

## Section 4.1 Extra Practice

1. Draw each angle in standard position. In what quadrant does each angle lie?
  - a)  $215^\circ$
  - b)  $-70^\circ$
  - c)  $110^\circ$
  - d)  $-300^\circ$
2. Draw each angle in standard position. Name the quadrant in which the angle lies.
  - a)  $\frac{2\pi}{3}$
  - b)  $\frac{3\pi}{4}$
  - c)  $\frac{\pi}{6}$
  - d)  $\pi$
3. Change the degree measures to radians. Give answers as both exact and approximate measures to the nearest hundredth of a unit.
  - a)  $150^\circ$
  - b)  $240^\circ$
  - c)  $45^\circ$
  - d)  $310^\circ$
4. Change the radian measures to degrees. Round to two decimal places if necessary.
  - a)  $\frac{4\pi}{5}$
  - b)  $\frac{5\pi}{6}$
  - c)  $\frac{11\pi}{16}$
  - d)  $-\frac{7\pi}{4}$
5. Change the radian measures to degrees, rounding to the nearest whole degree.
  - a) 3.2
  - b) 4
  - c) 6
  - d) -2.5
6. Determine the two subsequent positive angles that are coterminal with the given angle. Round approximate measures to the nearest hundredth of a unit.
  - a)  $450^\circ$
  - b)  $\frac{\pi}{5}$
  - c) 1.7
7. Explain how you would find the subsequent negative angle that is coterminal with each given angle.
  - a)  $40^\circ$
  - b)  $\frac{9\pi}{4}$
  - c) 0.8
8. Write an expression for all the angles that are coterminal with each given angle.
  - a)  $75^\circ$
  - b)  $\frac{\pi}{3}$
  - c) 1
9. A circle with a radius of 16.2 cm is drawn on a large piece of cardboard. A central angle of  $74^\circ$  is drawn. What is the length of the arc subtended by this angle, rounded to the nearest tenth of a cm?
10. The radius of a circle is 7 cm, and the length of an arc on the circle is 10 cm. In radians, what is the central angle that subtends this arc length? Give your answer to the nearest hundredth of a unit.

