

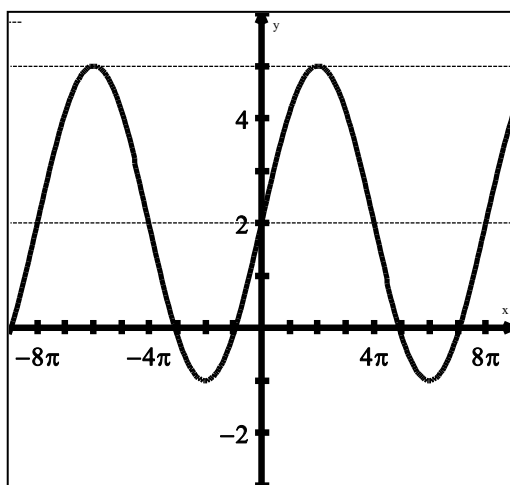
Partner Points!



1. Graph the trigonometric function: $y = -2\cos 6x$

2. Graph the trigonometric function: $y = 4\sin\left(\frac{\pi}{4}x - \frac{\pi}{2}\right) - 1$

3. Below is a graph of a sinusoid. Write both a sine equations and cosine equation to represent this graph.



Sine Equation _____

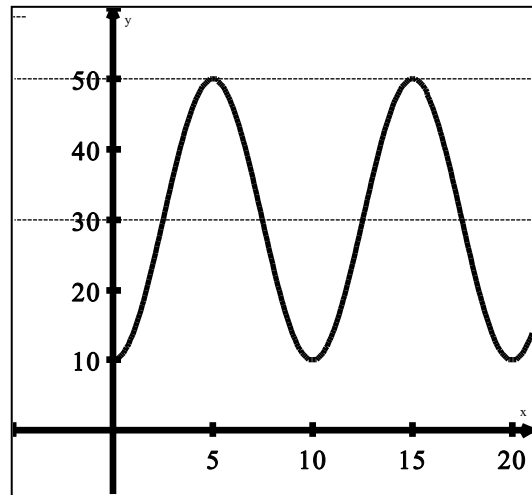
Cosine Equation _____

4. Describe the transformations required to graph the following function. Use transformation language!!

$$y = -3\cos 2(\theta + 20^\circ)$$

5. The equation and graph shown here represent a ride on a Ferris wheel. The time you've been on the Ferris wheel is represented by x , and y represents your height above ground at a given time.

$$y = -20\cos\left(\frac{\pi}{5}x\right) + 30$$



- a) What is the greatest height you will reach while riding the Ferris Wheel?

- b) How high above the ground is the center of the Ferris Wheel?

- c) How long does it take to complete one revolution around the wheel?

- d) What is the diameter of the Ferris wheel?

- e) How do the 30, 20, and negative sign in the equation relate to the Ferris wheel?

The 30 represents _____

The 20 represents _____

20 needs to be negative because _____

