

Circuit Training – Using the Unit Circle

Name _____

Directions: Beginning in cell #1, use your unit circle to either evaluate or solve. Sketch the portion of the unit circle that helps answer the question, circle your answer and hunt for your answer to advance in the circuit. Mark the next cell #2 and proceed in this manner until you complete the circuit.

Answer: $\frac{2}{\sqrt{3}}$ # 1 Evaluate $\sin(60^\circ)$.	Answer: 0 # _____ Evaluate $\tan\left(\frac{2\pi}{3}\right)$.
Answer: undefined # _____ Evaluate $\csc(120^\circ)$.	Answer: $\sqrt{3}$ # _____ Evaluate $\csc(300^\circ)$.
Answer: $\frac{3\pi}{4}$ # _____ If $\sin\omega = -0.5$ and ω is a degree measure in the third quadrant, find ω .	Answer: $\frac{3\pi}{2}$ # _____ $\sin^{-1}\left(\frac{1}{2}\right) = ?$
Answer: $\frac{7\pi}{6}$ # _____ Evaluate $\sec(90^\circ)$.	Answer: $\frac{\sqrt{3}}{2}$ # _____ Evaluate $\cos(180^\circ)$.
Answer: $\frac{\pi}{4}$ # _____ Evaluate $\sin\left(-\frac{5\pi}{6}\right)$.	Answer: 2π # _____ Evaluate $\csc(-45^\circ)$.
Answer: $\frac{\pi}{3}$ # _____ The angle $-\frac{\pi}{6}$ shares the same terminal side as which of which remaining angles?	Answer: $\sqrt{2}$ # _____ If $\sin\theta = 1$ and $0 < \theta < \pi$, find θ .
Answer: $-\sqrt{3}$ # _____ Evaluate $\cos\left(-\frac{\pi}{4}\right)$.	Answer: 2 # _____ $\sec^{-1}(2) = ?$
Answer: -2 # _____ Evaluate $\sin(300^\circ)$.	Answer: $-\frac{\sqrt{2}}{2}$ # _____ Evaluate $\tan(45^\circ)$.

<p>Answer: $\frac{1}{2}$ # _____ $\cos \theta = \frac{1}{\sqrt{2}}$ and θ is in Quadrant I. Find θ.</p>	<p>Answer: $\frac{\pi}{6}$ # _____ Evaluate $\tan\left(\frac{7\pi}{6}\right)$.</p>
<p>Answer: $-\frac{1}{\sqrt{3}}$ # _____ $\cot \varphi = -1$ and $\frac{3\pi}{2} < \varphi < 2\pi$. Find φ.</p>	<p>Answer: 150° # _____ If $\sec \beta = -\sqrt{2}$ and $\frac{\pi}{2} < \beta < \pi$, then $\beta = ?$</p>
<p>Answer: -1 # _____ Evaluate $\sin(225^\circ)$.</p>	<p>Answer: $\frac{11\pi}{6}$ # _____ Which of the remaining angles is in the third quadrant?</p>
<p>Answer: $\frac{1}{\sqrt{3}}$ # _____ Evaluate $\sec(-60^\circ)$.</p>	<p>Answer: 210° # _____ Evaluate $\tan(240^\circ)$.</p>
<p>Answer: $-\frac{2}{\sqrt{3}}$ # _____ Evaluate $\sin(30^\circ)$.</p>	<p>Answer: $\frac{\sqrt{2}}{2}$ # _____ Evaluate $\csc\left(\frac{3\pi}{4}\right)$.</p>
<p>Answer: $\frac{7\pi}{4}$ # _____ $\cos A = 0$. Find A.</p>	<p>Answer: $-\frac{\sqrt{3}}{2}$ # _____ Evaluate $\tan\left(\frac{11\pi}{6}\right)$.</p>
<p>Answer: $-\frac{1}{2}$ # _____ If $\cot A$ is undefined, then $A = ?$</p>	<p>Answer: 1 # _____ Evaluate $\cos\left(\frac{\pi}{2}\right)$.</p>
<p>Answer: $\frac{\pi}{2}$ # _____ If $\cos \theta = -\frac{\sqrt{3}}{2}$ and $90^\circ < \theta < 180^\circ$, then $\theta = ?$</p>	<p>Answer: $-\sqrt{2}$ # _____ Evaluate $\sec\left(\frac{4\pi}{3}\right)$.</p>