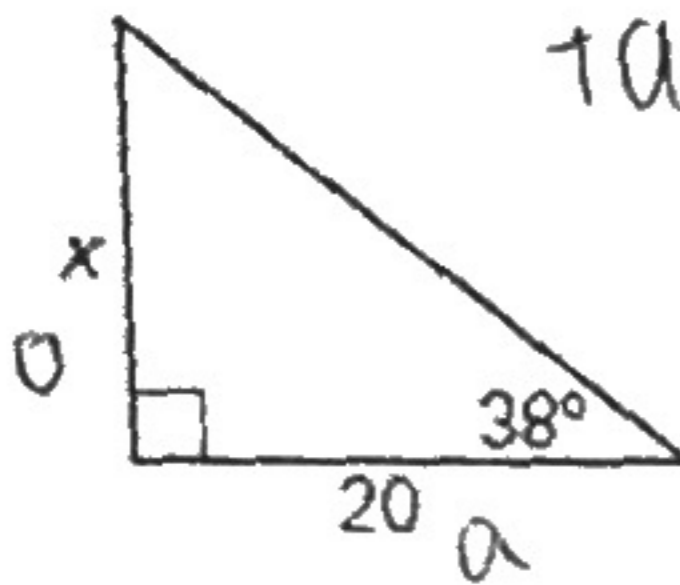
$\tan x = \frac{16}{30}$
 $x = \tan^{-1}\left(\frac{16}{30}\right)$
 $x = 28.1^\circ$

10.



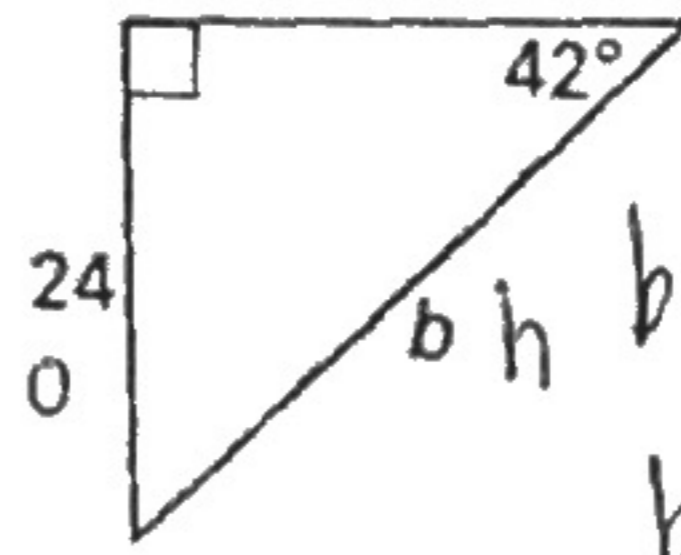
$\tan x = \frac{15}{11}$
 $x = \tan^{-1}\left(\frac{15}{11}\right)$
 $x = 53.7^\circ$

11.



$\tan 38 = \frac{x}{20}$
 $x = 20 \tan 38$
 $x = 15.6$

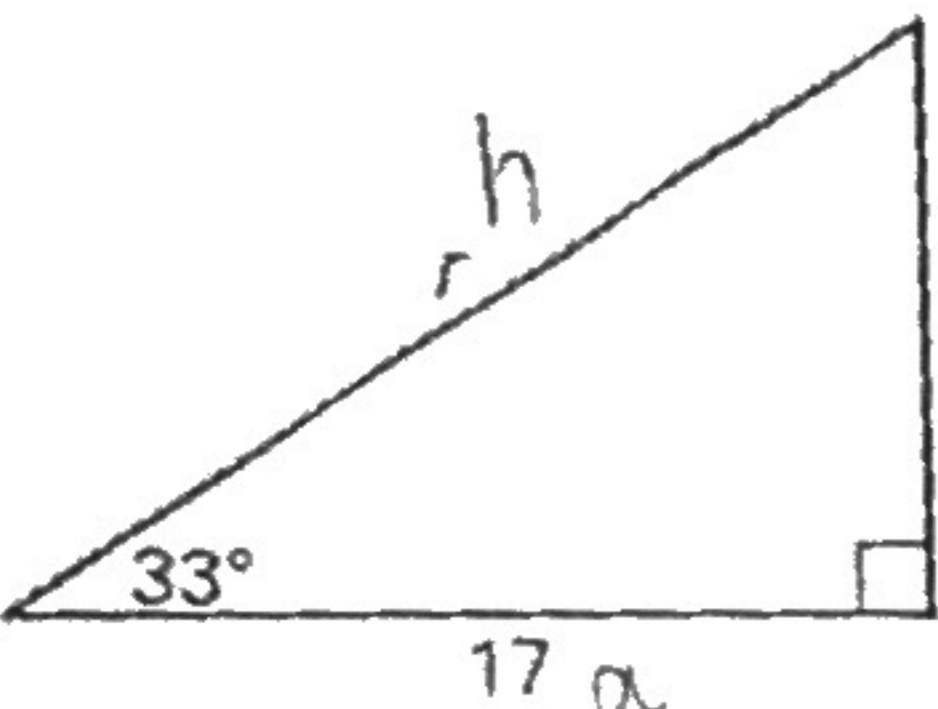
12.



$\sin 42 = \frac{24}{b}$
 $b \sin 42 = 24$
 $b = \frac{24}{\sin 42}$

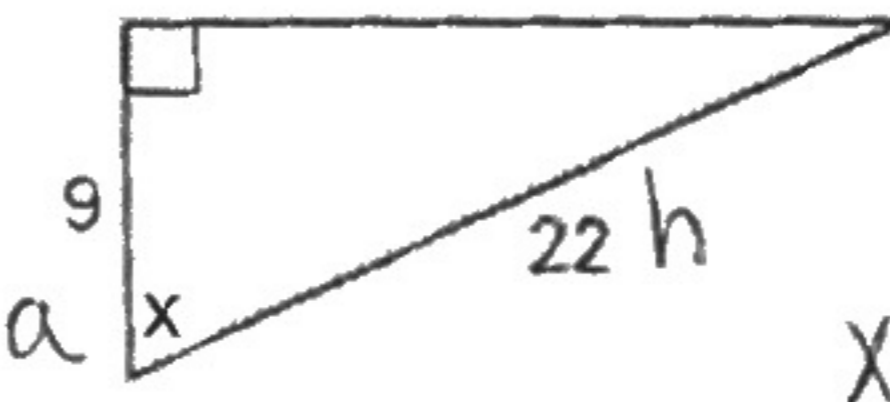
$x = 35.9$

13.



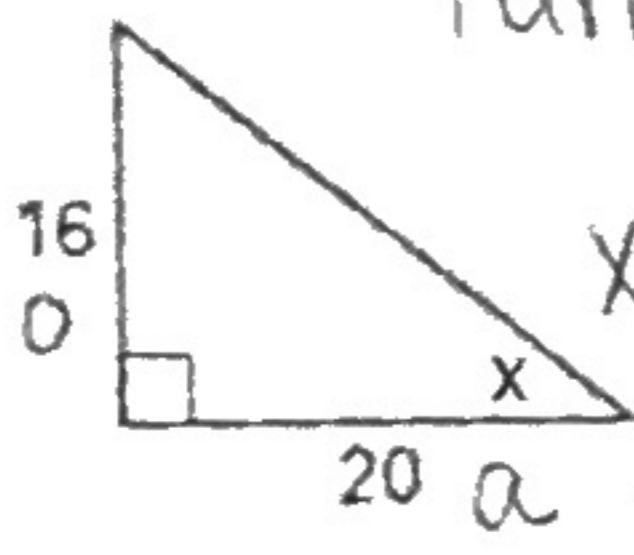
$\cos 33 = \frac{17}{y}$
 $y \cos 33 = 17$
 $y = \frac{17}{\cos 33}$
 $y = 20.3$

14.



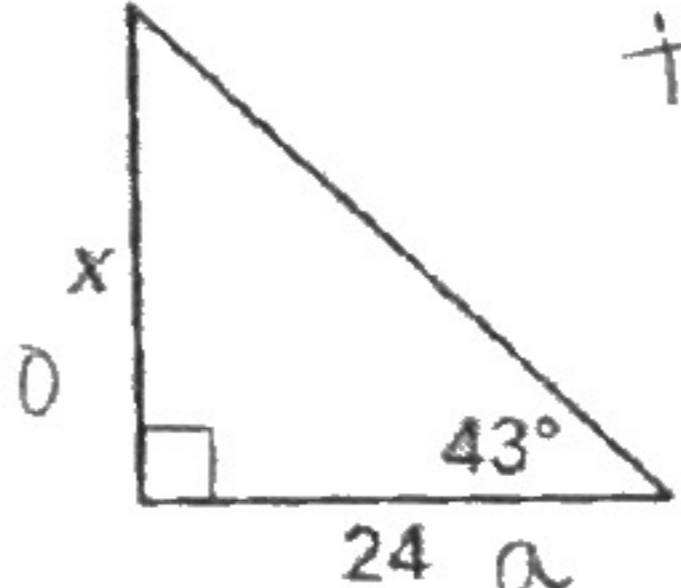
$\cos x = \frac{9}{22}$
 $x = \cos^{-1}\left(\frac{9}{22}\right)$
 $x = 65.9^\circ$

15.



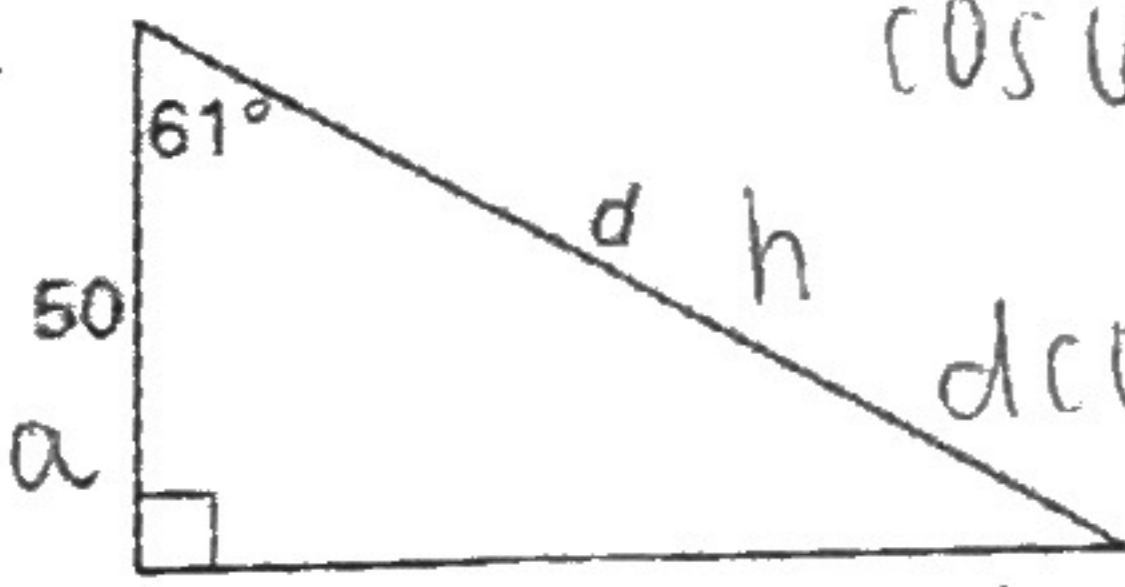
$\tan x = \frac{16}{20}$
 $x = \tan^{-1}\left(\frac{16}{20}\right)$
 $x = 38.7^\circ$

16.



$\tan 43 = \frac{x}{24}$
 $x = 24 \tan 43$
 $x = 22.4$

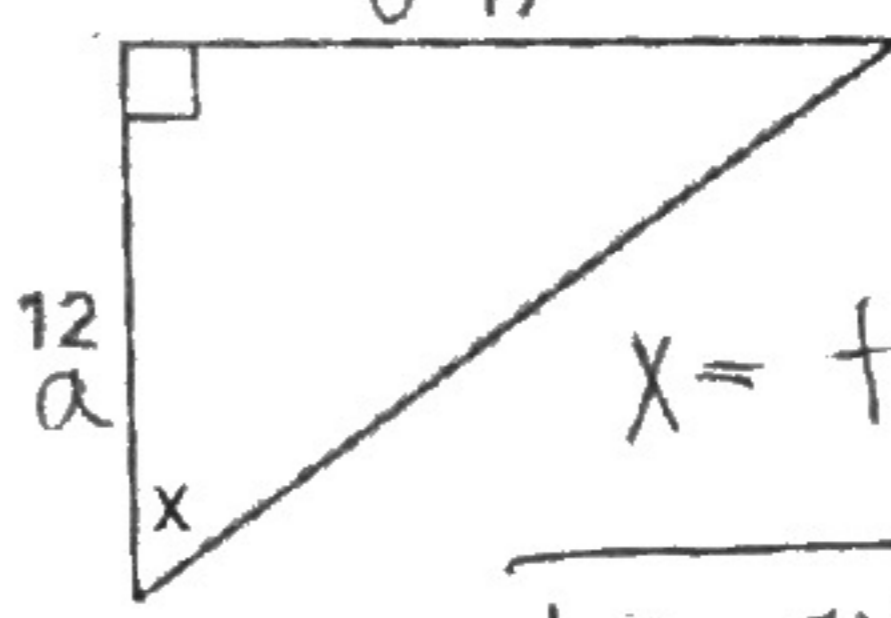
17.



$\cos 61 = \frac{50}{d}$
 $d \cos 61 = 50$
 $d = \frac{50}{\cos 61}$

$x = 103.1$

18.



$\tan x = \frac{17}{12}$
 $x = \tan^{-1}\left(\frac{17}{12}\right)$
 $x = 54.8^\circ$