Sample Quiz 02-03-Parameters of a Sine Function

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

____  1. **Sine Graphs**
What is the **amplitude** of the graph of \( y = \frac{2}{3} \sin \left( \frac{3}{4} \left( x + \frac{1}{2} \right) \right) + 5? \)

a. \( \frac{1}{2} \)  

b. \( \frac{3}{4} \)  

c. \( \frac{2}{3} \)  

d. 5

____  2. **Sine Graphs**
Which equation below represents a **sine** graph with an **amplitude** of 1?

a. \( y = 3 \sin(2x + 4) + 1 \)  

b. \( y = \pi \sin \left( \frac{1}{2} (x - 1) \right) \)  

c. \( y = 4 \sin(x) \)  

d. \( y = \sin(3x) + 4 \)

____  3. **Sine Graphs**
What is the **period** of the graph of \( y = \sin(2x + 6) - 3 \)?

a. 3  

b. 2  

c. \( \pi \)  

d. \( 2\pi \)

____  4. **Sine Graphs**
Which equation below represents a **sine** graph with a **period** of \( \pi \)?

a. \( y = \sin(\pi \cdot x + 4) \)  

b. \( y = \sin(2(x - 4)) \)  

c. \( y = \pi \cdot \sin(x) \)  

d. \( y = \sin(x - 1) - 2 \)

____  5. **Sine Graphs**
What is the **vertical shift** of the graph of the equation \( y = -2 \sin(\pi (x + 4)) + 3 \)?

a. \( -4 \)  

b. 2  

c. 3  

d. \( \pi \)

____  6. **Sine Graphs**
Which equation below represents a **sine** graph with a **vertical shift** of \( -\pi \)?

a. \( y = \sin(2x - 2) - \pi \)  

b. \( y = \sin(4(x - \pi)) \)  

c. \( y = \pi \cdot \sin(-2x) \)  

d. \( y = \sin(x + \pi) + 1 \)

____  7. **Sine Graphs**
What is the **phase shift** of the graph of the equation \( y = 6 \sin(3x + 3) - 2? \)

a. 3  

b. 6  

c. \( -1 \)  

d. \( -2 \)
8. **Sine Graphs**

Which equation below represents a Sine graph with a **phase shift** of 2?

a. \( y = 2\sin(x) \)  

b. \( y = \sin(x - 2) \)

c. \( y = \sin(\pi x) \)

d. \( y = \sin(x) + 2 \)