Name: _____                                 Date: _____

| **Learning Goal 4.1** | Examining angles in standard position in both radians and degrees.  Exploring the unit circle, reference and coterminal angles and special angles. |
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**More Questions**

1. The point $\left(-\frac{5}{13}, -\frac{12}{13}\right)$ is the point of intersection of the terminal arm of the unit circle and angle, $\theta$, in standard position.
   a. Draw $\theta$.
   b. Find the exact value of the six trigonometric ratios for $\theta$.

2. Find the exact value of each of the following, include a sketch.
   a. $\cot 270°$
   
   b. $\tan\left(-\frac{4\pi}{3}\right)$

3. Find the approximate value of each of the following.  Include a sketch.  Round your answer to three decimal places.
   a. $\cos(678°)$
   
   b. $\csc(-3.98)$
   
   c. $\cot\left(\frac{9\pi}{5}\right)$

4. Solve each of the following equations, $0 \le \theta < 2\pi$.
   a. $\cos\theta = -0.366$
   
   b. $\csc\theta = 1.678$

5. The point $(2, -9)$ is on the terminal arm of an angle, $\theta$, in standard position.
   a. Draw $\theta$.
   b. Find the exact value of the six trigonometric ratios for $\theta$.

6. Find the exact value of each of the following, where possible.  Include a sketch.
   a. $\tan(225°)$
   
   b. $\sin(540°)$
   
   c. $\cos\left(\frac{5\pi}{6}\right)$
   
   d. $\csc\left(-\frac{2\pi}{3}\right)$
   
   e. $\cot(-560°)$
   
   f. $\sec\left(\frac{\pi}{5}\right)$

7. Solve each of the following equations, $0 \le \theta < 2\pi$ .  Find exact values where possible, otherwise round to the nearest thousandth of a radian.
   a. $\cot\theta = -\sqrt{3}$
   
   b. $\sin\theta = -\frac{1}{2}$

8. Solve each of the following equations, $-360° \le \theta < 360°$ .  Find exact values where possible, otherwise round to the nearest tenth of a degree.
   a. $\cos\theta = -0.366$
   
   b. $\csc\theta = \sqrt{2}$

9. Solve each of the following equations, $-\pi \leq \theta < 2\pi$. Find exact values where possible, otherwise round to the nearest thousandth of a radian.

     a. $3\cos\theta = \cos\theta + 1$

     b. $\sqrt{3}\cot\theta = 1$