

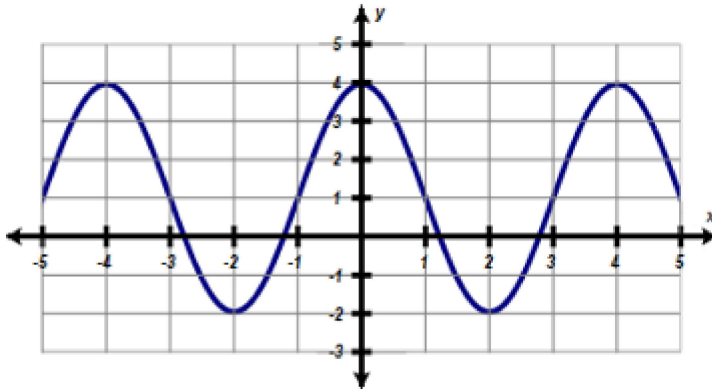
Sample Quiz 02-05-Graphing Cosine Waves

Multiple Choice

Identify the choice that best completes the statement or answers the question.

1. **Cosine Graphs**

Determine the **amplitude** of the following cosine graph.



- a. 2
b. 3
c. 4
d. 6

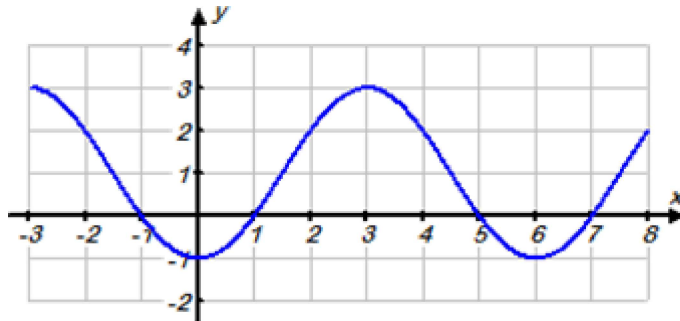
2. **Cosine Graphs**

What is the **amplitude** of the graph of $y = \cos(2x + 6) - 3$?

- a. 1
b. 2
c. 3
d. 6

3. **Cosine Graphs**

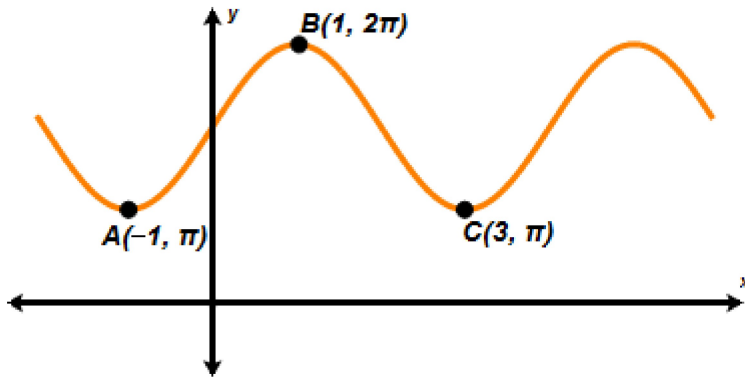
What is the **period** of the cosine wave shown in the graph?



- a. 1
b. 3
c. 6
d. 8

4. **Cosine Graphs**

Consider the following **cosine** graph. A local minimum occurs at point $A(-1, \pi)$ and point $C(3, \pi)$. A local maximum occurs at point $B(1, 2\pi)$. Determine the **period** of the following graph.



- | | |
|------|---------------------|
| a. 3 | c. π |
| b. 4 | d. $\frac{3\pi}{2}$ |

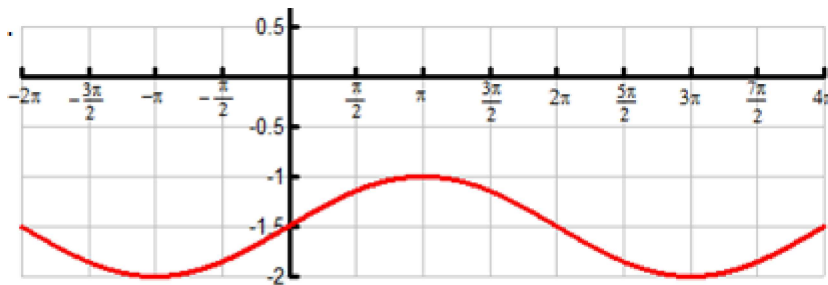
5. **Cosine Graphs**

Which equation below represents a **cosine** graph with a **period** of π ?

- | | |
|--------------------------------|----------------------------|
| a. $y = \cos(\pi \cdot x + 4)$ | c. $y = \pi \cdot \cos(x)$ |
| b. $y = \cos(2(x - 4))$ | d. $y = \cos(x - 1) - 2$ |

6. **Cosine Graphs**

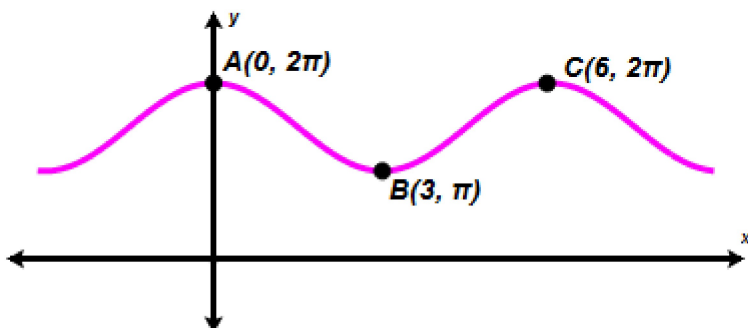
Determine the **vertical shift** of the following **cosine** graph.



- | | |
|-----------|---------|
| a. 2π | c. 0.5 |
| b. 4π | d. -1.5 |

7. **Cosine Graphs**

Consider the following **cosine** graph. A local maximum occurs at point $A(0, 2\pi)$ and point $C(6, 2\pi)$. A local minimum occurs at point $B(3, \pi)$. Determine the **vertical shift** of the following **cosine** graph.



- a. 3
b. 6
c. $\frac{\pi}{2}$
d. $\frac{3\pi}{2}$

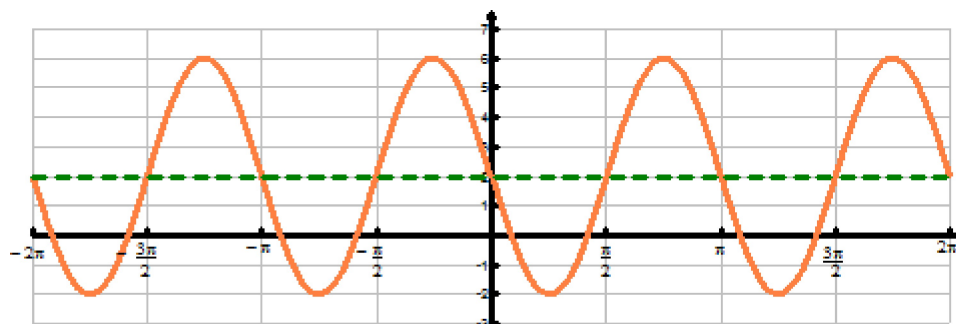
8. **Cosine Graphs**

What is the **vertical shift** of the graph of the equation $y = 4\cos(3x + 3) - 2$?

- a. 2
b. 3
c. -1
d. -2

9. **Cosine Graphs**

Determine which of the below is a possible **phase shift** of the following **cosine** graph.

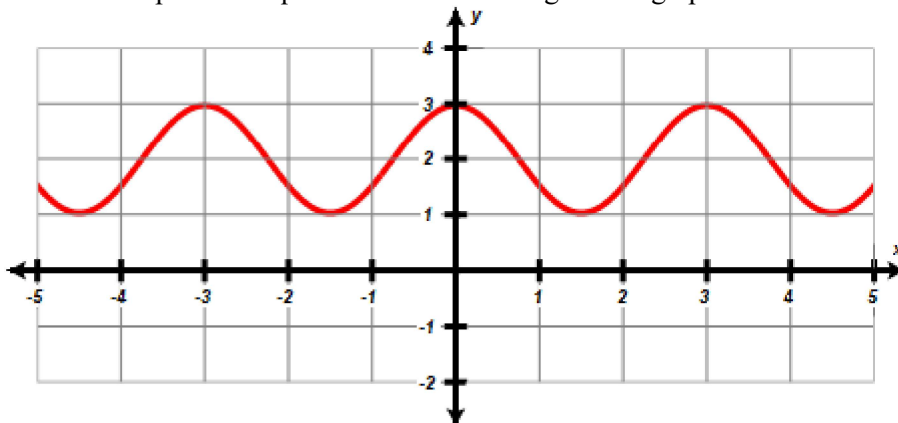


- a. $\frac{\pi}{4}$
b. $\frac{\pi}{2}$
c. $\frac{3\pi}{4}$
d. π

10. **Cosine Graphs**

Which equation below represents a **cosine** graph with a **phase shift** of 1?

- a. $y = 3\cos(x + 1) - 1$
b. $y = 2\cos(2x - 2)$
c. $y = 3\cos(x - 2) + 1$
d. $y = \cos(\pi(x + 3)) + 2$

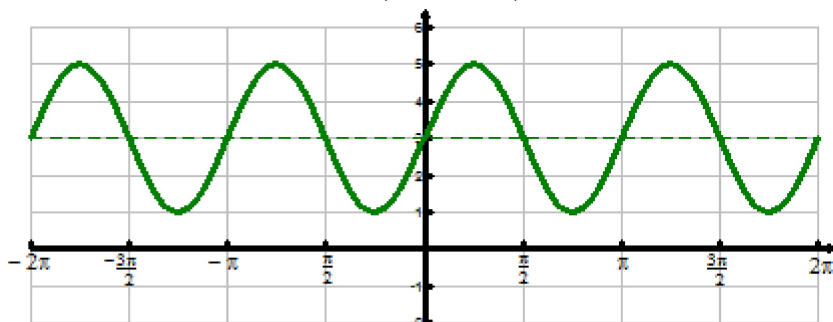
11. **Cosine Graphs**Determine a possible equation of the following **cosine** graph.

a. $y = 2 \cos(3(x)) + 2$

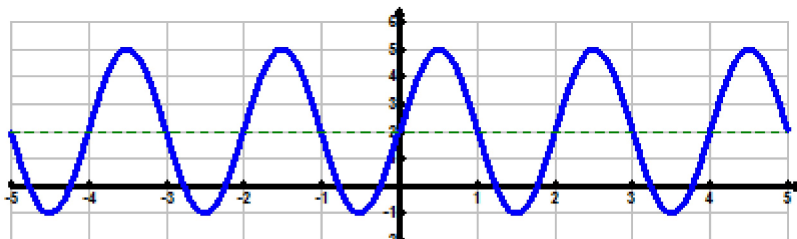
c. $y = \cos(3(x)) + 2$

b. $y = 2 \cos\left(\frac{2\pi}{3}(x)\right) + 2$

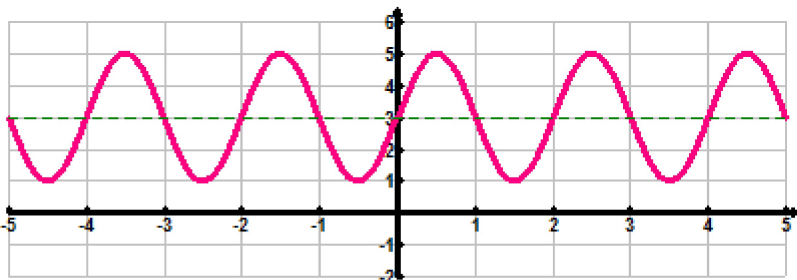
d. $y = \cos\left(\frac{2\pi}{3}(x)\right) + 2$

12. **Cosine Graphs**Which shows a graph of $y = 2\cos(\pi(x - 0.5)) + 3$?

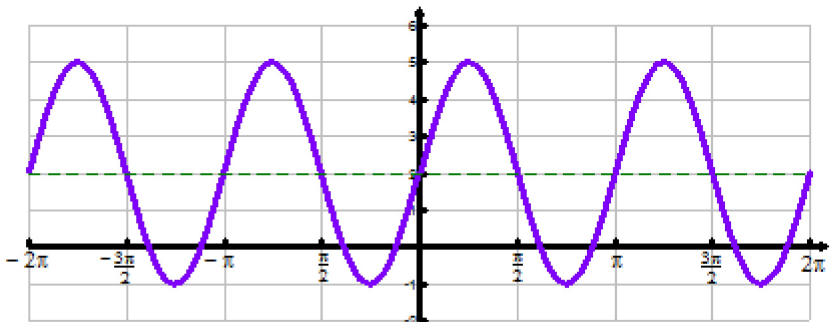
a.



b.



c.



d.