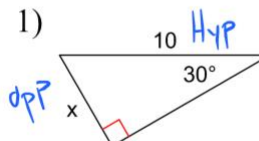
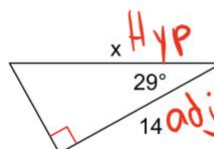


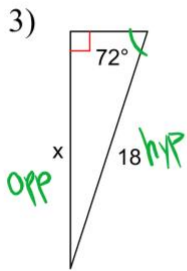
Right Triangle Trigonometry

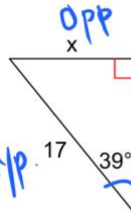
S O H C A T A

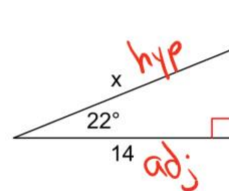
Find the missing side. Round to the nearest thousandth (third decimal place).

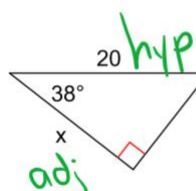
1)   $\sin(30) = \frac{x}{10}$   
 $x = 10 \cdot \sin(30)$   
 $x = 10.000$  units

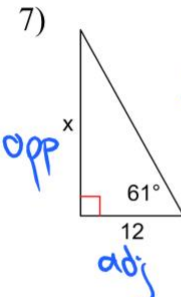
2)   $\cos(29) = \frac{14}{x}$   
 $x = \frac{14}{\cos(29)}$   
 $x = 16.007$  units

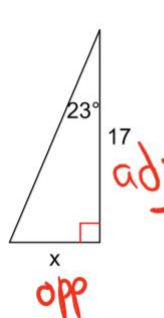
3)   $\sin(72) = \frac{x}{18}$   
 $x = 18 \cdot \sin(72)$   
 $x = 17.119$  units

4)   $\sin(39) = \frac{x}{17}$   
 $x = 17 \cdot \sin(39)$   
 $x = 10.698$  units

5)   $\cos(22) = \frac{14}{x}$   
 $x = \frac{14}{\cos(22)}$   
 $x = 15.099$  units

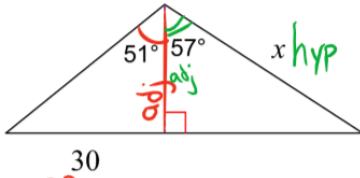
6)   $\cos(38) = \frac{x}{20}$   
 $x = 20 \cdot \cos(38)$   
 $x = 15.760$  units

7)   $\tan(61) = \frac{x}{12}$   
 $x = 12 \cdot \tan(61)$   
 $x = 21.649$  units

8)   $\tan(23) = \frac{x}{17}$   
 $x = 17 \cdot \tan(23)$   
 $x = 7.216$  units

Find the length of the side labeled  $x$ . Round intermediate values to the nearest tenth. Use the rounded values to calculate the next value. Round your final answer to the nearest tenth.

9)



$$\tan(51) = \frac{30}{y}$$

$$y = \frac{30}{\tan(51)}$$

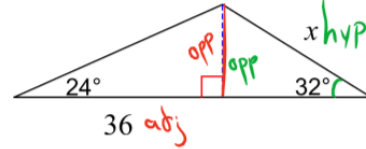
$$y = 24.3 \text{ units}$$

$$\cos(57) = \frac{24.3}{x}$$

$$x = \frac{24.3}{\cos(57)}$$

$$x = 44.6 \text{ units}$$

10)



$$\tan(24) = \frac{y}{36}$$

$$y = 36 \cdot \tan(24)$$

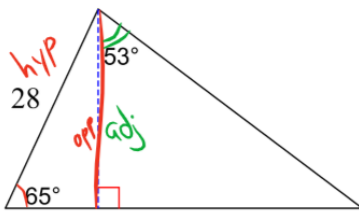
$$y = 16.0 \text{ units}$$

$$\sin(32) = \frac{16.0}{x}$$

$$x = \frac{16.0}{\sin(32)}$$

$$x = 30.2 \text{ units}$$

11)



$$\sin(65) = \frac{y}{28}$$

$$y = 28 \cdot \sin(65)$$

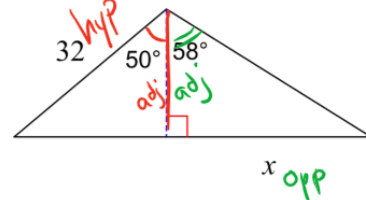
$$y = 25.4 \text{ units}$$

$$\tan(53) = \frac{x}{25.4}$$

$$x = 25.4 \cdot \tan(53)$$

$$x = 33.7 \text{ units}$$

12)



$$\cos(50) = \frac{y}{32}$$

$$y = 32 \cdot \cos(50)$$

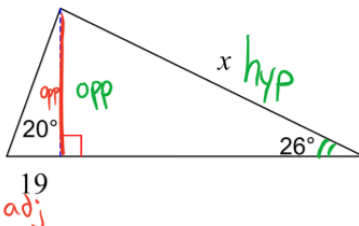
$$y = 20.6 \text{ units}$$

$$\tan(58) = \frac{x}{20.6}$$

$$x = 20.6 \cdot \tan(58)$$

$$x = 33.0 \text{ units}$$

13)



$$\tan(20) = \frac{y}{19}$$

$$y = 19 \cdot \tan(20)$$

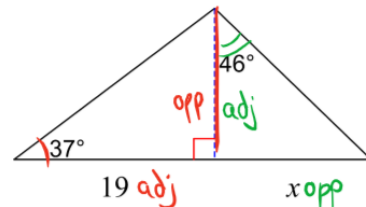
$$y = 6.9 \text{ units}$$

$$\sin(26) = \frac{6.9}{x}$$

$$x = \frac{6.9}{\sin(26)}$$

$$x = 15.7 \text{ units}$$

14)



$$\tan(37) = \frac{y}{19}$$

$$y = 19 \cdot \tan(37)$$

$$y = 14.3 \text{ units}$$

$$\tan(46) = \frac{x}{14.3}$$

$$x = 14.3 \cdot \tan(46)$$

$$x = 14.8 \text{ units}$$