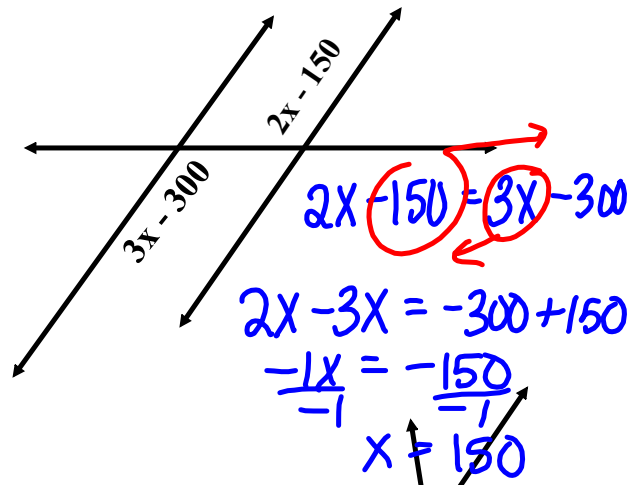
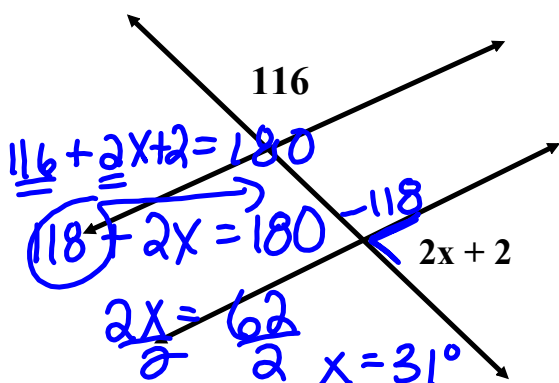
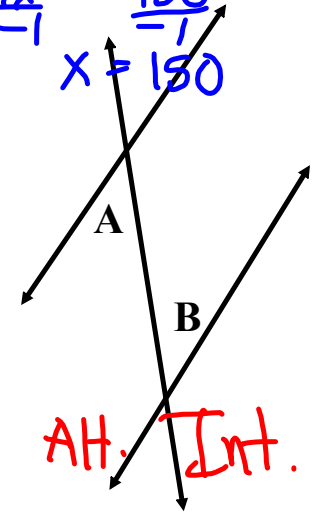
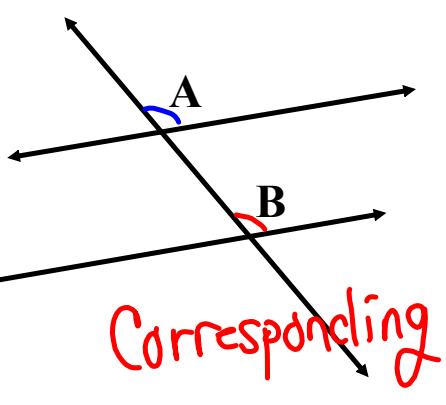
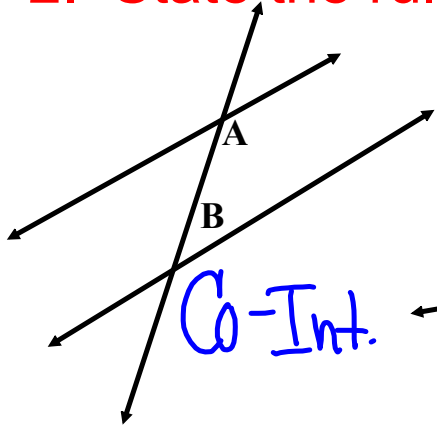


1. Solve for x



2. State the rule



Which of the following are a  
Pythagorean Triple

a) 14, 18, 29  
 $14^2 + 18^2 = 29^2$   
 $a^2 + b^2 = c^2$

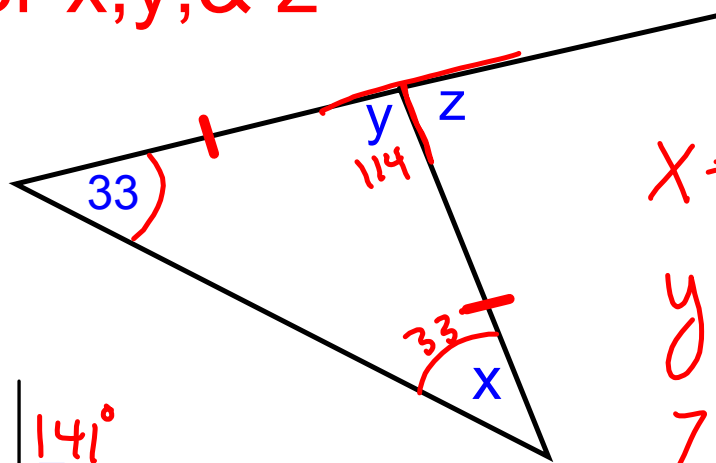
b) 11, 60, 61  
 $11^2 + 60^2 = 61^2$   
 $121 + 3600 = 3721$   
 $3721 = 3721$

c) 13, 84, 85

$13^2 + 84^2 = 85^2$   
 $169 + 7056 = 7225$   
 $7225 = 7225$

Solve for x, y, & z

a)



$$x = 33^\circ$$

$$y = 114^\circ$$

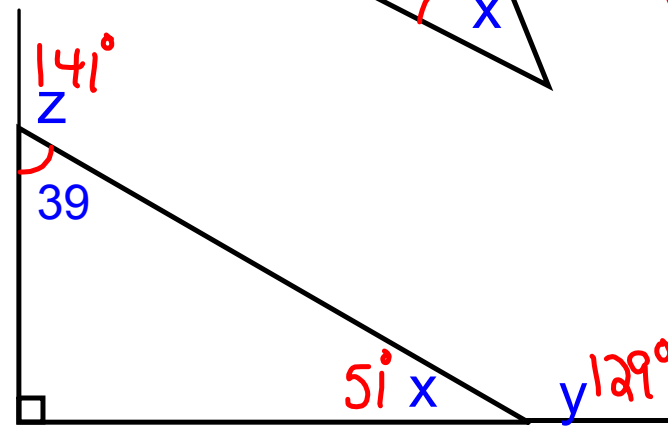
$$z = 66^\circ$$

$$z = 141^\circ$$

$$x = 51^\circ$$

b)

$$y = 129^\circ$$



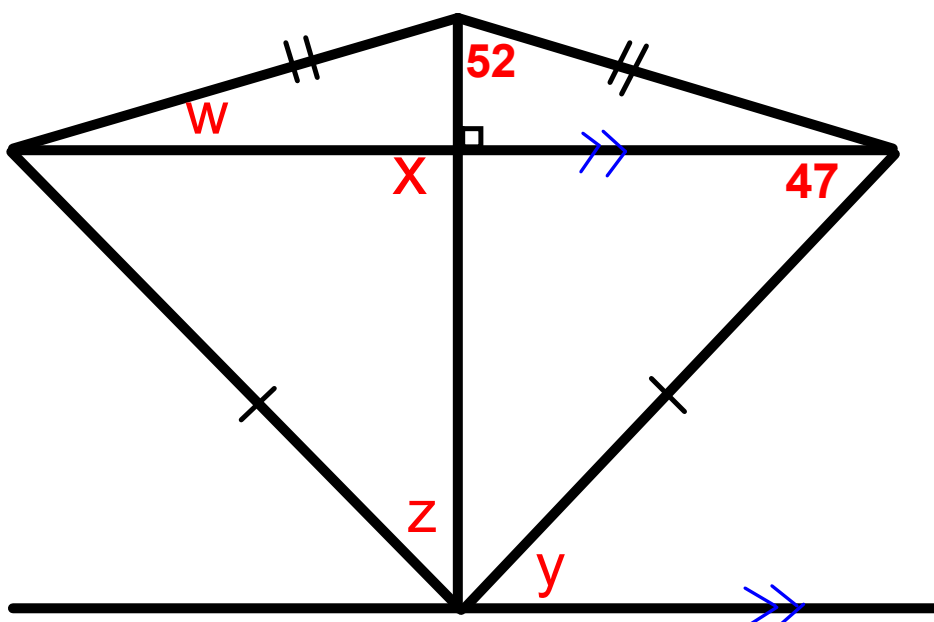
$$z = 141^\circ$$

$$39$$

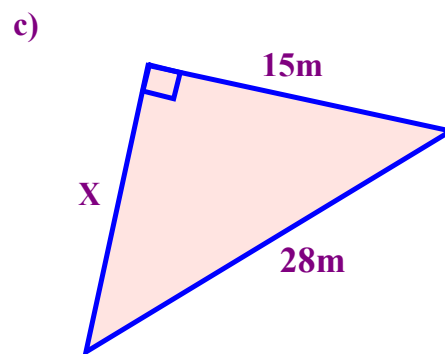
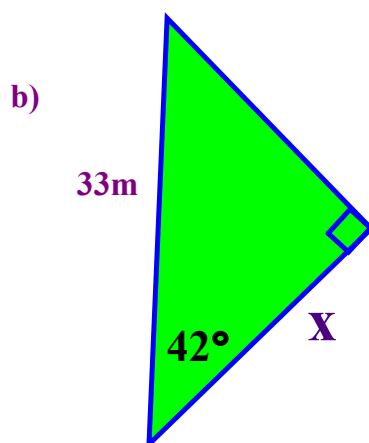
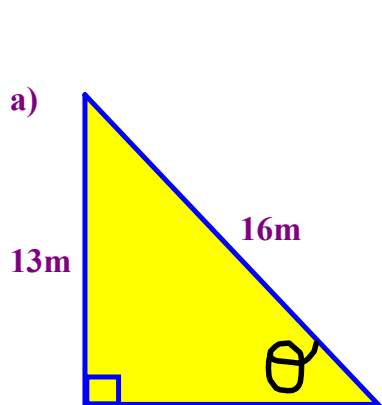
$$51^\circ x$$

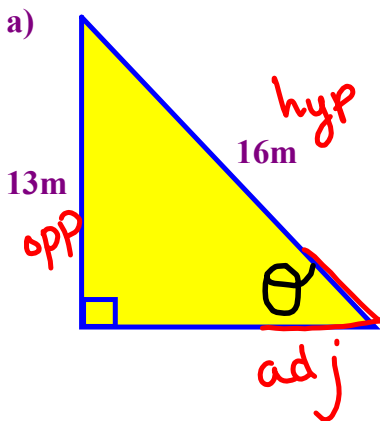
$$y = 129^\circ$$

Solve for  $w$ ,  $x$ ,  $y$ ,  $z$



Find the missing value





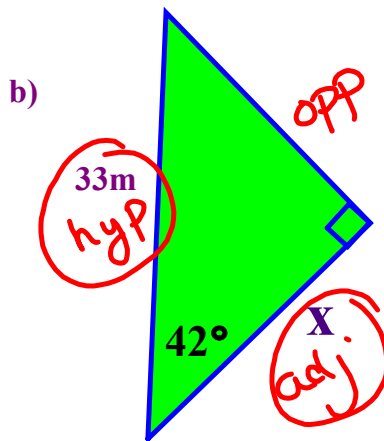
adj

$$\sin \theta = \frac{o}{h}$$

$$\sin \theta = \frac{13}{16}$$

$$\sin \theta = 0.8125$$

$$\theta = 54^\circ$$

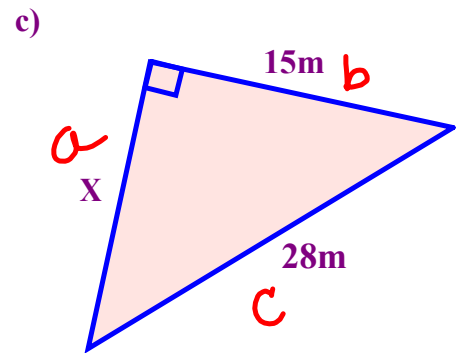


$$\cos \theta = \frac{a}{h}$$

$$\frac{\cos 42^\circ}{1} = \frac{x}{33}$$

$$0.7431 = \frac{x}{33}$$

$$x = 24.5$$



$$a^2 = c^2 - b^2$$

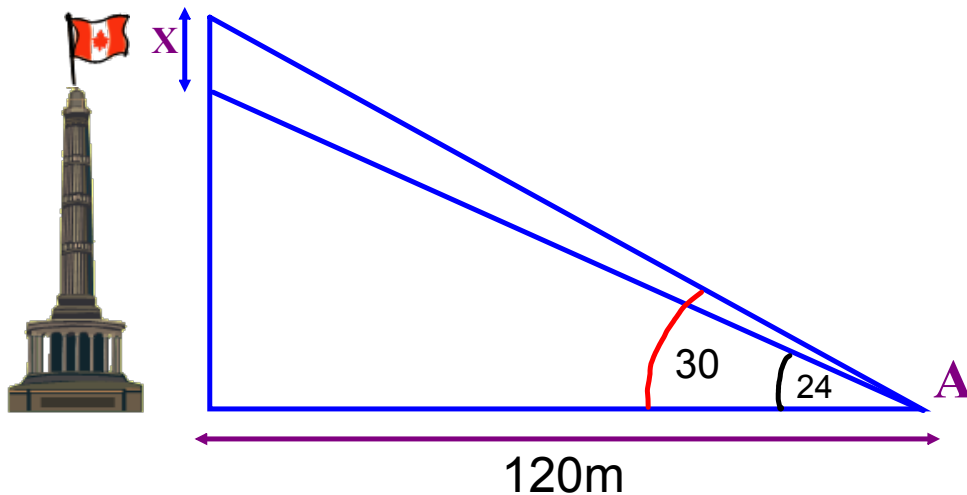
$$a^2 = 28^2 - 15^2$$

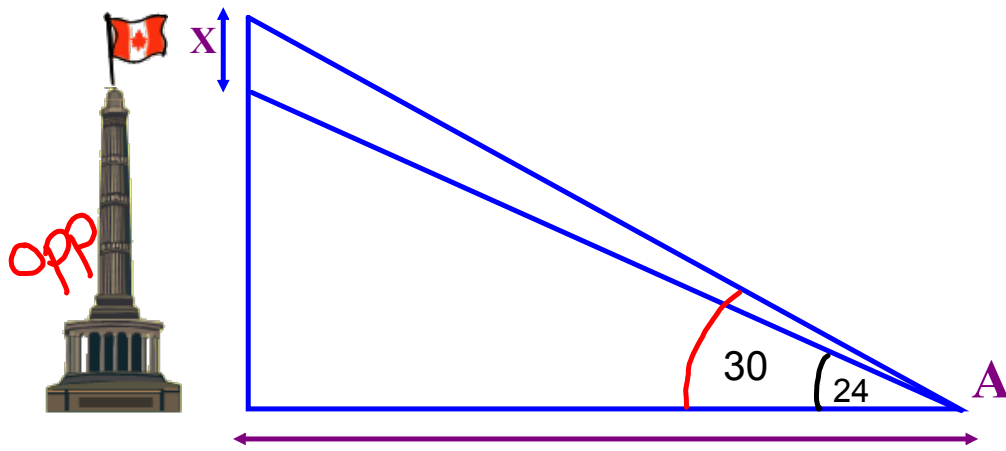
$$a^2 = 784 - 225$$

$$\sqrt{a^2} = \sqrt{559}$$

$$a = 23.6$$

The angle of elevation to the top of a building from point A is 24 degrees. Point A is located 120m from the base of the building. A flagpole is on the top of the building. The angle of elevation from point A to the top of the flagpole is 30 degrees. What is the length of the flagpole?





$$\begin{aligned} \tan \theta &= \frac{o}{a} \\ \tan 30^\circ &= \frac{x}{120} \\ \frac{0.5775}{1} &= \frac{x}{120} \\ x &= 69.3 \end{aligned}$$

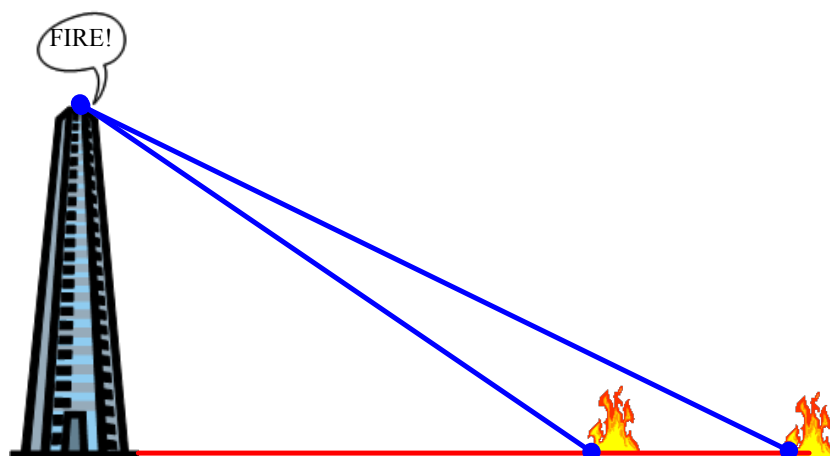
120m  
adj

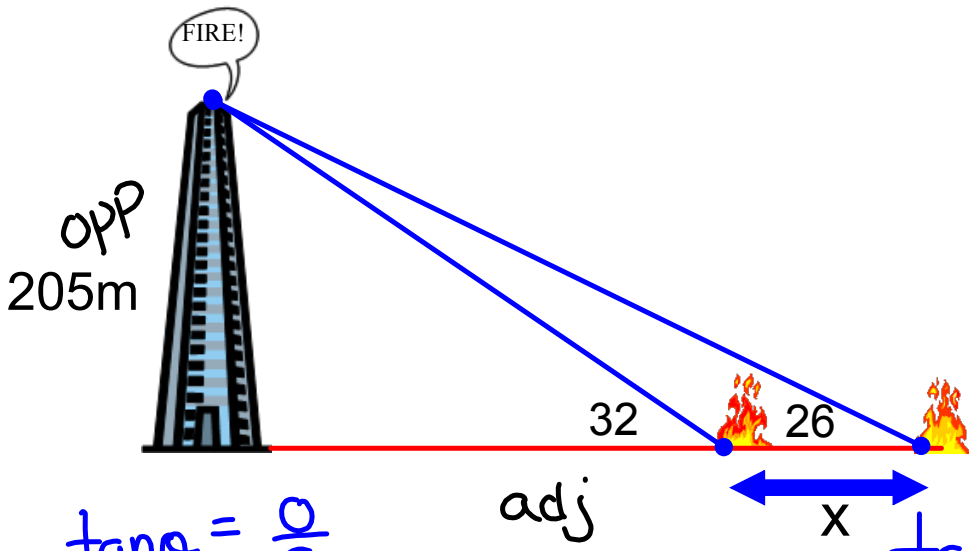
$$\begin{aligned} &69.3 \\ - &53.4 \\ \hline &15.9m \end{aligned}$$

$$\begin{aligned} \tan \theta &= \frac{o}{a} \\ \tan 24^\circ &= \frac{x}{120} \\ \frac{0.4452}{1} &= \frac{x}{120} \\ x &= 53.4 \end{aligned}$$



**A forest ranger in a tower 205 m high sights two fires in the same line of sight with the angles of depression of 26 and 32 degrees. How far apart are the fires?**





$$\tan \theta = \frac{o}{a}$$

$$\tan 32^\circ = \frac{205}{x}$$

$$0.6249 = \frac{205}{x}$$

$$\cancel{0.6249}x = \frac{205}{\cancel{0.6249}}$$

$$x = 328.1 \text{ m}$$

$$\begin{array}{r} 420.3 \\ - 328.1 \\ \hline = 92.2 \text{ m} \end{array}$$

$$\tan \theta = \frac{o}{a}$$

$$\tan 26^\circ = \frac{205}{x}$$

$$0.4877 = \frac{205}{x}$$

$$\cancel{0.4877}x = \frac{205}{\cancel{0.4877}}$$

$$x = 420.3$$