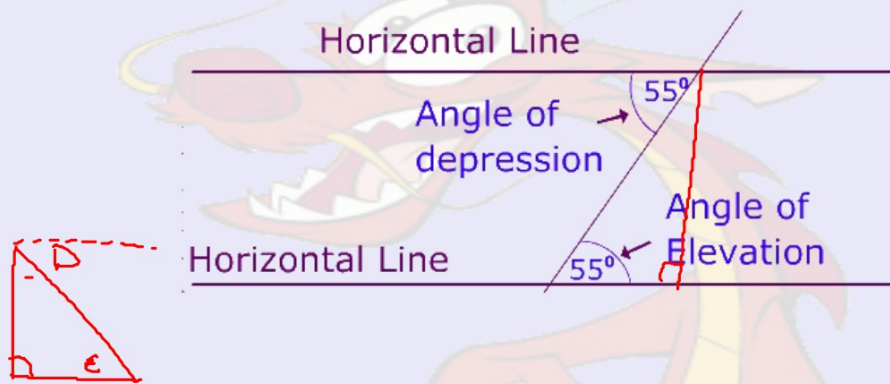


**Precalculus A**

**4.8 Solving Problems with Trig**

**Day One**

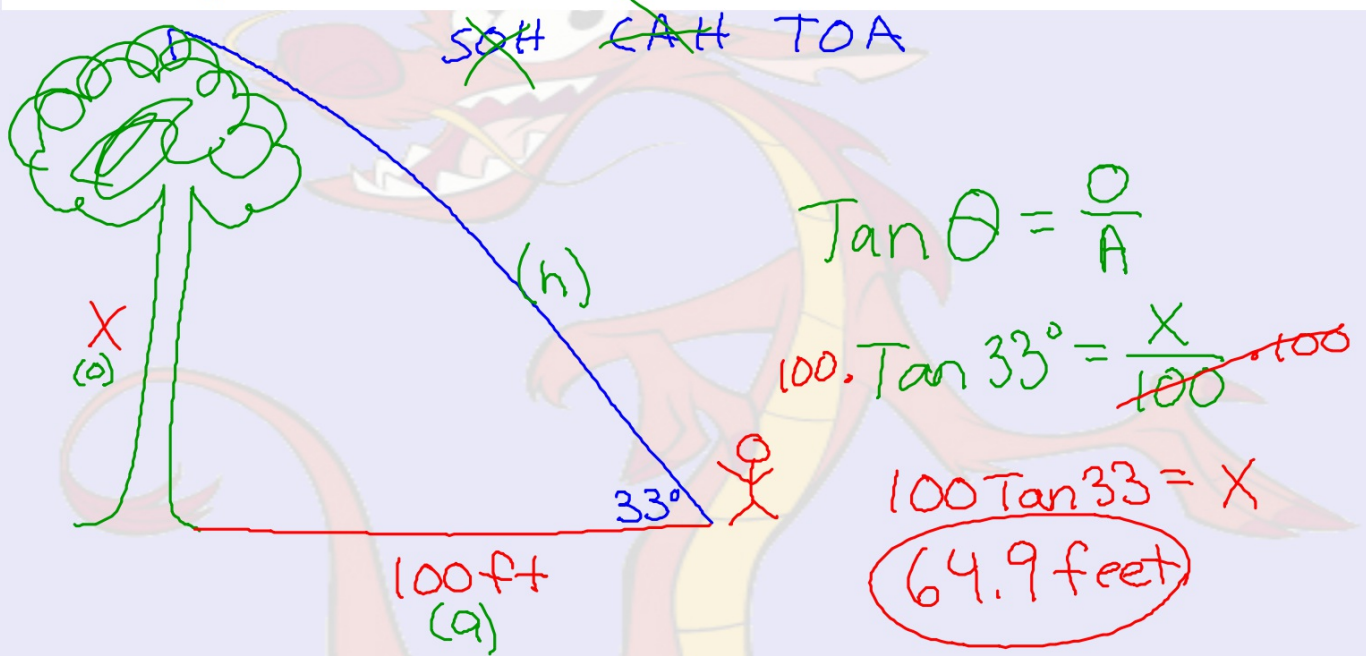
**Homework: Finish 4.8 HW #4**



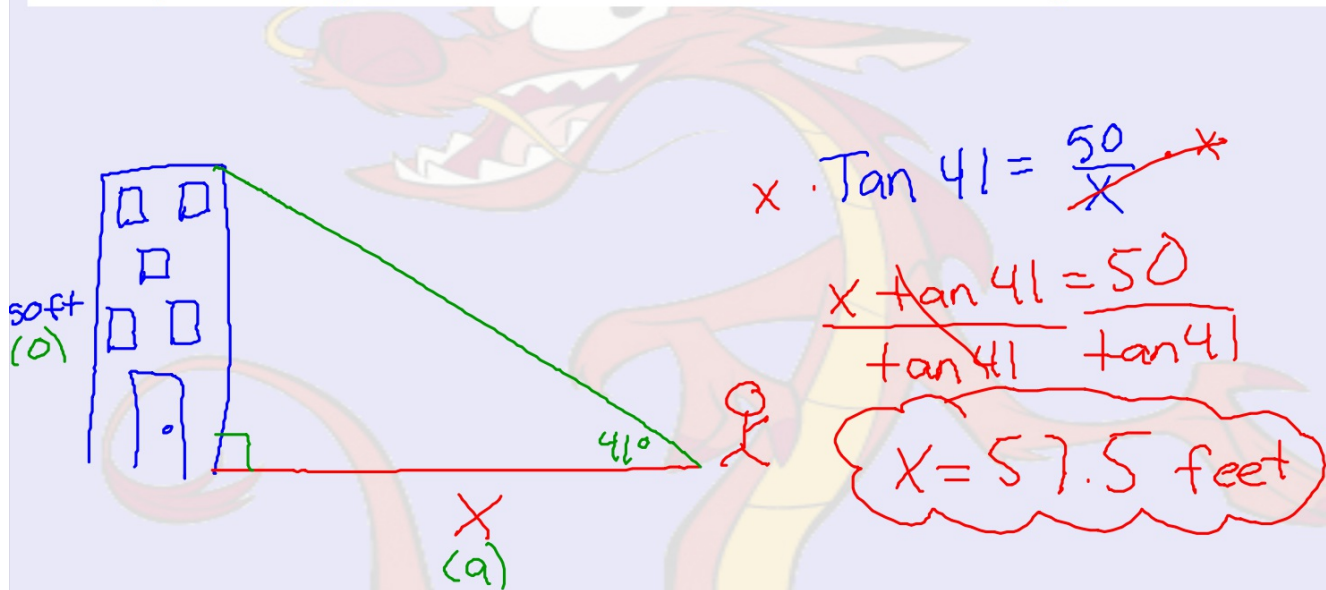
**The angle of elevation and the angle of depression are equal in measure because they are alternate interior angles.**

SOH CAH TOA

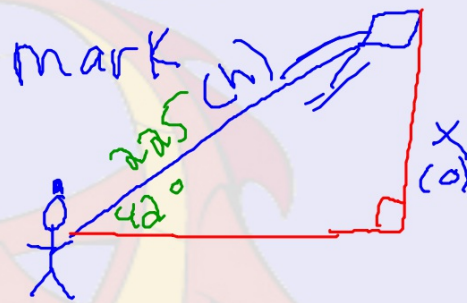
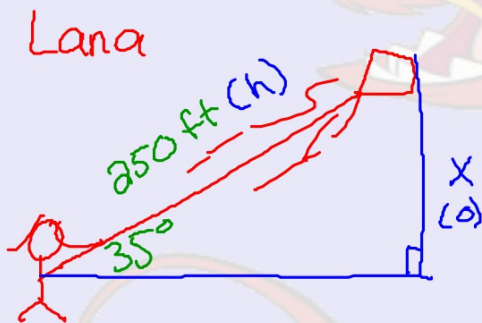
1. John wants to measure the height of a tree. He walks exactly 100 feet from the base of the tree and looks up at it from an angle of elevation of  $33^\circ$ . How tall is the tree?



2. A building is 50 feet tall. At a distance away from the building, an observer notices that the angle of elevation to the top of the building is  $41^\circ$ . How far is the observer from the base of the building?



7. Lana and Mark are flying kites on a windy spring day. Lana has released 250 feet of string, and Mark has released 225 feet of string. The angle of elevation of Lana's kite string is  $35^\circ$ . The angle of elevation of Mark's kite string is  $42^\circ$ . Which kite is higher and by how much?



$$\sin 35 = \frac{x}{250} \cdot 250$$

$$143.4 = x$$

$$\begin{array}{r} 150.6 \\ - 143.4 \\ \hline \end{array}$$

$$\sin 42 = \frac{x}{225} \cdot 225$$

$$150.6 = x$$

Mark 7.2 feet