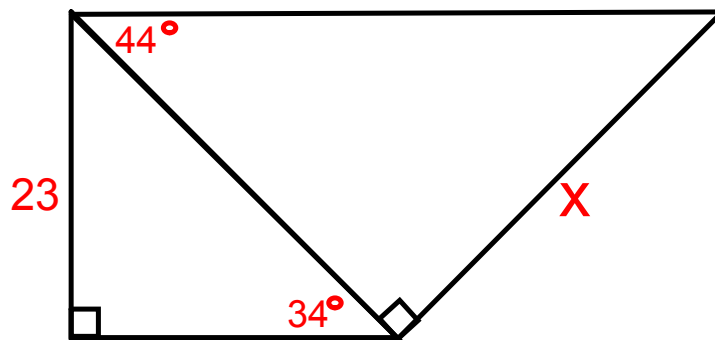
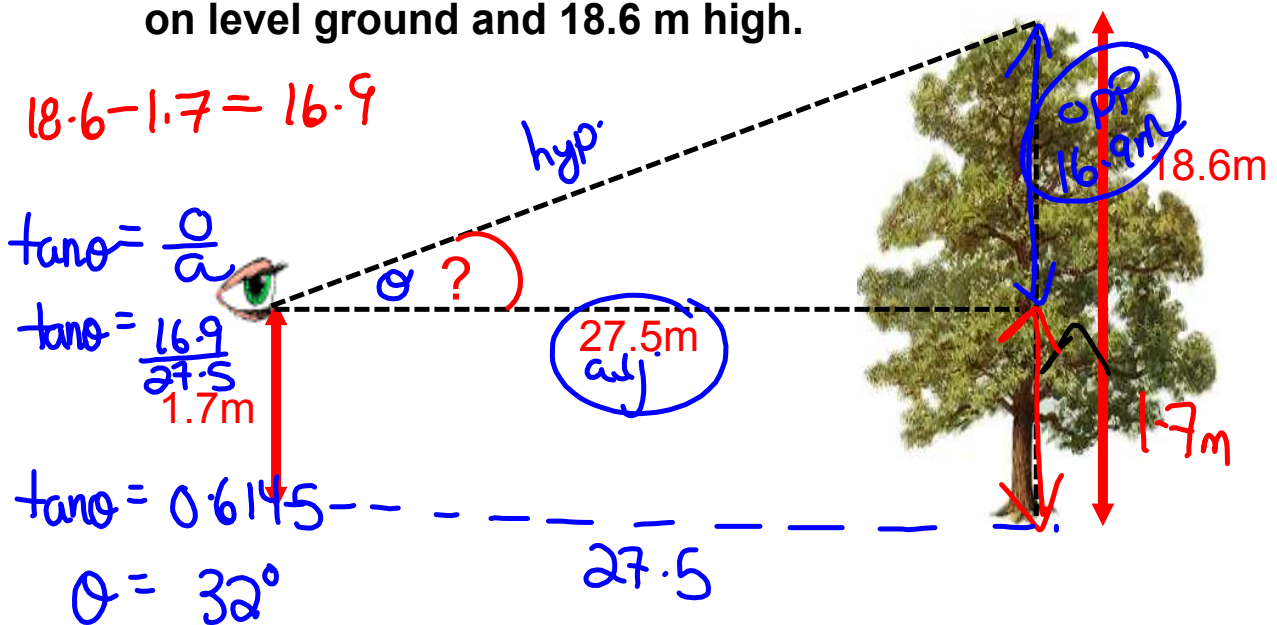


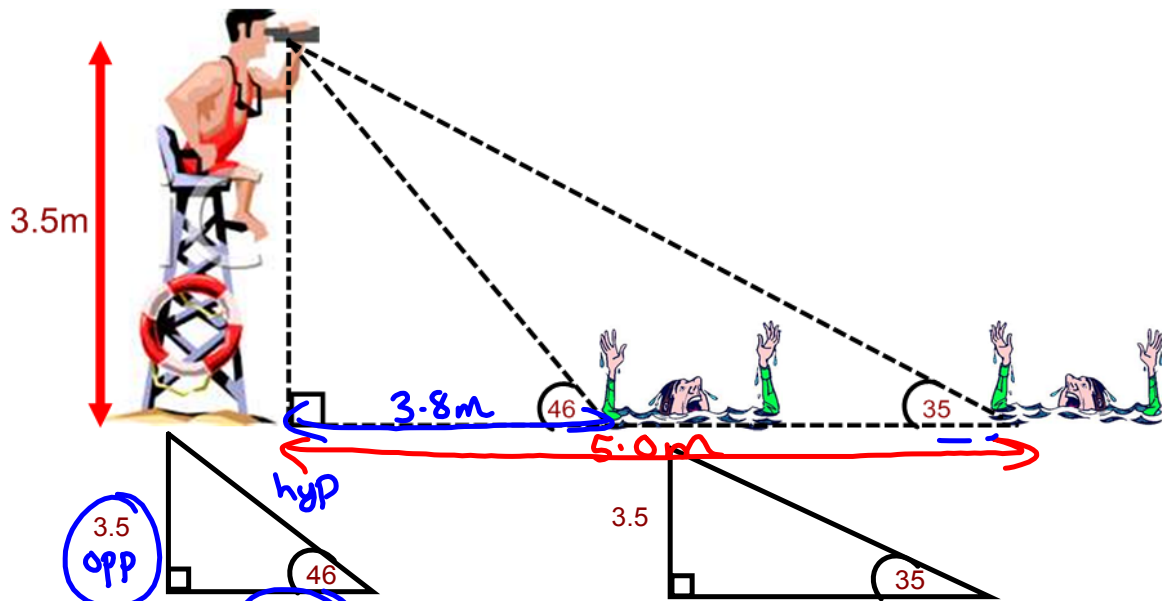
1. Calculate the angle of elevation of the line of sight of a person whose eye is 1.7 m above the ground, and is looking at the top of a tree which is 27.5 m away on level ground and 18.6 m high.
2. From his line of sight 3.5m high, a life guard sees two people in distress. The angles of depression to the individuals are 46 and 35 respectively. What is the distance between the two people in distress?
3. Solve for x



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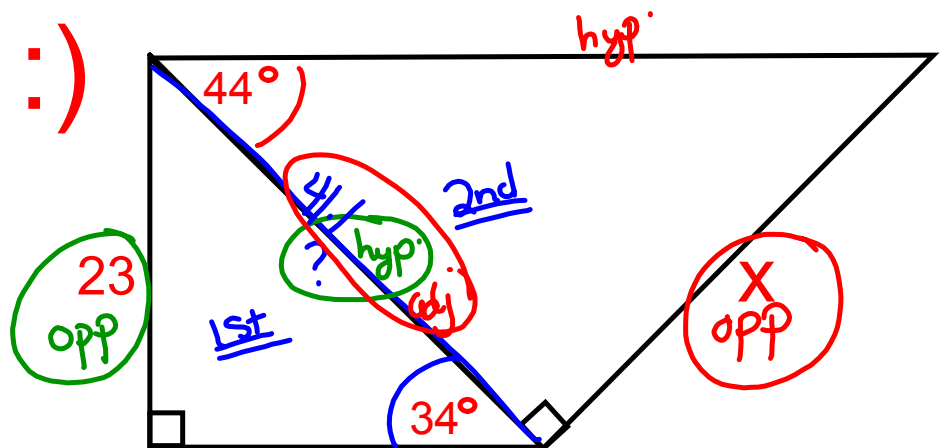


$\tan \theta = \frac{\text{opp}}{\text{adj}}$   
 $\tan 46^\circ = \frac{3.5}{x}$   
 $1.0355 = \frac{3.5}{x}$   
 $1.0355x = 3.5$   
 $x = 3.4$

$\tan \theta = \frac{\text{opp}}{\text{adj}}$   
 $\tan 35^\circ = \frac{3.5}{x}$   
 $0.7002 = \frac{3.5}{x}$   
 $0.7002x = 3.5$   
 $x = 5.0\text{m}$

$5 - 3.4 = 1.6\text{m}$

Find x :)



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

$$\sin 34^\circ = \frac{23}{x}$$

$$\frac{0.5592}{1} = \frac{23}{x}$$

$$\frac{0.5592x}{0.5592} = \frac{23}{0.5592}$$

$$x = 41.1$$

Solve for x: adj

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

$$\tan 44^\circ = \frac{x}{41.1}$$

$$\frac{0.9657}{1} = \frac{x}{41.1}$$

$$x = 39.7$$