

M205: Trigonometric Functions

Post-Badge Task

Reflecting on Badge Learning

Now that you have learned more about trigonometric functions, respond to the questions that follow. These are the same questions you responded to before the start of this badge.

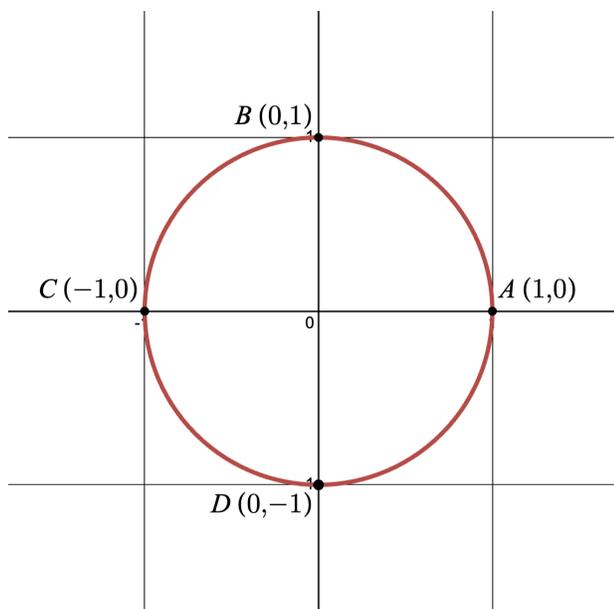
The Task

QUESTION 1

The image shows the unit circle with four marked points A , B , C , and D . Determine the standard position radian measure for each point.

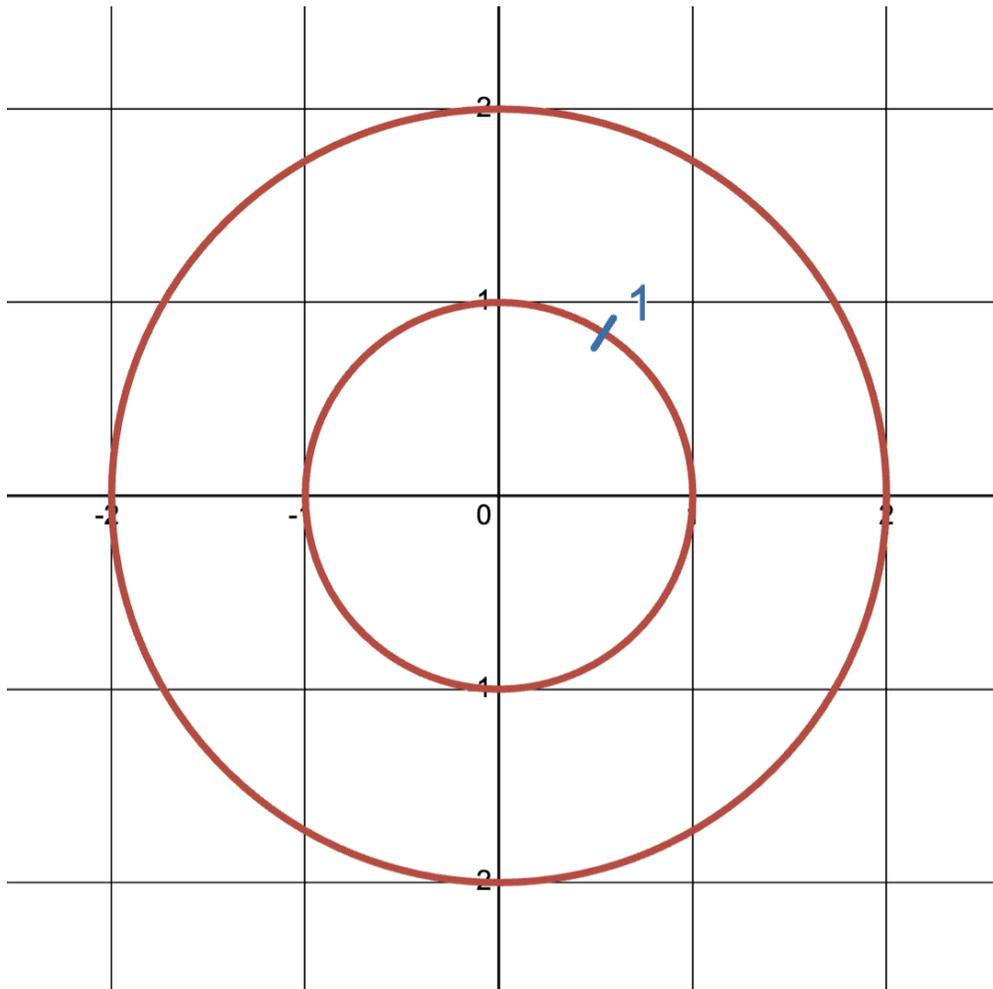


Point	Radian Measure
A	
B	
C	
D	



QUESTION 2

The figure shows concentric circles with radii 1 and 2, respectively. A mark is drawn at standard position angle 1 radian on the inner circle. Mark measurements of 1 radian and 2 radians on the outer circle.



QUESTION 3

Evaluate each trigonometric expression.



$$\cos \frac{\pi}{4} =$$

$$\cos \frac{2\pi}{3} =$$

$$\sin \frac{\pi}{4} =$$

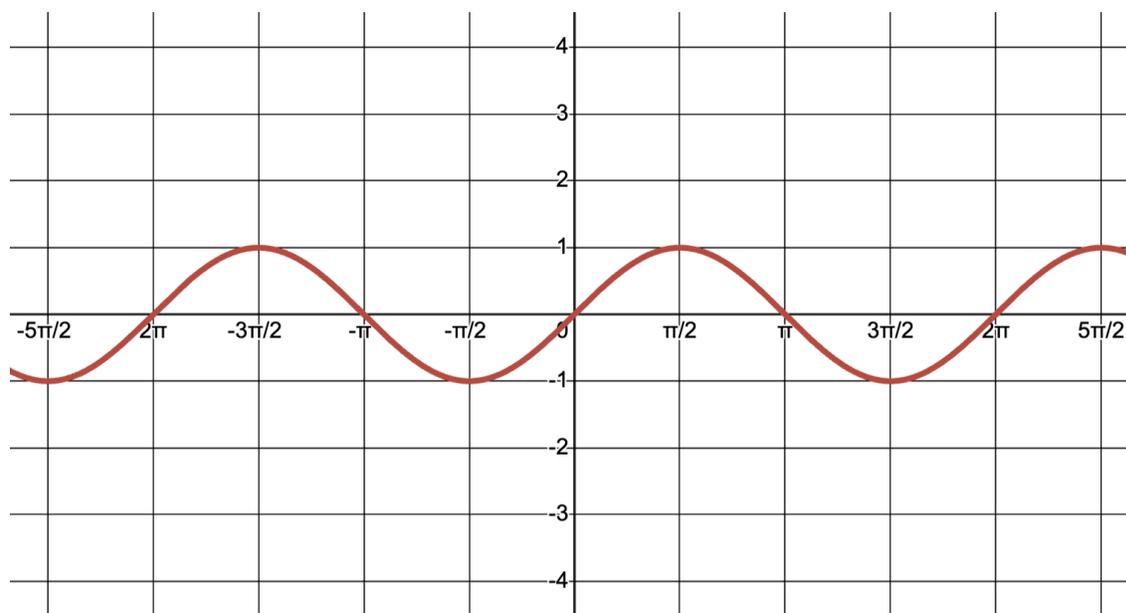
$$\sin \frac{2\pi}{3} =$$

$$\tan \frac{\pi}{4} =$$

$$\tan \frac{2\pi}{3} =$$

$$\left(\cos \frac{\pi}{4}\right)^2 + \left(\sin \frac{\pi}{4}\right)^2 =$$

$$\left(\cos \frac{2\pi}{3}\right)^2 + \left(\sin \frac{2\pi}{3}\right)^2 =$$

QUESTION 4The image below shows the graph of $y = \sin x$. On the same grid, draw the graph of $y = 3\sin\left(x - \frac{\pi}{2}\right)$.

QUESTION 5

The height h (measured in feet from the ground) of a rider on a Ferris wheel in Southern California can be modeled by the equation $h(t) = 64 + 54 \cos \frac{\pi}{60}t$, where t is measured in seconds. How long does it take for the Ferris wheel to complete one revolution? What is the maximum height reached by a rider on this Ferris wheel?

**QUESTION 6** What else did you learn that was not reflected in Questions 1-5?

QUESTION 7 Compare your answers to these questions now to your answers from the earlier attempt. What do you notice about your progress?

