

Chapter 8 Review Solutions

- 1) $\sin\theta = \frac{7\sqrt{65}}{65}$, $\cos\theta = \frac{4\sqrt{65}}{65}$, $\tan\theta = \frac{4}{7}$
 $\csc\theta = \frac{\sqrt{65}}{7}$, $\sec\theta = \frac{\sqrt{65}}{4}$, $\cot\theta = \frac{7}{4}$
- 2) $\sin\theta = \frac{5\sqrt{41}}{41}$, $\cos\theta = \frac{4\sqrt{41}}{41}$, $\tan\theta = \frac{4}{5}$
 $\csc\theta = \frac{\sqrt{41}}{5}$, $\sec\theta = \frac{\sqrt{41}}{4}$, $\cot\theta = \frac{5}{4}$
- 3) $\sin\theta = \frac{6}{7}$, $\cos\theta = \frac{\sqrt{13}}{7}$, $\tan\theta = \frac{6\sqrt{13}}{13}$
 $\csc\theta = \frac{7}{6}$, $\sec\theta = \frac{\sqrt{65}}{4}$, $\cot\theta = \frac{\sqrt{13}}{6}$
- 4) a = 5.2
c = 6
A = 60°
- 5) c = 5
A = 53.13°
B = 36.87°
- 6) b = 4.77
c = 6.23
B = 50°
- 7) 13°
- 8) 200 ft
- 9) 31,744 ft
- 10) B = 45°, a = 9, c = 12.73
- 11) C = 10°, b = 5.24, c = 0.92
- 12) B = 90°, C = 60°, c = 36.4
- 13) two triangles
 $A_1 = 30^\circ$, $C_1 = 124^\circ$, $c_1 = 12.3$;
 $A_2 = 150^\circ$, $C_2 = 4^\circ$, $c_2 = 1$
- 14) 1.7 mi
- 15) no triangle
- 16) 1.47 mi
- 17) 26.29 m
- 18) 19.41 ft
- 19) 3.35 mi
- 20) c = 8.95, A = 33.8°, B = 51.2°
- 21) c = 54.98, A = 55.5°, B = 9.5°
- 22) a = 6.36, B = 47.6°, C = 62.4°
- 23) A = 57.1°, B = 44.4°, C = 78.5°
- 24) A = 21.8°, B = 60.1°, C = 98.1°
- 25) A = 87.4°, B = 57.3°, C = 35.3°
- 26) 61.7 ft
- 27) 270.8 mi
- 28) 70.92
- 29) 177.99
- 30) 28 cans
- 31) 71 ft²