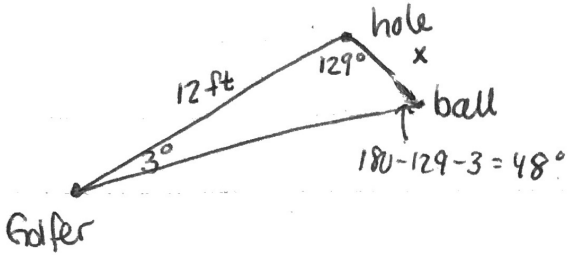


pg. 298

# 7, 9, 18, 25, 35, 56, 57

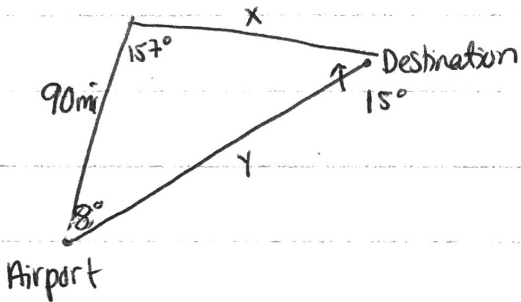
7.



$$\frac{\sin 3}{x} = \frac{\sin 48}{12}$$

$$x = 0.845 \text{ ft}$$

9.



$$\frac{\sin 8}{x} = \frac{\sin 15}{90}$$

$$x = 48.4 \text{ mi}$$

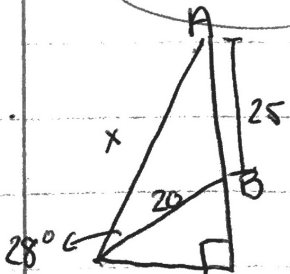
$$\frac{\sin 157}{y} = \frac{\sin 15}{90}$$

$$y = 135.87$$

a  $90 + 48.4 = 138.4 \text{ mi}$

b  $135.9 \text{ mi}$

18.



$$\frac{\sin 28}{25} = \frac{\sin A}{20}$$

$$\sin A = 0.3755$$

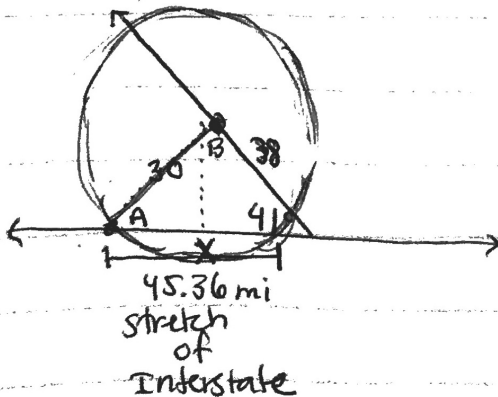
$$A = 22.06^\circ$$

$$B = 180 - 28 - 22 = 130^\circ$$

$$\frac{\sin 28}{25} = \frac{\sin 130}{B}$$

$$B = 40.8 \text{ ft}$$

25.



$$\frac{\sin 41}{30} = \frac{\sin A}{38}$$

$$\sin A = 0.831$$

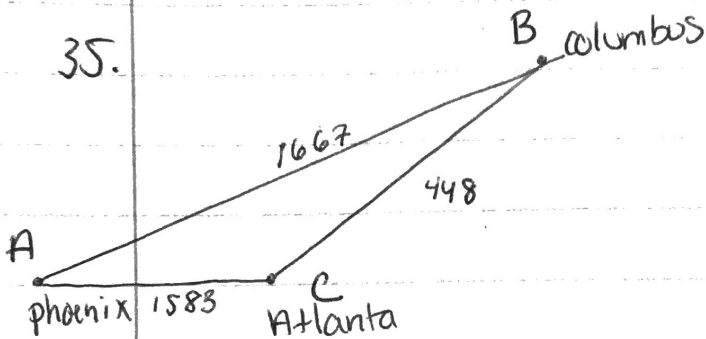
$$A = 56.2^\circ$$

$$B = 180 - 41 - 56.2 = 82.8^\circ$$

$$\frac{\sin 41}{30} = \frac{\sin 82.8}{x}$$

$$x = 45.36 \text{ mi}$$

35.



$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$448^2 = 1583^2 + 1667^2 - 2(1583)(1667) \cos A$$

$$-5084074 = 5277722 \cos A$$

$$0.9633 = \cos A$$

$$16^\circ = A$$

$$b^2 = a^2 + c^2 - 2ac \cos B$$

$$1583^2 = 448^2 + 1667^2 - 2(448)(1667) \cos B$$

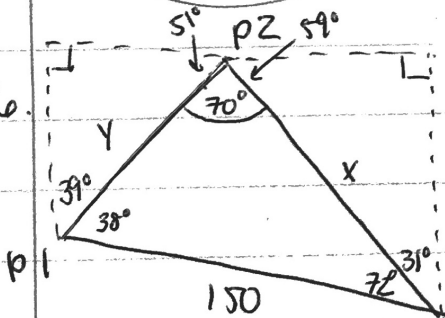
$$-473704 = -1493632 \cos B$$

$$0.31714 = \cos B$$

$$72^\circ = B$$

$$C = 180 - 72 - 16 = 92^\circ$$

56.



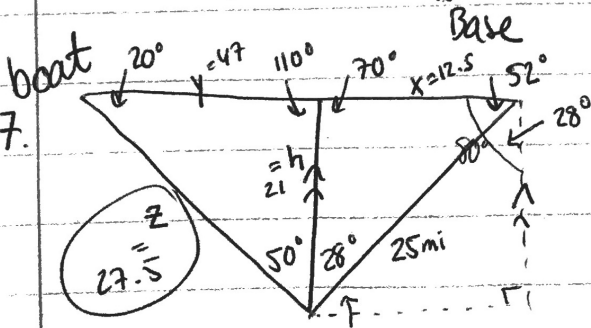
$$\frac{\sin 70}{150} = \frac{\sin 72}{y}$$

$$y = 151.8 \text{ ft}$$

$$\frac{\sin 70}{150} = \frac{\sin 38}{x}$$

$$x = 98.3 \text{ ft}$$

57.



$$\frac{\sin 28}{x} = \frac{\sin 70}{25}$$

$$x = 12.5$$

$$\frac{\sin 52}{h} = \frac{\sin 70}{25}$$

$$h = 21$$

$$\frac{\sin 20}{21} = \frac{\sin 110}{z}$$

$$z = 27.5$$

$$\frac{\sin 50}{y} = \frac{\sin 20}{21}$$

$$y = 47$$

$$x + y = 12.5 + 47 = 59.5$$