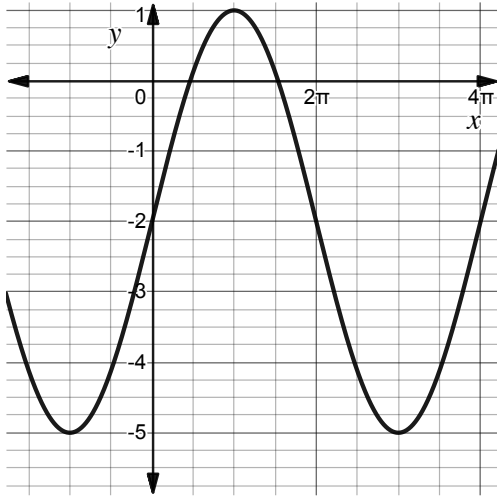


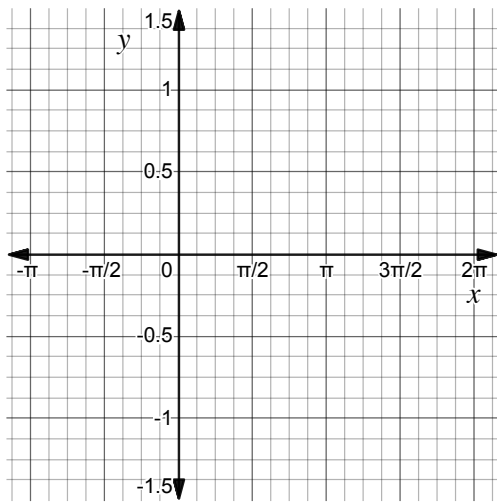
# APPC Lesson 6.6 Homework

Name \_\_\_\_\_

1. Identify the midline, amplitude, domain, and range of the sinusoidal function shown in the graph.

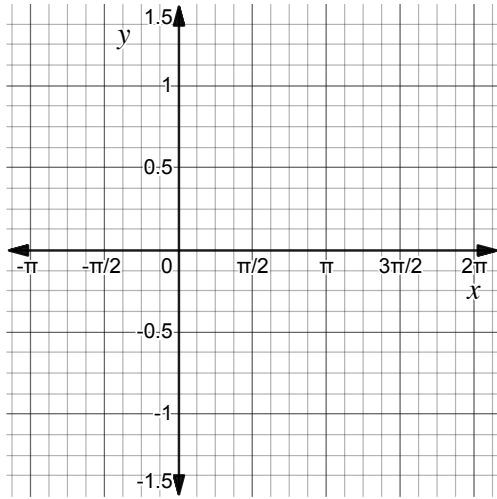


2. Graph  $y = \frac{1}{2} \cos(x + \pi)$ .



 MATH MEDIC

3. Graph  $y = \sin(2x)$ .



4. Describe the transformations of the parent function  $f(x) = \sin x$ , that produce the graph of  $f(x) = -3\sin(x + \frac{\pi}{4})$ .


5. Consider the graph of  $y = f(x)$  where  $f(x) = 2 + 5 \cos x$ .

a. Identify the midline of the graph of  $f$ .

b. Identify the period of  $f$ .

c. Identify the range of  $f$ .

d. Identify the amplitude of  $f$ .


 6. The graph of  $y = \cos x$  is reflected across the  $y$ -axis and horizontally stretched by a factor of  $\frac{1}{3}$ . Which of the following is affected?

A) Range

B) Amplitude

C) Period

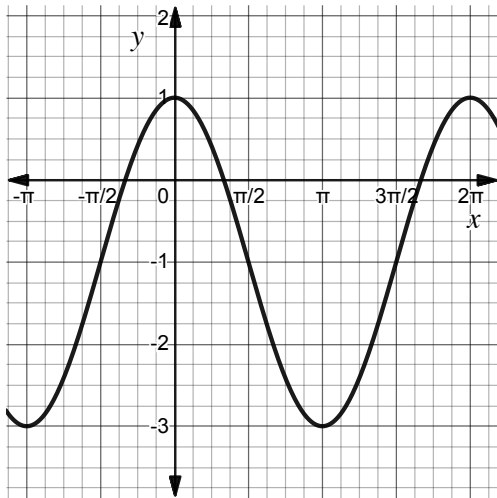
D) Domain

 7. The period of the graph of  $y = 7 \sin(Bx) - 3$  is  $\frac{\pi}{2}$ . Find the value of  $B$ .



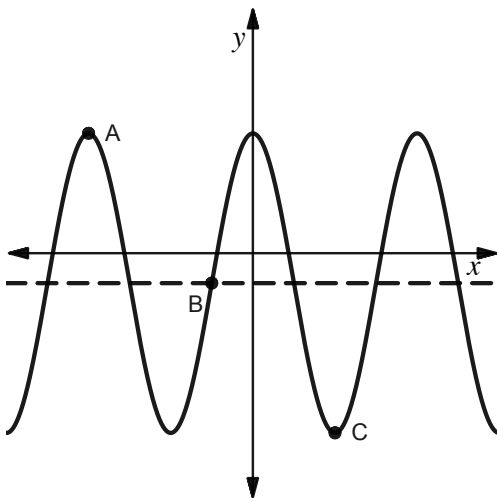
8.

The graph of  $y = A \cos(x - C) + D$  is shown for some constants  $A$ ,  $C$ , and  $D$ . Find the values of  $A$ ,  $C$ , and  $D$ .



9.

The sinusoidal function  $y = f(x)$  shown below has a midline at  $y = -2$ , a period of  $4\pi$ , and an amplitude of 5. Give the coordinates of points  $A$ ,  $B$ , and  $C$ .



10. Write two equations for the graph shown, one using sine and one using cosine.

