NAME _____ DATE _____ PERIOD _____

Practice

Angles and Radian Measure

Change each degree measure to radian measure in terms of π.

1. $-250°$

$-\dfrac{25\pi}{18}$

2. $6°$

$\dfrac{\pi}{30}$

3. $-145°$

$-\dfrac{29\pi}{36}$

4. $870°$

$\dfrac{29\pi}{6}$

5. $18°$

$\dfrac{\pi}{10}$

6. $-820°$

$-\dfrac{41\pi}{9}$

Change each radian measure to degree measure. Round to the nearest tenth, if necessary.

7. 4π

720°

8. $\dfrac{13\pi}{30}$

78°

9. -1

−57.3°

10. $\dfrac{3\pi}{16}$

33.8°

11. -2.56

−146.7°

12. $-\dfrac{7\pi}{9}$

−140°

Evaluate each expression.

13. $\tan \dfrac{\pi}{4}$

1

14. $\cos \dfrac{3\pi}{2}$

0

15. $\sin \dfrac{3\pi}{2}$

−1

16. $\tan \dfrac{11\pi}{6}$

$-\dfrac{\sqrt{3}}{3}$

17. $\cos \dfrac{3\pi}{4}$

$-\dfrac{\sqrt{2}}{2}$

18. $\sin \dfrac{5\pi}{3}$

$-\dfrac{\sqrt{3}}{2}$

Given the measurement of a central angle, find the length of its intercepted arc in a circle of radius 10 centimeters. Round to the nearest tenth.

19. $\dfrac{\pi}{6}$

5.2 cm

20. $\dfrac{3\pi}{5}$

18.8 cm

21. $\dfrac{\pi}{2}$

15.7 cm

Find the area of each sector, given its central angle θ and the radius of the circle. Round to the nearest tenth.

22. $\theta = \dfrac{\pi}{6}, r = 14$

51.3 units^2

23. $\theta = \dfrac{7\pi}{4}, r = 4$

44.0 units^2

Angle

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So, 6400 r

Example

Change e

1. 1600 m

$\dfrac{\pi}{2}$

3. 4800 m

$\dfrac{3\pi}{2}$

Change e
answers t

5. $\dfrac{\pi}{8}$

400 n

7. $\dfrac{\pi}{12}$

266.7