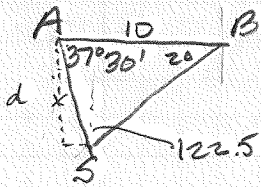


# LOS WS #1

①



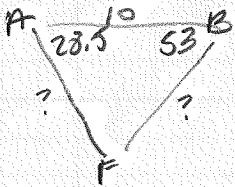
$$\frac{\sin 122.5}{10} = \frac{\sin 20}{x}$$

$$x = 4.06 \text{ miles}$$

$$\cos 52.5 = \frac{d}{4.06}$$

$$d = 2.47$$

②



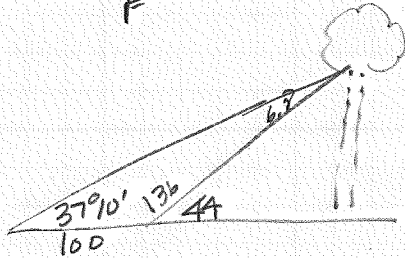
$$\frac{\sin 97.5}{10} = \frac{\sin 53}{AF}$$

$$AF = 8.06$$

$$\frac{\sin 97.5}{15} = \frac{\sin 28.5}{BF}$$

$$BF = 4.02 \text{ miles}$$

③



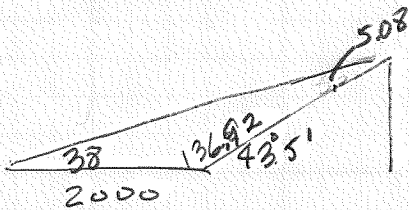
$$\frac{\sin 6.8}{100} = \frac{\sin 37}{x}$$

$$x = 516.2$$

$$\sin 44 = \frac{h}{516.2}$$

$$h = 354.48 \text{ ft}$$

④



$$\frac{\sin 5.08}{2000} = \frac{\sin 38}{x}$$

$$x = 13905.93 \text{ ft}$$

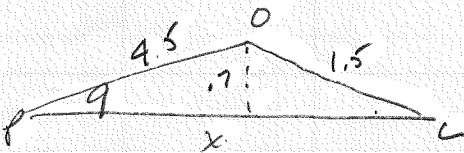
$$\sin 43.08 = \frac{h}{13905.93}$$

$$h = 9498.01$$

$$+ 5000$$

$$h = 14,498.01 \text{ ft}$$

⑤



$$\frac{\sin 9}{1.5} = \frac{\sin C}{4.5}$$

$$C = 28 \quad \text{or} \quad 143$$

$$c = 152 \quad \text{or} \quad 19$$

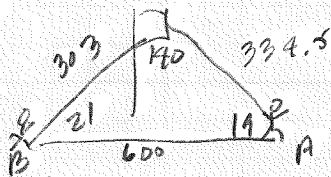
$$\frac{\sin 9}{1.5} = \frac{\sin 143}{x}$$

$$x = 5.77$$

$$\frac{\sin 9}{1.5} = \frac{\sin 28}{x}$$

$$x = 3.12$$

⑥



$$\frac{\sin 140}{600} = \frac{\sin 14}{a}$$

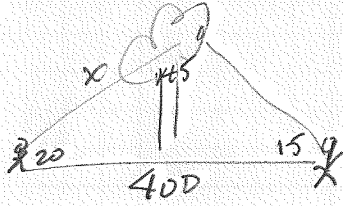
$$a = 303$$

$$\frac{\sin 140}{600} = \frac{\sin 21}{b}$$

$$b = 334.5$$

$$p = 303 (\sin 21) = 107.6 \text{ ft}$$

7



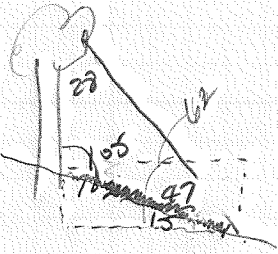
$$\frac{\sin 145}{400} = \frac{\sin 15}{x}$$

$$x = 190.5$$

$$\sin 20 = \frac{h}{180.5}$$

$$h = 61.7 \text{ ft}$$

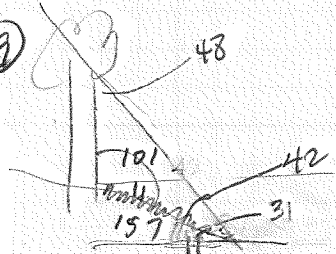
8



$$\frac{\sin 28}{102} = \frac{\sin 47}{h}$$

$$h = 158.9 \text{ ft}$$

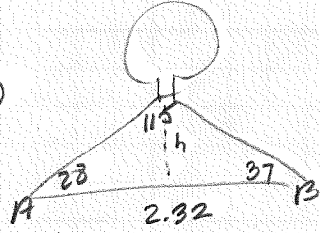
9



$$\frac{\sin 31}{h} = \frac{\sin 48}{157}$$

$$h = 108.8 \text{ ft}$$

10



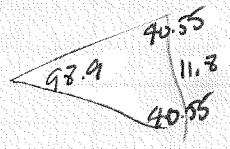
$$\frac{\sin 115}{2.32} = \frac{\sin 37}{h}$$

$$h = 1.54$$

$$1.54 \sin 28 = h$$

$$h = 0.72$$

11



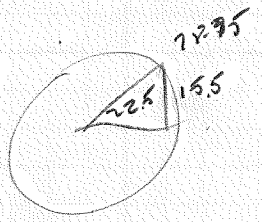
$$\frac{\sin 98.9}{11.7} = \frac{\sin 40.55}{R}$$

$$R = 7.76 \text{ mm}$$

$$AL = R \cdot \theta \quad 98.9 \cdot \frac{\pi}{180}$$

$$s = 13.4 \text{ mm}$$

12



$$\theta = 22.5$$

$$\frac{\sin 78.75}{x} = \frac{\sin 22.5}{15.5}$$

$$x = 39.73 \text{ ft}$$