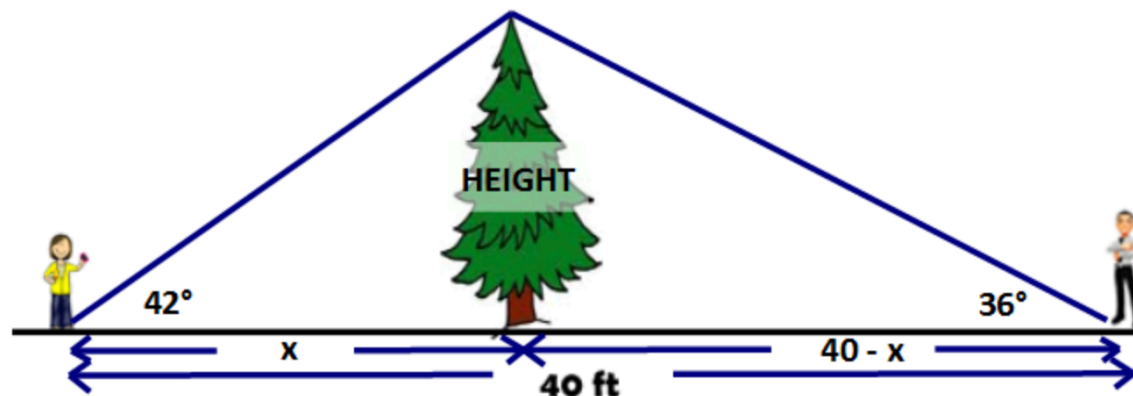**Height**: Given the horizontal distance between both persons is 40m retrieve the HEIGHT of their garden's pine, tree up to cm. Use GeoGebra freely for calculations (GeoGebra/View/CAS)

Solution

$$\tan 42° = \frac{h}{x}$$

$$h = (\tan 42°)(x)$$

$$\tan 36° = \frac{h}{40 - x}$$

$$h = (\tan 36°)(40 - x)$$

$$(\tan 42°)(x) = (\tan 36°)(40 - x)$$

$$(\tan 42°)(x) = (\tan 36°)(40) - (\tan 36°)(x)$$

$$(\tan 42°)(x) + (\tan 36°)(x) = (\tan 36°)(40)$$

$$1.63x = 29.06$$

$$x = 17.83$$

$$\tan 42° = \frac{h}{17.83}$$

$$h = (\tan 42°)(17.83)$$

$$h \approx 16.05$$