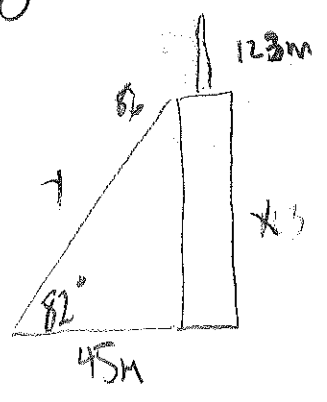


4.3 Day 2 p309-310 # 63, 65-68

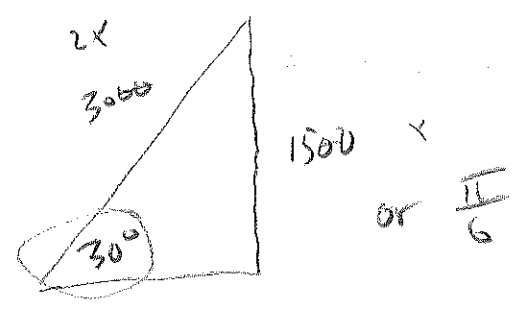
63



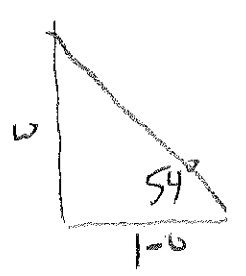
a) $\tan 82^\circ = \frac{x}{45}$
 $x = 45(\tan 82^\circ)$
 $x \approx 320.19 \text{ m}$
 $\frac{+123 \text{ m}}{443.19 \text{ m}}$

b) $\cos 82^\circ = \frac{45}{y}$
 $y = \frac{45}{\cos 82^\circ}$
 $\approx 323.34 \text{ m}$

65

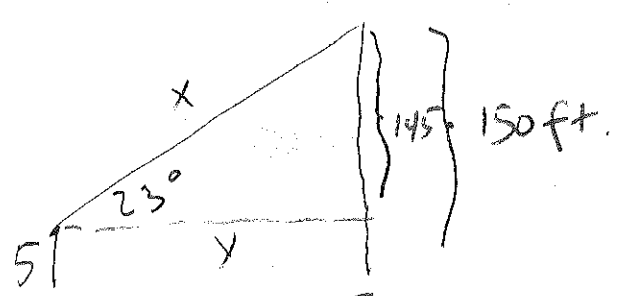


66



$\tan 54^\circ = \frac{w}{100}$
 $w = 100(\tan 54^\circ) \approx 137.64 \text{ ft}$

67



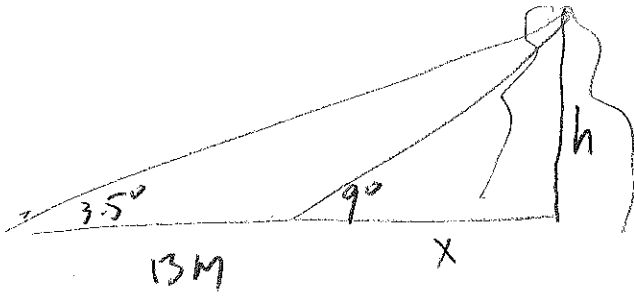
a) $\sin 23^\circ = \frac{145}{x}$
 $x = \frac{145}{\sin 23^\circ} \approx 371.1 \text{ ft}$

c) $\frac{371.1 \text{ ft}}{6 \text{ s}} \approx 61.85 \frac{\text{ft}}{\text{s}}$

b) $\tan 23^\circ = \frac{145}{y}$
 $y = \frac{145}{\tan 23^\circ} \approx 371.6 \text{ ft}$

Vertically
 $\frac{145}{6} \approx 24.2 \frac{\text{ft}}{\text{s}}$

15



$$\tan 3.5^\circ = \frac{h}{13+x}$$

$$h = (13+x)\tan 3.5^\circ = 13\tan 3.5^\circ + x\tan 3.5^\circ$$

$$\tan 9^\circ = \frac{h}{x}$$

$$h = x\tan 9^\circ$$

$$x\tan 9^\circ = 13\tan 3.5^\circ + x\tan 3.5^\circ$$

$$x\tan 9^\circ - x\tan 3.5^\circ = 13\tan 3.5^\circ$$

$$x(\tan 9^\circ - \tan 3.5^\circ) = 13\tan 3.5^\circ$$

$$x = \frac{13\tan 3.5^\circ}{\tan 9^\circ - \tan 3.5^\circ} \approx 8.178350$$

$$h \approx 8.178350(\tan 9^\circ) \approx 1.3 \text{ M}$$