

4-2 Practice

Degrees and Radians

Write each decimal degree measure in DMS form and each DMS measure in decimal degree form to the nearest thousandth.

1. 28.955

2. -57.3278

3. $32^{\circ} 28' 10''$

4. $-73^{\circ} 14' 35''$

Write each degree measure in radians as a multiple of π and each radian measure in degrees.

5. 25°

6. 130°

7. $\frac{3\pi}{4}$

8. $\frac{5\pi}{3}$

Identify all angles that are coterminal with the given angle. Then find and draw one positive and one negative angle coterminal with the given angle.

9. 43°

10. $-\frac{7\pi}{4}$

Find the length of the intercepted arc with the given central angle measure in a circle of the given radius. Round to the nearest tenth.

11. 30° , $r = 8$ yd

12. $\frac{7\pi}{6}$, $r = 10$ in.

Find the rotation in revolutions per minute given the angular speed and the radius given the linear speed and the rate of rotation.

13. $\omega = \frac{4}{5}\pi$ rad/s

14. $V = 32$ m/s, 100 rev/min

15. On a game show, a contestant spins a wheel. The angular speed of the wheel was $\omega = \frac{\pi}{3}$ radians per second. If the wheel maintained this rate, what would be the rotation in revolutions per minute?

Find the area of each sector.

16. $\theta = \frac{\pi}{6}$, $r = 14$ in.

17. $\theta = \frac{7\pi}{4}$, $r = 4$ m