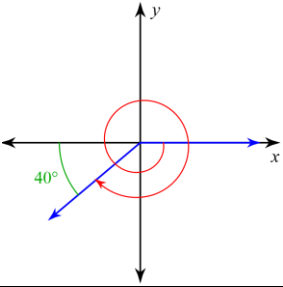


**8.REV.3 – Foundations of Trigonometry Circuit**

Begin by completing the problem in cell #1. Search for your answer in the remaining cells. Put #2 in the problem blank: # \_\_\_\_\_. Work that question and proceed in this manner until you complete the circuit.

<p><b>Answer:</b> <math>-\frac{\pi}{3}</math></p> <p><b># 1</b> Find the measure of the angle and then convert to radians.</p> 	<p><b>Answer:</b> <math>208^\circ</math></p> <p># _____ Alexandra swings on a tree swing with a rope length of 5 feet. If she swings through an angle of <math>120^\circ</math>, what is the distance that she swings? (Round to the nearest tenth.)</p>
<p><b>Answer:</b> <math>\frac{\sqrt{3}}{3}</math></p> <p># _____ Find the exact value of:</p> $\sec \frac{19\pi}{6}$	<p><b>Answer:</b> <math>\frac{3\sqrt{5}}{2}</math></p> <p># _____ Find the measure of the reference angle for <math>\theta = -485</math>.</p>
<p><b>Answer:</b> <math>\frac{\sqrt{5}}{2}</math></p> <p># _____ Use the given point on the terminal side of angle <math>\theta</math> to find the exact value of:</p> $(-9, -\sqrt{19}); \sec \theta$	<p><b>Answer:</b> 18.8 feet</p> <p># _____ Find the value of <math>\theta</math> if...</p> $\sin^{-1}\left(\cos \frac{5\pi}{6}\right)$
<p><b>Answer:</b> 10.5 feet</p> <p># _____ Javier has a circular garden with a radius of 9 feet. He is placing a stone border along a <math>90^\circ</math> arc. How many feet of stone will he need? (Round to the nearest tenth.)</p>	<p><b>Answer:</b> <math>\frac{20\pi}{9}</math></p> <p># _____ Find the exact value of:</p> $\cos\left(\sin^{-1}\frac{1}{3}\right)$

Answer:  $\frac{2\sqrt{2}}{3}$

# \_\_\_\_\_ Find the exact value of:

$$\sec\left(\tan^{-1}\frac{1}{2}\right)$$

Answer:  $-\frac{\sqrt{2}}{10}$

# \_\_\_\_\_ Find the exact value of  $\csc \theta$  if  $\sin \theta < 0$  &

$$\tan \theta = \frac{\sqrt{2}}{5}$$

Answer:  $55^\circ$

# \_\_\_\_\_ Find the measure of a coterminal angle between  $0^\circ$  and  $360^\circ$  for  $\theta = -512^\circ$ .

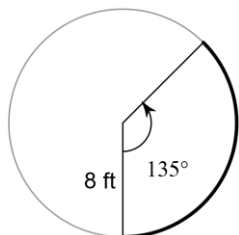
Answer:  $-\frac{10}{9}$

# \_\_\_\_\_ Use the given point on the terminal side of angle  $\theta$  to find the exact value of:

$$(-2, 14); \cos \theta$$

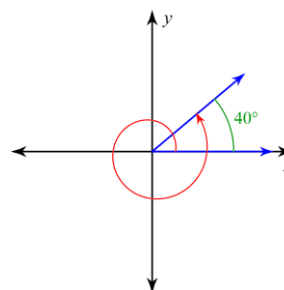
Answer:  $-\frac{2\sqrt{3}}{3}$

# \_\_\_\_\_ Find the arc length. (Round to the nearest tenth.)



Answer:  $-\frac{25\pi}{9}$

# \_\_\_\_\_ Find the measure of the angle and then convert to radians.



Answer:  $-\frac{3\sqrt{6}}{2}$

# \_\_\_\_\_ Find the exact value of  $\cot \theta$  if  $\sin \theta < 0$  &

$$\sec \theta = -\frac{7\sqrt{5}}{15}$$

Answer: 14.1 feet

# \_\_\_\_\_ Find the exact value of:

$$\tan\left(-\frac{29\pi}{6}\right)$$