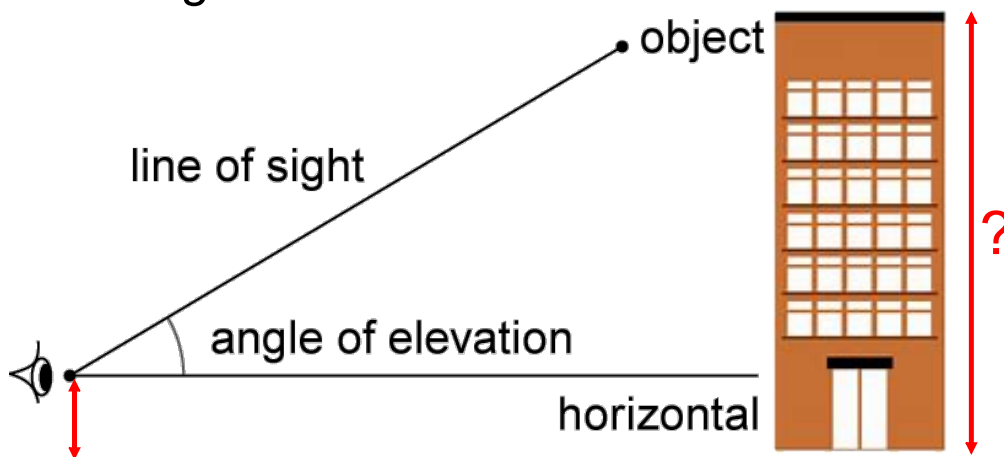
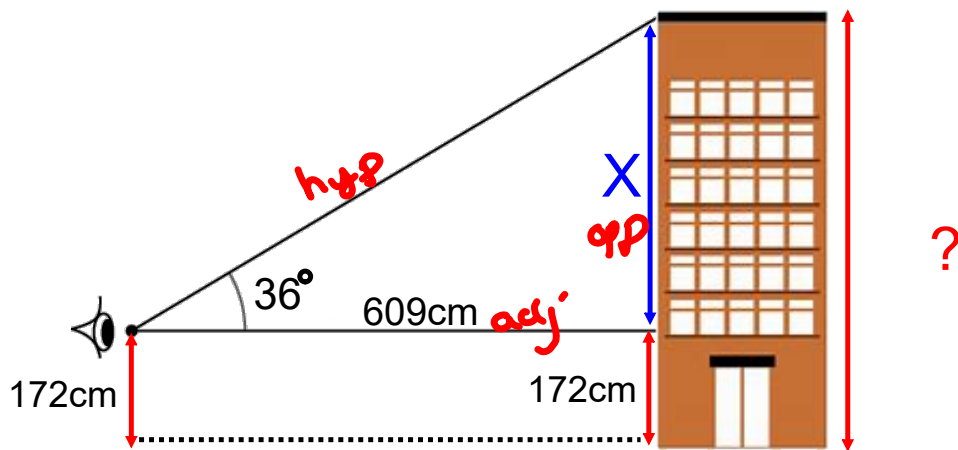


Jennifer, who is 172 cm in height, is using a clinometer and determines that the angle of elevation to the top of a nearby building is 36 degrees. If Jennifer is standing 609 cm away from the building, what is the height of the building?





$$\tan 36^\circ = \frac{o}{a}$$

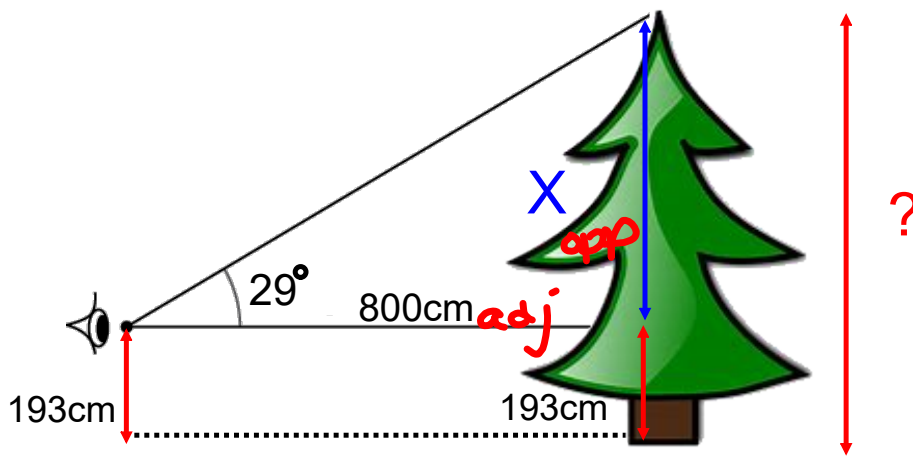
$$\tan 36 = \frac{x}{609}$$

$$\frac{0.7265}{1} = \frac{x}{609}$$

$$x = 442.5 \text{ cm}$$

$$\frac{442.5}{172.0} = 614.5 \text{ cm}$$

Tom, who is 193 cm in height, is using a clinometer and determines that the angle of elevation to the top of a nearby tree is 29 degrees. If Tom is standing 800 cm away from the tree, what is the height of the tree?



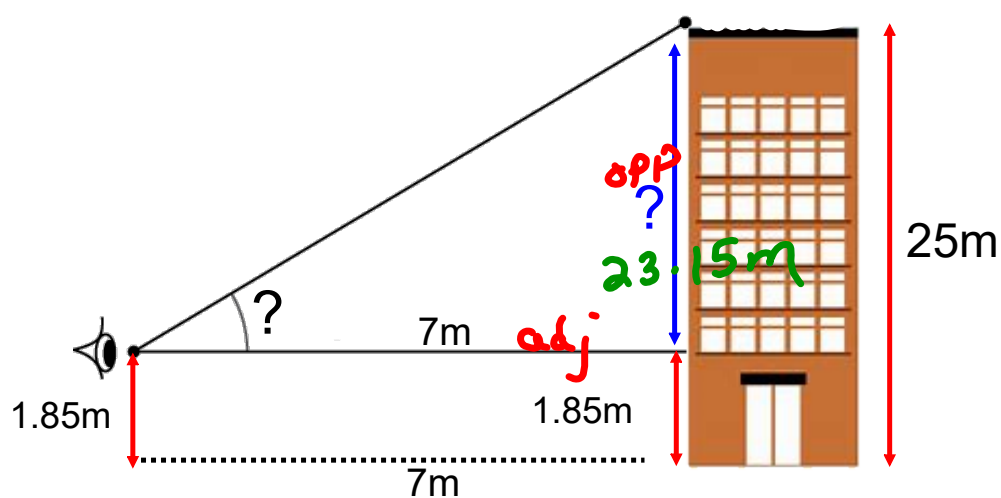
$$\frac{\tan 29^\circ}{1} = \frac{X}{800}$$

$$0.5543 = \frac{X}{800}$$

$$X = 443.4$$

$$443.4 + 193.0 = 636.4 \text{ cm}$$

Jack, who is 1.85 m in height, is using a clinometer to determine the angle of elevation to the top of a nearby building. Tom is standing 7 m away from the building. If Tom determines the height of the building to be 25m, what angle of elevation did the clinometer measure?



$$\tan \theta = \frac{23.15}{7m}$$

$$\tan \theta = 3.3071$$

$$\theta = 73^\circ$$