

HW Answers Unit 5 Lesson 6 p. 312 Odds #57 - 67

57. $\tan 30^\circ = \frac{y}{105}$

$y = 105 \cdot \tan 30^\circ = 105 \frac{\sqrt{3}}{3} = 35\sqrt{3} \approx 60.6218$

59. $\cot 60^\circ = \frac{x}{38}$

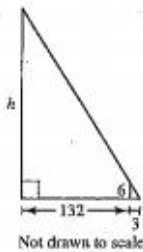
$\frac{\sqrt{3}}{3} = \frac{x}{38}$

$\frac{38\sqrt{3}}{3} = x$

61. $\sin 50^\circ = \frac{y}{15}$

$y = 15 \cdot \sin 50^\circ \approx 11.4907 \approx 11.5$

63. (a)



(b) $\tan \theta = \frac{6}{3}$ and $\tan \theta = \frac{h}{135}$

Thus, $\frac{6}{3} = \frac{h}{135}$

(c) $\frac{135 \cdot 6}{3} = h = 270$ feet

65. $\tan \theta = \frac{\text{opp}}{\text{adj}}$

$\tan 58^\circ = \frac{w}{100}$

$w = 100 \tan 58^\circ \approx 160.0$ feet

67. (a)



(b) $\sin \theta = \frac{\text{opp}}{\text{hyp}}$

$\sin \theta = \frac{10/3}{20} = \frac{1}{6}$

(c) $\sin \theta = \frac{1}{6} \Rightarrow \theta = 9.59^\circ$