Name _____ Date _____ Period ___

Using the Unit Circle to Find Coterminal Angles

Find the angle in degrees $[0°, 360°)$ and radians $[0, 2\pi)$ on the unit circle that matches the given ordered pair. Then find all 6 trigonometric ratios for the found angle.

1. $\left(\frac{1}{2}, -\frac{\sqrt{3}}{2}\right)$ $\qquad \theta =$ _____

$\sin\theta =$ _____ $\qquad\qquad \cos\theta =$ _____ $\qquad\qquad \tan\theta =$ _____

$\csc\theta =$ _____ $\qquad\qquad \sec\theta =$ _____ $\qquad\qquad \cot\theta =$ _____

2. $\left(-\frac{\sqrt{3}}{2}, -\frac{1}{2}\right)$ $\qquad \theta =$ _____

$\sin\theta =$ _____ $\qquad\qquad \cos\theta =$ _____ $\qquad\qquad \tan\theta =$ _____

$\csc\theta =$ _____ $\qquad\qquad \sec\theta =$ _____ $\qquad\qquad \cot\theta =$ _____

3. $(0, -1)$ $\qquad \theta =$ _____

$\sin\theta =$ _____ $\qquad\qquad \cos\theta =$ _____ $\qquad\qquad \tan\theta =$ _____

$\csc\theta =$ _____ $\qquad\qquad \sec\theta =$ _____ $\qquad\qquad \cot\theta =$ _____

4. $\left(-\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$ $\qquad \theta =$ _____

$\sin\theta =$ _____ $\qquad\qquad \cos\theta =$ _____ $\qquad\qquad \tan\theta =$ _____

$\csc\theta =$ _____ $\qquad\qquad \sec\theta =$ _____ $\qquad\qquad \cot\theta =$ _____

5. $(1, 0)$ $\qquad \theta =$ _____

$\sin\theta =$ _____ $\qquad\qquad \cos\theta =$ _____ $\qquad\qquad \tan\theta =$ _____

$\csc\theta =$ _____ $\qquad\qquad \sec\theta =$ _____ $\qquad\qquad \cot\theta =$ _____

Find the exact value of each trigonometric function using the Unit Circle as a reference.

6. $\sec \dfrac{3\pi}{2}$

7. $\tan\left(-150°\right)$

8. $\cot 330°$

9. $\cos\left(-45°\right)$

10. $\csc \dfrac{\pi}{4}$

11. $\sin\left(-\dfrac{4\pi}{3}\right)$

12. $\tan 315°$

13. $\cos 0°$

14. $\tan 90°$

15. $\sin\left(-45°\right)$

16. $\cos 135°$

17. $\cot\left(-\dfrac{19\pi}{4}\right)$

18. $\cot \dfrac{13\pi}{6}$

19. $\sin \dfrac{10\pi}{3}$

20. $\csc 30°$

21. $\cot 3\pi$

22. $\cos 600°$

23. $\sin 1050°$