

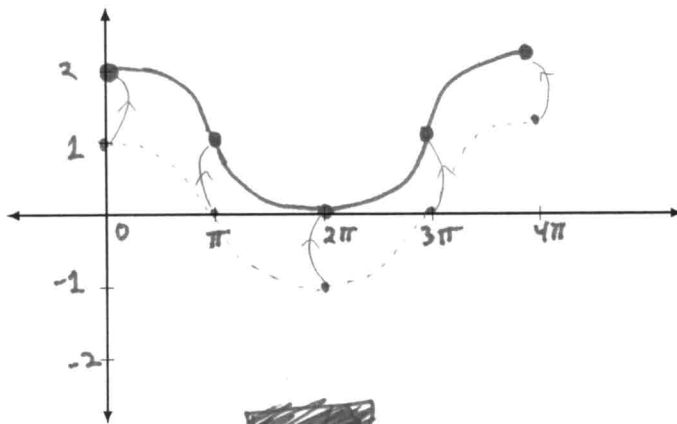
Name: Key

Section: _____

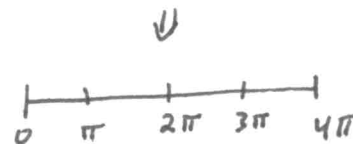
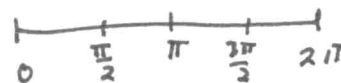
You have 12 minutes to complete the quiz. Please **show all work**, and then **write your answer on the line provided**.

1. (3 points) Sketch the graph of $f(x) = \cos\left(\frac{x}{2}\right) + 1$, and write its period on the line below.

Be sure you fill in the scale for the x and y axes.



$$\text{Period} = \frac{2\pi \cdot 2}{\frac{1}{2}} = 4\pi$$

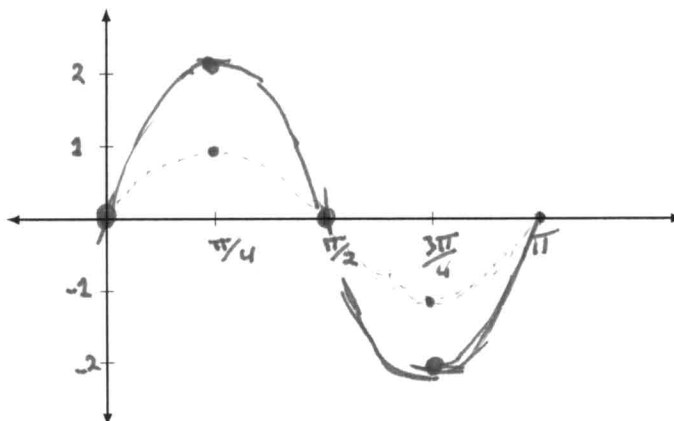


- 1 pt - $\cos(x)$
- 1 pt - up one
- 1 pt - period 4π

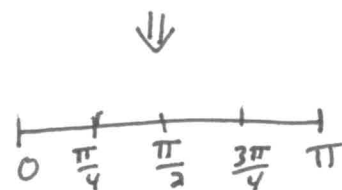
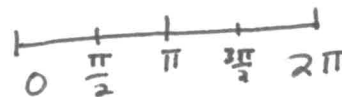
Period: 4π

2. (3 points) Sketch the graph of $g(x) = 2 \cdot \sin(2x)$, and write its period on the line below.

Be sure you fill in the scale for the x and y axes.



$$\text{Period} = \frac{2\pi}{2} = \pi$$



- 1 pt - $\sin x$
- 1 pt - stretch vertically by 2
- 1 pt - period π

Period: π

Name: _____

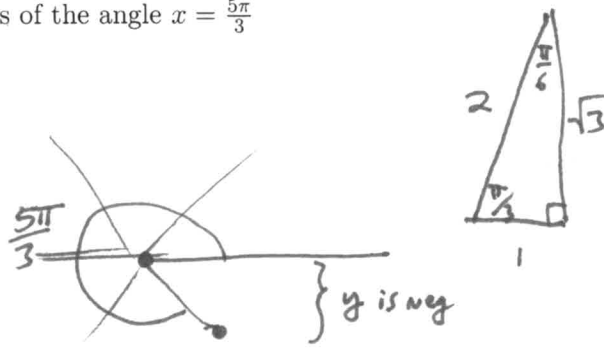
Section: _____

3. (4 points) Find all six trigonometric functions of the angle $x = \frac{5\pi}{3}$

$$\sin\left(\frac{5\pi}{3}\right) = \frac{-\sqrt{3}}{2}$$

$$\cos\left(\frac{5\pi}{3}\right) = \frac{+1}{2}$$

$$\tan\left(\frac{5\pi}{3}\right) = \frac{\sin\left(\frac{5\pi}{3}\right)}{\cos\left(\frac{5\pi}{3}\right)} = \frac{-\frac{\sqrt{3}}{2} \cdot 2}{\frac{1}{2} \cdot 2} = \frac{-\sqrt{3}}{1}$$



$$\sin\left(\frac{5\pi}{3}\right) = \underline{\underline{\frac{-\sqrt{3}}{2}}}$$

$$\cos\left(\frac{5\pi}{3}\right) = \underline{\underline{\frac{1}{2}}}$$

$$\tan\left(\frac{5\pi}{3}\right) = \underline{\underline{-\sqrt{3}}}$$

$$\frac{1}{\sin\left(\frac{5\pi}{3}\right)} = \csc\left(\frac{5\pi}{3}\right) = \underline{\underline{\frac{-2}{\sqrt{3}}}}$$

$$\frac{1}{\cos\left(\frac{5\pi}{3}\right)} = \sec\left(\frac{5\pi}{3}\right) = \underline{\underline{2}}$$

$$\frac{1}{\tan\left(\frac{5\pi}{3}\right)} = \cot\left(\frac{5\pi}{3}\right) = \underline{\underline{\frac{-1}{\sqrt{3}} = \frac{-\sqrt{3}}{3}}}$$

1 pt each