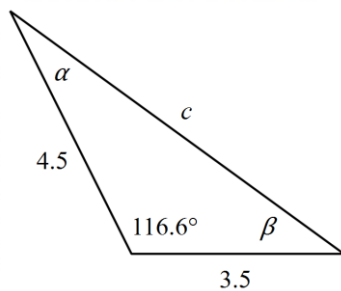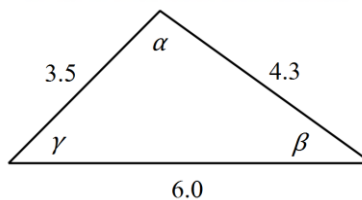Name_____ Date_____ Per_____

Solve each triangle. Round to the nearest tenth.

1.

2.

Draw and label a triangle with the given parts. Then solve the triangle. Round to the nearest tenth.

3. $a = 17.7, \ b = 15.6, \ c = 19.3$

4. $a = 6.2, \ b = 8.3, \ \gamma = 31.9°$

Draw and label a triangle with the given parts. Then solve the triangle. Round to the nearest tenth.

5. $a = 20.4$, $c = 34.6$, $\beta = 75°$

6. $a = 36.6$, $b = 32.5$, $c = 59.2$

7. $a = 5.3$, $\beta = 20°$, $\gamma = 60°$

Solve each problem.

8. What is the length of the chord intercepted by a central angle of 24° on a circle of radius 1.5 inches? Round to the nearest tenth of an inch.

9. John and Sarah left the airport at the same time. John flew at 180 mph on a course with bearing 65° and Sarah flew at 240 mph on a course with bearing 307°. How far apart were they after 3 hours?

Find the area of each triangle with the given parts. Round to the nearest tenth.

10. $b = 14.4$, $c = 8.1$, $\alpha = 22.5°$
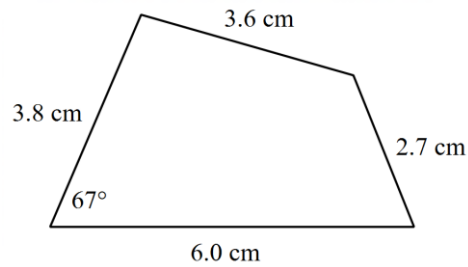
11. $\alpha = 41.5°$, $\beta = 92.6°$, $c = 53.5$

12. $\beta = 27.1°$, $\gamma = 31.8°$, $c = 8.2$

13. $a = 4$, $b = 9$, $c = 7$

14. $a = 98.2$, $b = 47.3$, $c = 65.1$

Find the area of the region to the nearest whole number of square units.

15.

3.6 cm

3.8 cm

2.7 cm

67°

6.0 cm

Solve the problem.

16. A surveyor locating the corners of a triangular piece of property started at one corner and walked 300 feet in the direction of S20°W to reach the next corner, then turned and walked S50°E to reach the next corner of the property. Finally, the surveyor walked in the direction N30°W to get back to the starting point. What is the area of the property in square feet? Round to the nearest tenth.