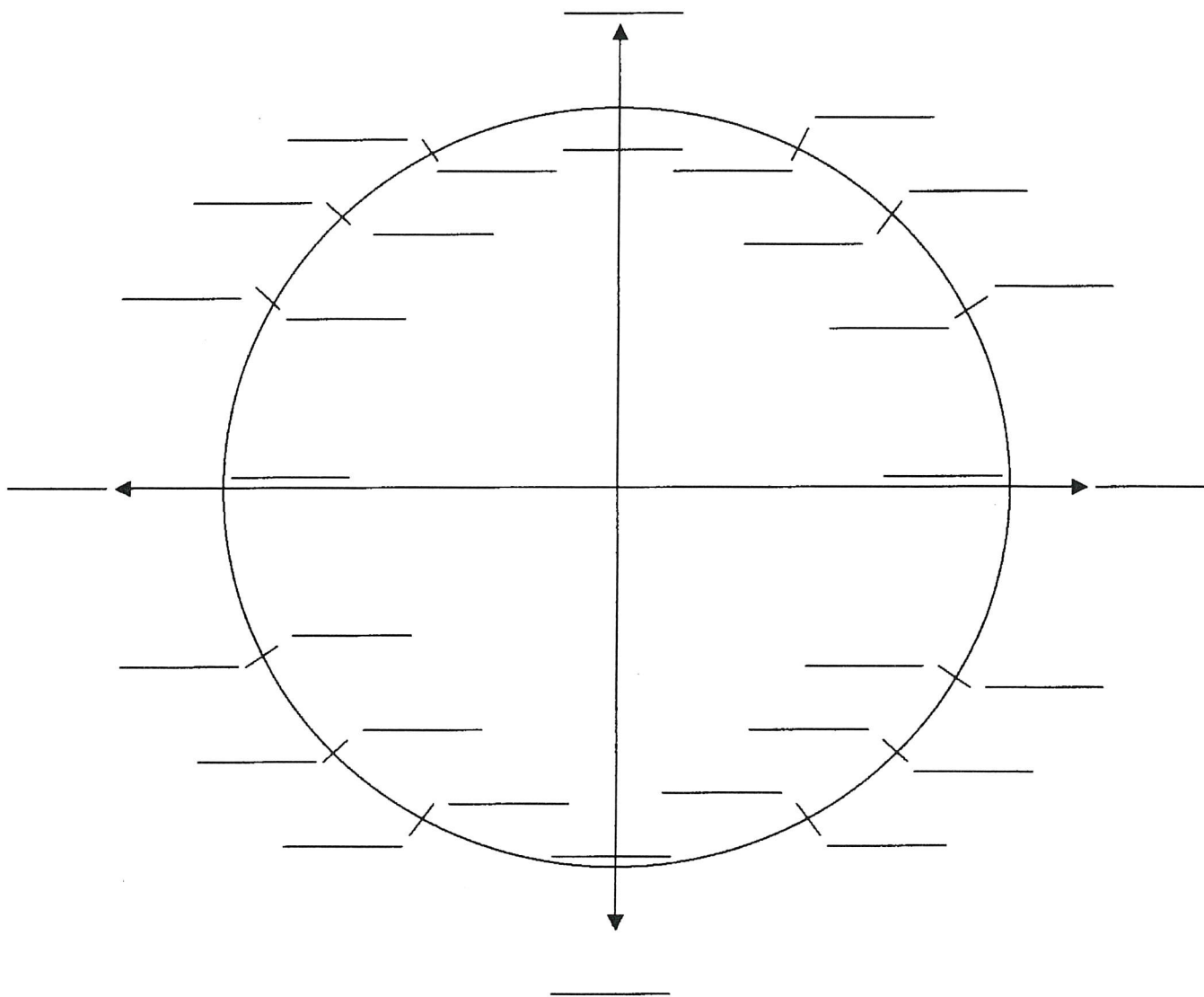


## Developing and Using the Unit Circle

On the blanks on the inside of the circle, write the degree measure of the angle  $\theta$ , where  $0^\circ < \theta \leq 360^\circ$  that would terminate at each notch.

Notice that every angle on the unit circle is a multiple of either  $45^\circ$  or  $30^\circ$ . In the space below, convert these two degree measures into radian measure.

Now, on the blanks on the outside of the circle, write the radian measure of each angle  $\theta$ , where  $0 < \theta \leq 2\pi$  that would terminate at each notch.



**Day #67 Homework**

Given below are angles whose terminal sides terminate on the unit circle. Identify the point,  $(x, y)$ , that corresponds with the given angle,  $\theta$ .

1. $\theta = \frac{5\pi}{6}$	2. $\theta = \frac{5\pi}{4}$	3. $\theta = \frac{5\pi}{3}$	4. $\theta = -\frac{4\pi}{3}$	5. $\theta = -\frac{3\pi}{2}$
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Given below are angles whose terminal sides terminate on the unit circle. If the given angle is a specifically identified angle from the unit circle, identify the coordinates of the point that the terminal side of the angle passes through. If the angle is not, first identify the angle on the unit circle with which it is co-terminal. Find the exact value of the six trigonometric ratios for each angle,  $\theta$ .

6. $\theta = \frac{5\pi}{3}$	7. $\theta = \frac{5\pi}{6}$	8. $\theta = -\frac{3\pi}{2}$
9. $\theta = \frac{7\pi}{4}$	10. $\theta = -\frac{11\pi}{6}$	11. $\theta = -7\pi$

For each of the following angles, identify the angle on the unit circle,  $0 < \theta \leq 2\pi$ , that the given angle is coterminal with. Then, evaluate the indicated trigonometric ratio.

12. $\tan\left(\frac{8\pi}{3}\right)$	13. $\cot\left(-\frac{9\pi}{4}\right)$	14. $\sin\left(\frac{13\pi}{6}\right)$
15. $\sec\left(\frac{15\pi}{4}\right)$	16. $\csc\left(-\frac{13\pi}{2}\right)$	17. $\tan\left(\frac{17\pi}{6}\right)$