

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Convert the angle from degrees to radians. Express the answer as a multiple of π .

- 1) 45°
- 2) -30°
- 3) 210°
- 4) 810°

Convert the angle from radians to degrees.

- 5) $-\frac{\pi}{2}$
- 6) $\frac{8}{3}\pi$
- 7) $\frac{11\pi}{12}$

Find the complement and the supplement of the given angle. If the angle has no complement or supplement state so.

- 8) 25°
- 9) 150°

Find the radian measure of a central angle of the circle of radius r that intercepts the arc of length s . Round your answer to three decimal places.

- 10) $r = 2$ meters, $s = 8$ meters

Find the length of the arc on the circle of radius r meters intercepted by a central angle θ . Round your answer to three decimal places.

- 11) $r = 3$, $\theta = 75^\circ$
- 12) $r = 2$, $\theta = \frac{\pi}{6}$ radians

Solve the problem.

- 13) Find the area of a sector of a circle of radius 20 inches formed by a central angle of 90° . Round your answer to two decimal places.
- 14) A car wheel has a 16-inch radius. Through what angle (to the nearest tenth of a degree) does the wheel turn when the car rolls forward 5 ft?
- 15) Two pulleys of diameter 6 meters and 3 meters are connected by a belt. The larger pulley rotates 47 times per minute. Find the angular speed of the smaller pulley.
- 16) A wheel with a 15-inch diameter is turning at the rate of 56 revolutions per minute. To the nearest inch per minute, what is the linear speed of a point on the rim?