Angles and Angle Measure

Draw an angle with the given measure in standard position.

1. 210°



2.305°



3.580°



4. 135°



5. -450°



6. -560°



Rewrite each degree measure in radians and each radian measure in degrees.

10.
$$347^{\circ}$$

14.
$$-165^{\circ}$$

15.
$$4\pi$$

16.
$$\frac{5\pi}{2}$$

17.
$$\frac{13\pi}{5}$$

18.
$$\frac{13\pi}{30}$$

19.
$$-\frac{9\pi}{2}$$

20.
$$-\frac{7\pi}{12}$$

21.
$$-\frac{3\pi}{8}$$

22.
$$-\frac{3\pi}{16}$$

Find one angle with positive measure and one angle with negative measure coterminal with each angle.

29.
$$\frac{2\pi}{5}$$

30.
$$\frac{5\pi}{6}$$

31.
$$\frac{17\pi}{6}$$

32.
$$-\frac{3\pi}{2}$$

33.
$$-\frac{\pi}{4}$$

34.
$$-\frac{5\pi}{12}$$

- 35. TIME Find both the degree and radian measures of the angle through which the hour hand on a clock rotates from 5 A.M. to 10 A.M.
- 36. ROTATION A truck with 16-inch radius wheels is driven at 77 feet per second (52.5 miles per hour). Find the measure of the angle through which a point on the outside of the wheel travels each second. Round to the nearest degree and nearest radian.