5-3

NAME _____ DATE _____ PERIOD _____

Practice

Trigonometric Functions on the Unit Circle

Use the unit circle to find each value.

1. csc 90°
1

2. tan 270°
undefined

3. sin (−90°)
−1

Use the unit circle to find the values of the six trigonometric functions for each angle.

4. 45°

$\sin 45° = \frac{\sqrt{2}}{2}$ $\csc 45° = \sqrt{2}$

$\cos 45° = \frac{\sqrt{2}}{2}$ $\sec 45° = \sqrt{2}$

$\tan 45° = 1$ $\cot 45° = 1$

5. 120°

$\sin 120° = \frac{\sqrt{3}}{2}$ $\csc 120° = \frac{2\sqrt{3}}{3}$

$\cos 120° = -\frac{1}{2}$ $\sec 120° = -2$

$\tan 120° = -\sqrt{3}$ $\cot 120° = -\frac{\sqrt{3}}{3}$

Find the values of the six trigonometric functions for angle θ in standard position if a point with the given coordinates lies on its terminal side.

6. (−1, 5)

$\sin \theta = \frac{5\sqrt{26}}{26}$

$\cos \theta = -\frac{\sqrt{26}}{26}$

$\tan \theta = -5$

$\csc \theta = \frac{\sqrt{26}}{5}$

$\sec \theta = -\sqrt{26}$

$\cot \theta = -\frac{1}{5}$

7. (7, 0)

$\sin \theta = 0$

$\cos \theta = 1$

$\tan \theta = 0$

$\csc \theta$ = undefined

$\sec \theta = 1$

$\cot \theta$ = undefined

8. (−3, −4)

$\sin \theta = -\frac{4}{5}$

$\cos \theta = -\frac{3}{5}$

$\tan \theta = \frac{4}{3}$

$\csc \theta = -\frac{5}{4}$

$\sec \theta = -\frac{5}{3}$

$\cot \theta = \frac{3}{4}$

5-3

Areas of

A regular poly
measure. A r
about a circle
formulas can

Area of circle

Area of inscri

Area of circun

Use a calcula

	Number of Sides
	3
1.	4
2.	8
3.	12
4.	20
5.	24
6.	28
7.	32
8.	1000

9. What num
polygons s
polygon in

π