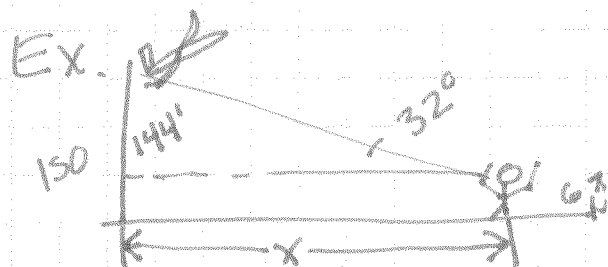
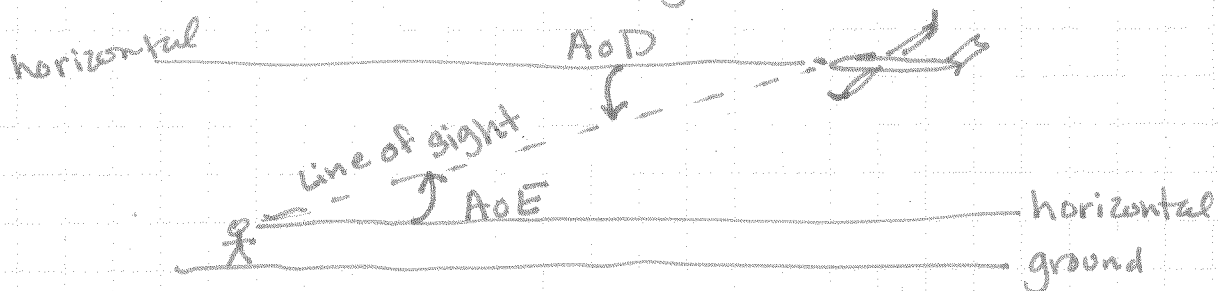


## 4.1. Triangle Trig Story Problems

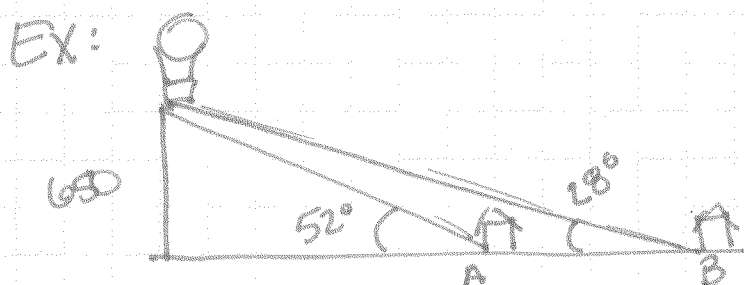
angle of elevation - angle above horizontal

angle of depression - angle below horizontal



$$\tan 32^\circ = \frac{144}{x}$$

$$x = \frac{144}{\tan 32^\circ} \approx \boxed{230.5'}$$



$$\tan 52^\circ = \frac{650}{a}$$

$$\tan 28^\circ = \frac{650}{b}$$

$$a = \frac{650}{\tan 52^\circ}$$

$$b = \frac{650}{\tan 28^\circ}$$

$$a = 507.8'$$

$$b = 1222.5'$$

$$x = b - a = 1222.5 - 507.8 = \boxed{714.7'}$$