**If the given angle is in standard position, find two positive coterminal angles and two negative coterminal angles**.

1. (a) 120° (b) 135° (c) -30° (d) 620°

(e) (f) (g) (h)

**Find the angle that is complementary to θ.**

2. (a) θ = 5°17'34" (b) θ = 32.5°

**Find the angle that is supplementary to θ.**

3. (a) θ = 48°51'37" (b) θ = 136.42°

**Find the exact radian measure of the angle.**

4. (a) 150° (b) -60° (c) 225°

(d) 450° (e) 72° (f) 100°

**Find the exact degree measure of the angle.**

5. (a) (b) (c)

(d) (e) (f) 7π

**Express θ in terms of degrees, minutes, and seconds, to the nearest second.**

6. θ = 2 7. θ = 5

**Express the angle as a decimal, to the nearest ten-thousandth of a degree.**

8. 37°41' 9. 115°26'27"

**Express the angle in terms of degrees, minutes, and seconds, to the nearest second.**

10. 63.169° 11. 310.6215°

**If a circular arc of the given length *s* subtends the central angle θ on a circle, find the radius of the circle.**

12. s = 10 cm, θ = 4 13. s = 3 km, θ = 20°

**Find (a) the length of the arc and (b) the area of the circle sector.**

14. central angle θ = 45°, r = 8 cm.

**Find (a) the radian and degree measures of the central angle θ subtended by the given arc of length s on a circle of radius r and (b) find the area of the sector determined by θ.**

15. s = 7 cm, r = 4 cm

16. A wheel of the given radius 5 in. is rotating at the rate of 40 rpm. Find the angular speed (in radians per minute).

17. A typical tire for a compact car is 22 inches in diameter. If the car is traveling at a speed of 60 mi/hr, find the number of revolutions the tire makes per minute.

18. A vender sells two sizes of pizza by the slice. The small slice is of a circular 18-inch-diameter pizza, and it sells for $2.00. The large slice is of a circular 26-inch-diameter pizza, and it sells for $3.00. Which slice provides more pizza per dollar?