

# Modeling Trig Functions

DAY 7

## 1. Write a sine and cosine equation of the function.

Step 1: Draw the middle line.

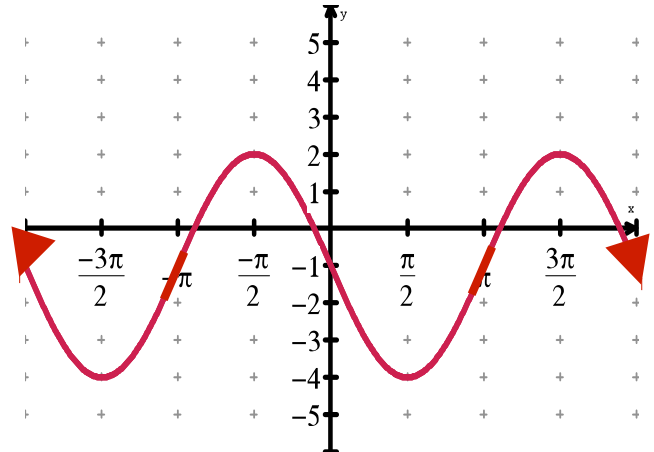
Step 2: Find a and d.

Step 3: Write the period formula.

Find the period on the graph.

(measure from the y-axis).

Solve for b.



Step 4: Choose a starting point (sine is in the middle, cosine is low or high)

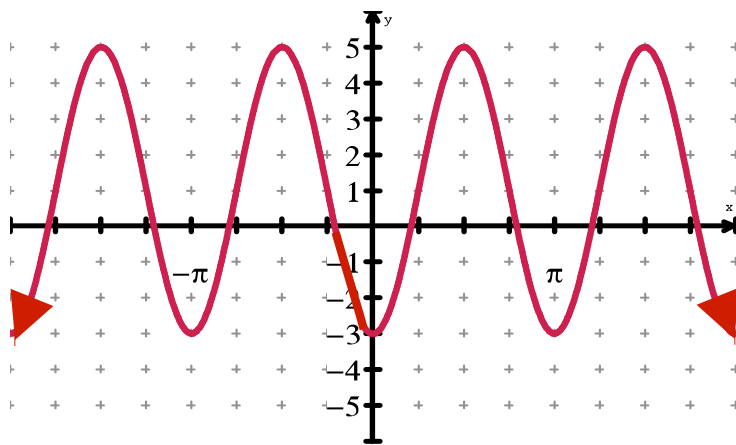
Step 5: Determine if a will be positive or negative based on the starting point.

Step 4: Write  $(bx - c) = 0$  and substitute b. Find the phase shift on the graph and substitute it for x. Then solve for c.

Step 5: Write the function!

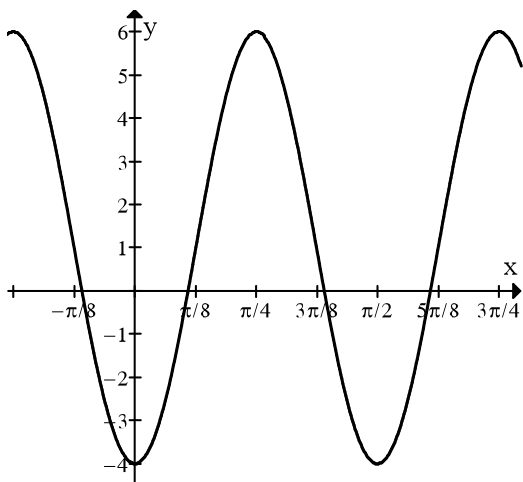
Sine	Cosine

2. Write a sine and cosine equation of the function below.



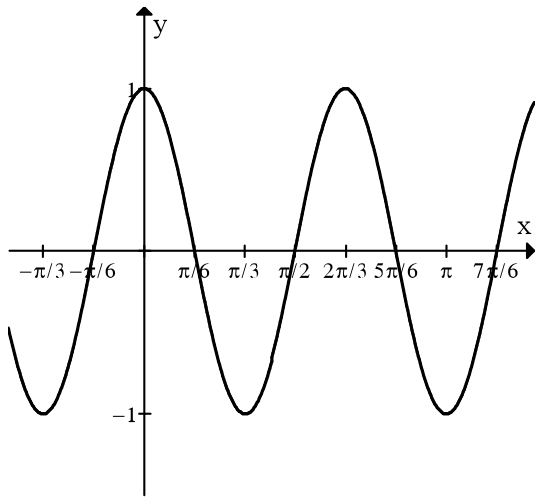
Sine	Cosine

3. Write a sine equation of the function below.

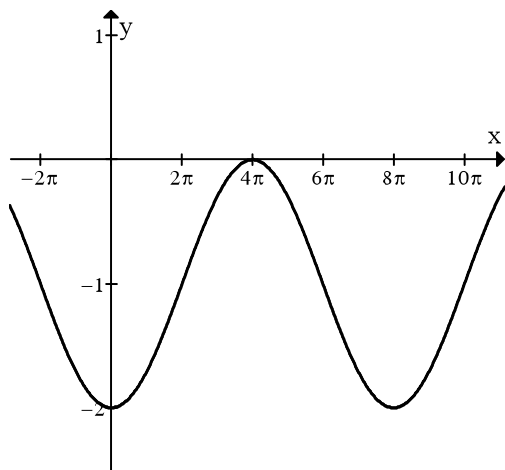


## PRACTICE

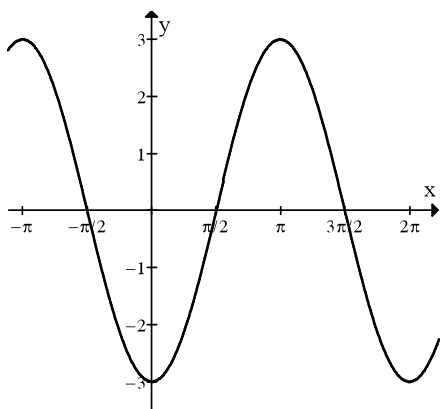
1. Write the equation of the graph as a **sine** function



2. Write the equation of the graph as a **cosine** function



3. Write the equation of the graph as a **sine** function



4. Write the equation of the graph as a **cosine** function

