5.1 Trigonometry short version

Name_____

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

The given angle is in standard position. Determine the quadrant in which the angle lies.

1) –315°

1) _____

2) –244°

2) _____

3) –141°

3) _____

4) 347°

4) _____

Perform the indicated operation.

5) $\frac{\pi}{11} + 2\pi$

5) _____

6) $\pi - \frac{\pi}{6}$

6) _____

7) $\pi + \frac{\pi}{8}$

7) _____

Classify the angle as acute, right, obtuse, or straight.

8) 48°

8) _____

9) 95°

9) _____

10) 12.6°

10) _____

11) 116.103°

11) _____

12) π

12) _____

13) $\frac{\pi}{9}$

13) _____

14) $\frac{3\pi}{5}$

14) _____

Find the radian measure of the central angle of a circle of radius r that intercepts an arc of length s.

15) $r = \frac{1}{2}$ feet, s = 14 feet

15) _____

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

16) 480°

16) _____

17) – 144°

17) _____

Convert the angle in radians to degrees.

18) $-\dfrac{\pi}{4}$

18) _____

19) $\dfrac{9}{10}\pi$

19) _____

20) $-\dfrac{5\pi}{4}$

20) _____

Convert the angle in radians to degrees. Round to two decimal places.

21) 4 radians

21) _____

Find the radian measure of the central angle of a circle of radius r that intercepts an arc of length s.

22) r = 1 meter, s = 200 centimeters

22) _____

Draw the angle in standard position.

23) $\dfrac{13\pi}{6}$

23) _____

24) –120°

24) _____

Find a positive angle less than 360° or 2π that is coterminal with the given angle.

25) –890°

25) _____

26) $\dfrac{21\pi}{10}$

26) _____

Find the length s. Round the answer to three decimal places.

27)

27) _____

35°

s

4 ft
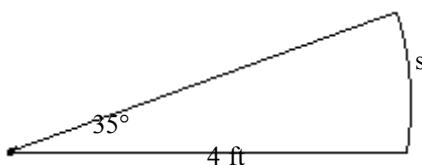
Solve the problem.

28) A car wheel has a 14–inch radius. Through what angle (to the nearest tenth of a degree) does the wheel turn when the car rolls forward 2 ft?

28) _____

29) Find the measure of the smaller angle formed by the hands of the clock shown.   29) _____
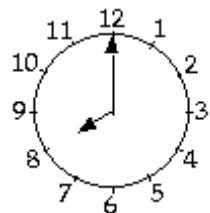
Find the measures of two angles, one positive and one negative, that are coterminal with the given angle.

30) 27°   30) _____

31) -149°   31) _____

32) $\dfrac{\pi}{7}$ 32) _____

1) Quadrant I
2) Quadrant II
3) Quadrant III
4) Quadrant IV

5) $\dfrac{\pi}{11}$

6) $\dfrac{5\pi}{6}$

7) $\dfrac{9\pi}{8}$

8) acute
9) obtuse
10) acute
11) obtuse
12) straight
13) acute
14) obtuse
15) 28 radians

16) $\dfrac{8\pi}{3}$ radians

17) $-\dfrac{4\pi}{5}$ radians

18) –45°
19) 162°
20) -225°
21) 229.18°
22) 2 radians
23)

24)
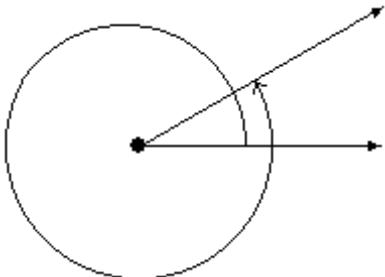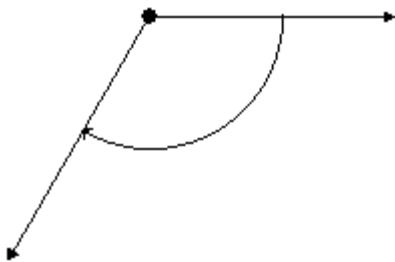
25) 190°

26) $\dfrac{\pi}{10}$

27) 2.443 ft

28) 98.2°

29) 120°

30) 387°, -333°

31) 211°, -509°

32) $\dfrac{15\pi}{7}$, $-\dfrac{13\pi}{7}$