

6. 29.7 m
 7. a) 48.3 m
 b) The surveyor could use the tangent ratio or the Pythagorean Theorem.
 8. 4.0 km
 9. 2813 m
 10. 18.3 cm by 4.6 cm
 11. a) 423 cm b) 272 cm
 12. a) i) 21.0 cm ii) 15.1 cm
 13. 186 mm
 14. a) Approximately 139 ft.
 b) $17\,407\text{ ft.}^2$

Chapter 2: Checkpoint 2, page 104

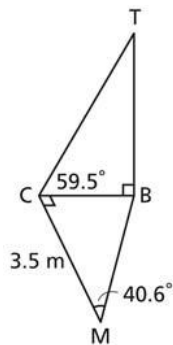
1. a) 30° b) 48°
 c) 56°
 2. 13°
 3. a) i) 0.9848... ii) 0.9396...
 iii) 0.8660... iv) 0.7660...
 v) 0.6427... vi) 0.5
 vii) 0.3420... viii) 0.1736...
 4. a) 4.2 cm b) 2.7 cm
 c) 14.0 cm
 5. Approximately 3.2 km

2.6 Applying the Trigonometric Ratios, page 111

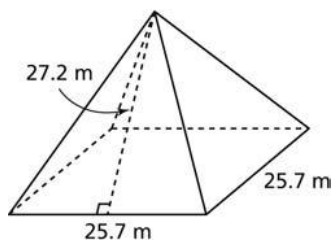
3. a) Sine b) Tangent
 c) Cosine d) Tangent
 4. a) 4.6 cm; cosine b) 4.7 cm; tangent
 c) 11.8 cm; sine d) 14.5 cm; cosine
 5. a) Pythagorean Theorem b) Sine ratio
 c) Pythagorean Theorem d) Pythagorean Theorem
 6. a) $\angle T = 57^\circ$, $TU \doteq 23.0\text{ cm}$, $VU \doteq 19.2\text{ cm}$
 b) $\angle Y = 43^\circ$, $WY \doteq 8.7\text{ cm}$, $XY \doteq 6.3\text{ cm}$
 c) $ZB \doteq 11.3\text{ cm}$, $\angle B \doteq 60.3^\circ$, $\angle Z \doteq 29.7^\circ$
 d) $\angle E = 61^\circ$, $CD \doteq 12.0\text{ cm}$, $CE \doteq 6.6\text{ cm}$
 7. a) 1147 cm b) 1144 cm
 8. 173 ft.
 9. a) 68 km b) 31°
 10. a) 4° b) 15.0 m
 11. a) 31° b) 118°
 12. a) 13.5 cm; 7.8 cm^2 b) 28.9 cm; 47.5 cm^2
 13. 7.3 cm
 14. a) 3 in.^2 b) 15 in.^3
 15. 36 cm
 16. 15.6 cm; 11.6 cm^2

2.7 Solving Problems Involving More than One Right Triangle, page 118

3. a) 6.0 cm b) 6.0 cm
 c) 4.3 cm d) 3.6 cm
 4. a) 5.7 cm b) 4.9 cm
 c) 5.7 cm
 5. a) 93.2° b) 123.7°
 c) 11.1° d) 15.0°
 6. 15 m, 19 m
 7. 51° , 65° , 65°
 8. a) 19 ft. b) 21 ft.
 9. 35 m, 58 m
 10. Approximately 126° , approximately 54°
 11. 4.5 m
 12. a) 53 m b) 29 m
 c) 50 m
 13. a) 5.0 m b) 51.3°
 c) 2.4 m
 14. a) 23 m b) 20 m
 16. a)



- b) 5.1 m
 17. a) 98.1° , 51.7° , 105.1° , 105.1°
 b) 100 mm
 18. a)



- b) 24.0 m
 19. a) 5.4 cm b) 33.9°
 20. Approximately 8.3 m
 21. Approximately 18 in.