Name: _____ Date: _____ Block: _____

Find the amplitude, period, vertical shift and phase shift.

1. $y = -4\sin(2x + \pi) - 2$

Amplitude: 4

Period: π

Phase Shift: Left $\frac{\pi}{2}$

Vertical Shift: Down 2

2. $y = \frac{1}{2}\cos\left(\frac{\pi}{4}x\right) + 1$

Amplitude: ½

Period: 8

Phase Shift: None

Vertical Shift: Up 1

3. $y = 1 - \frac{1}{3}\cos\left(\frac{x}{5} + 2\right)$

Amplitude: 1/3

Period: 10π

Phase Shift: Left 10

Vertical Shift: Up 1

4. $y = 3\sin(x - \frac{\pi}{2}) + 4$

Amplitude: 3

Period: 2π

Phase Shift: Right $\frac{\pi}{2}$

Vertical Shift: Up 4

5. $y = -4\cos\left(\frac{\pi}{8}x + \frac{\pi}{8}\right) - 3$

Amplitude: 4

Period: 16

Phase Shift: Left 1

Vertical Shift: Down 3

6. $y = 3 - \frac{1}{4}\cos\left(\frac{x}{2} - 6\right)$

Amplitude: 1/4

Period: 4π

Phase Shift: Right 12

Vertical Shift: Up 3

Name: _____ Date: _____ Block: _____

Match the graph with the correct equation. Write the LETTER of the graph on the line provided next to the correct equation.

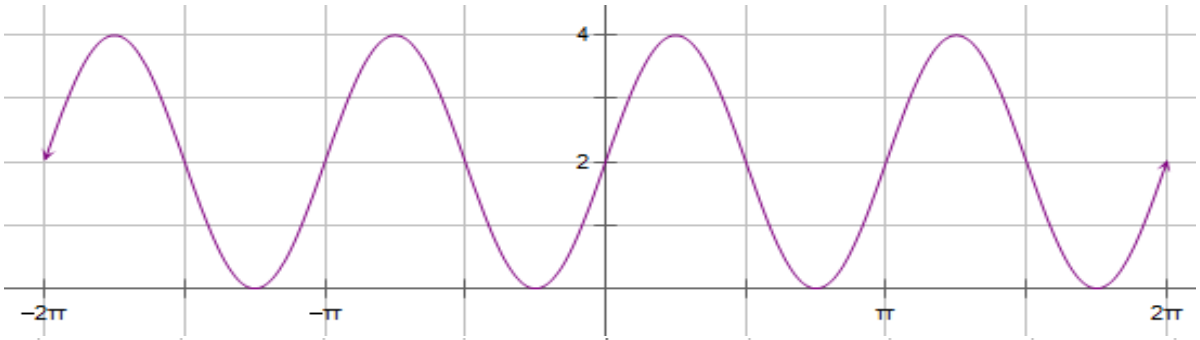
7. $y = 2sin(2x - \pi) + 2$ **D**

8. $y = -2sin(2x + \pi) + 2$ **A**

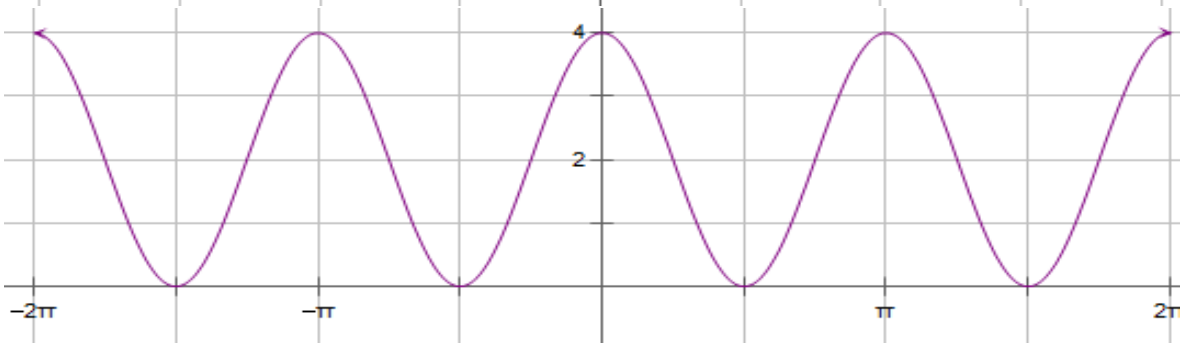
9. $y = 2cos(2x - \pi) + 2$ **B**

10. $y = -2cos(2x + \pi) + 2$ **C**

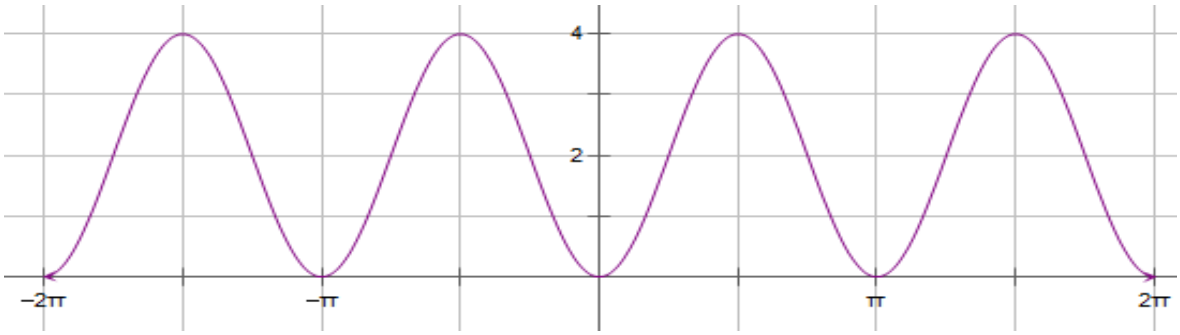
A.



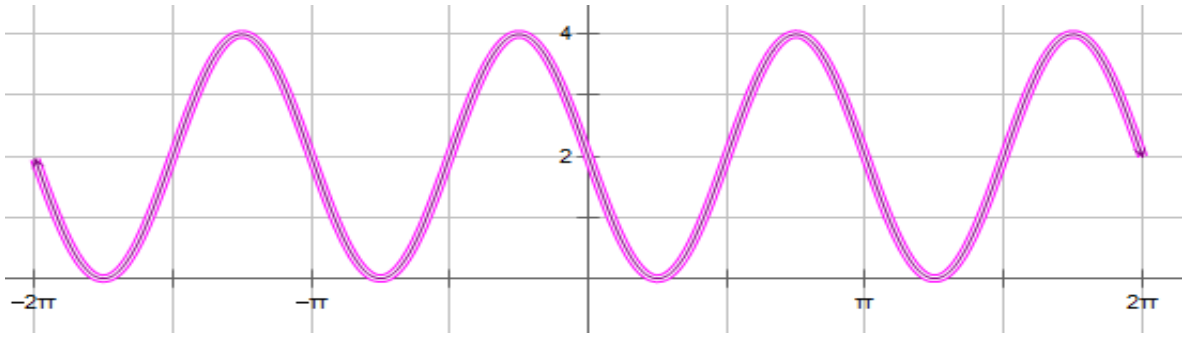
B.



C.



D.



Name: _____ Date: _____ Block: _____

Match the graph with the correct equation. Write the LETTER of the graph on the line provided next to the correct equation.

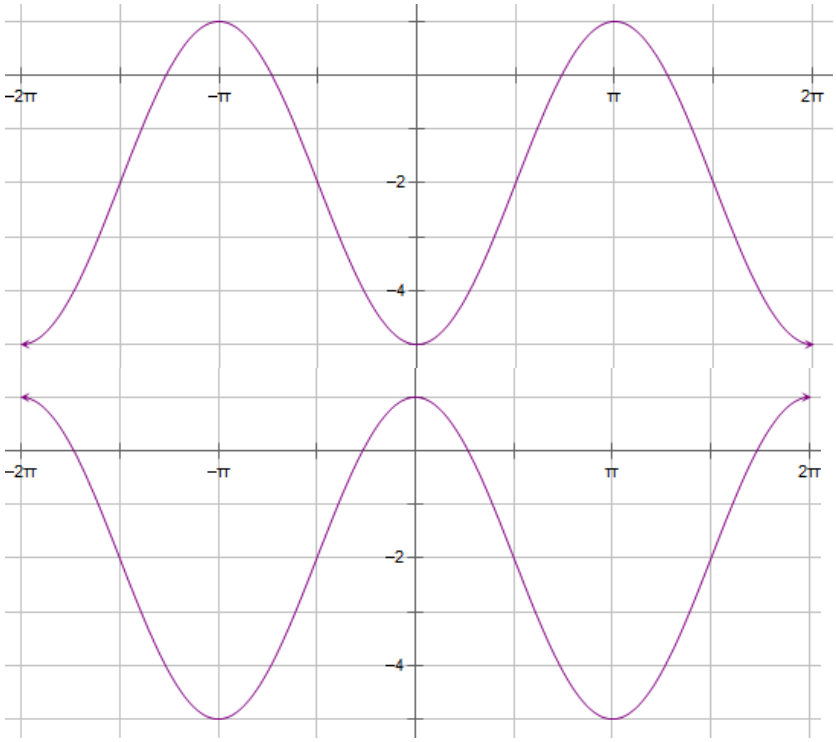
11. $y = -3cos(x + \pi) - 2$ **B**

12. $y = -3sin(x + \pi) - 2$ **D**

13. $y = 3sin(x - \pi) - 2$ **C**

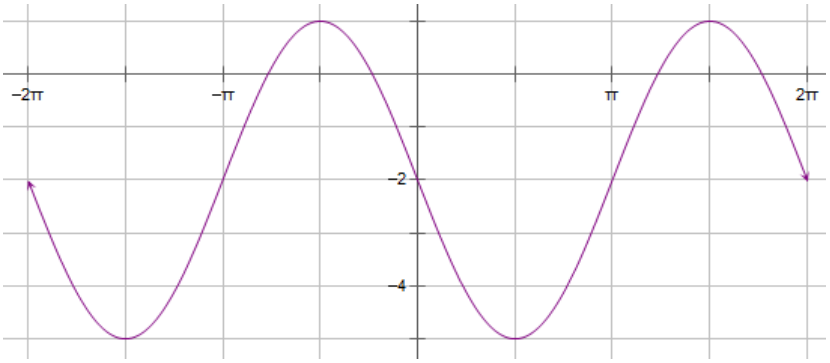
14. $y = 3cos(x - \pi) - 2$ **A**

A.

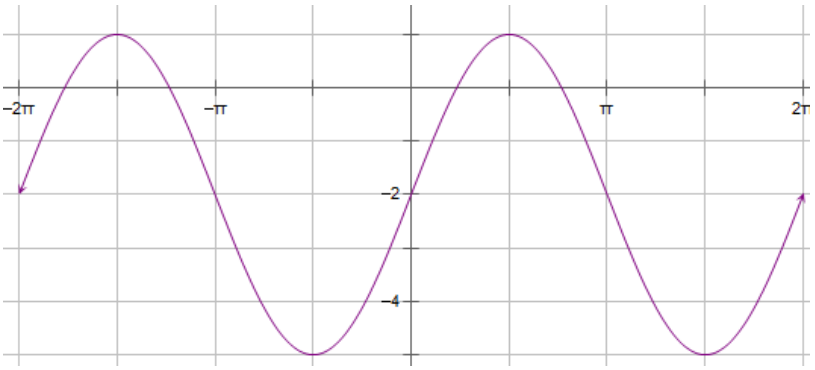


B.

C.



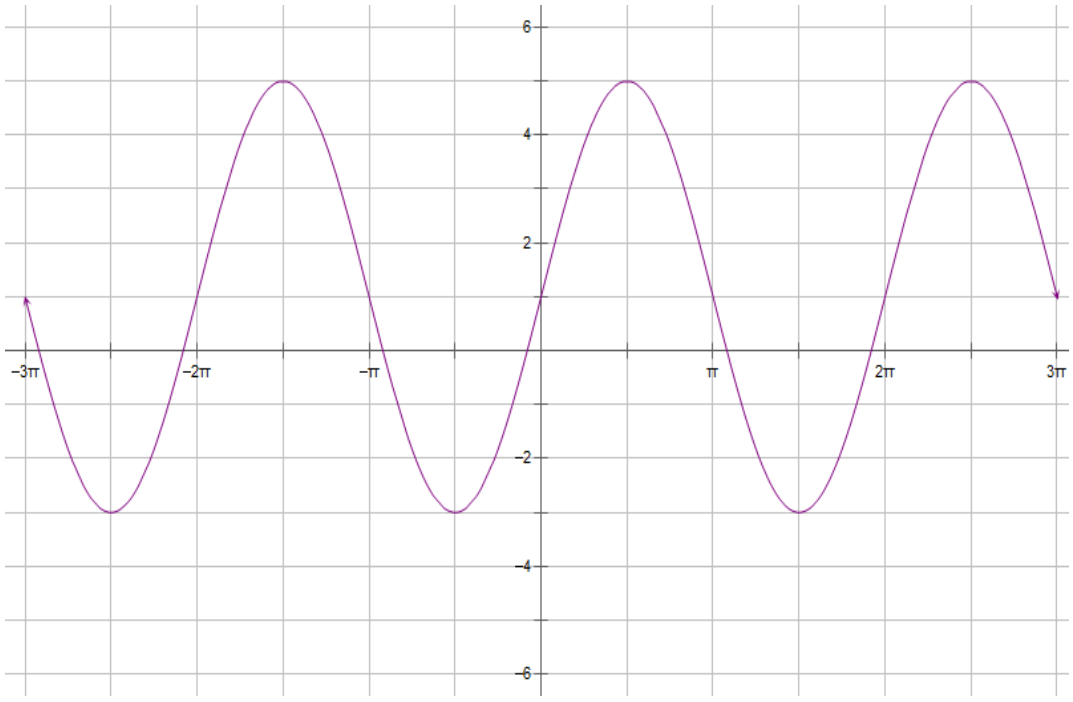
D.



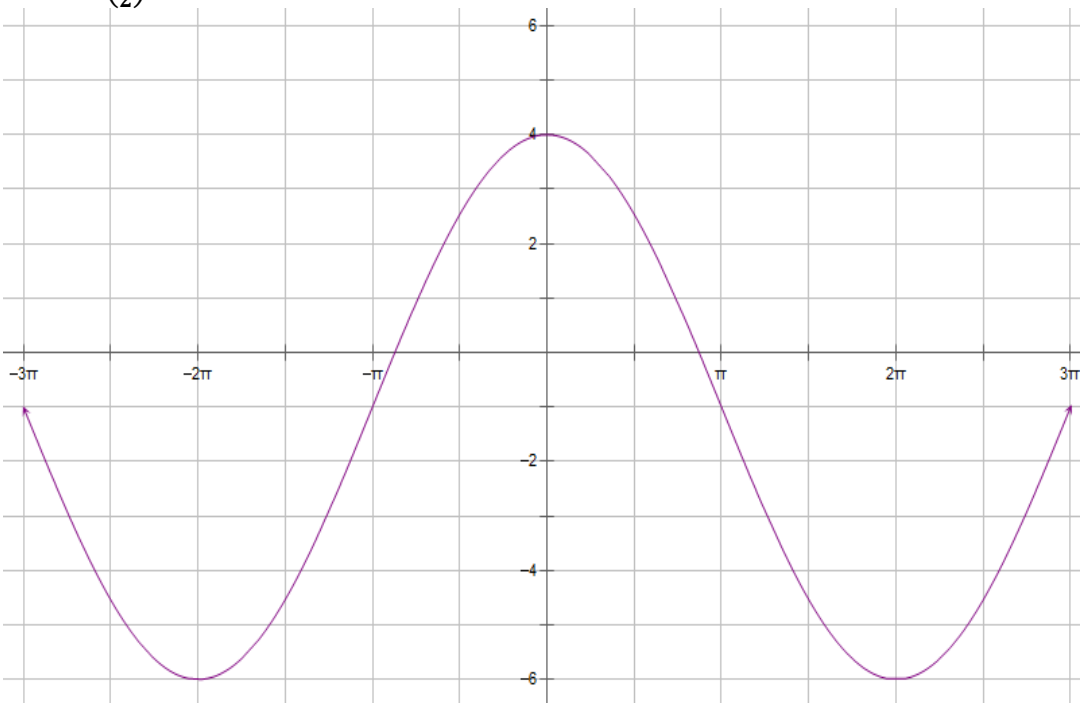
Name: _____ Date: _____ Block: _____

Graph at least one full period of the following functions.

15. $y = 4sin(x) + 1$



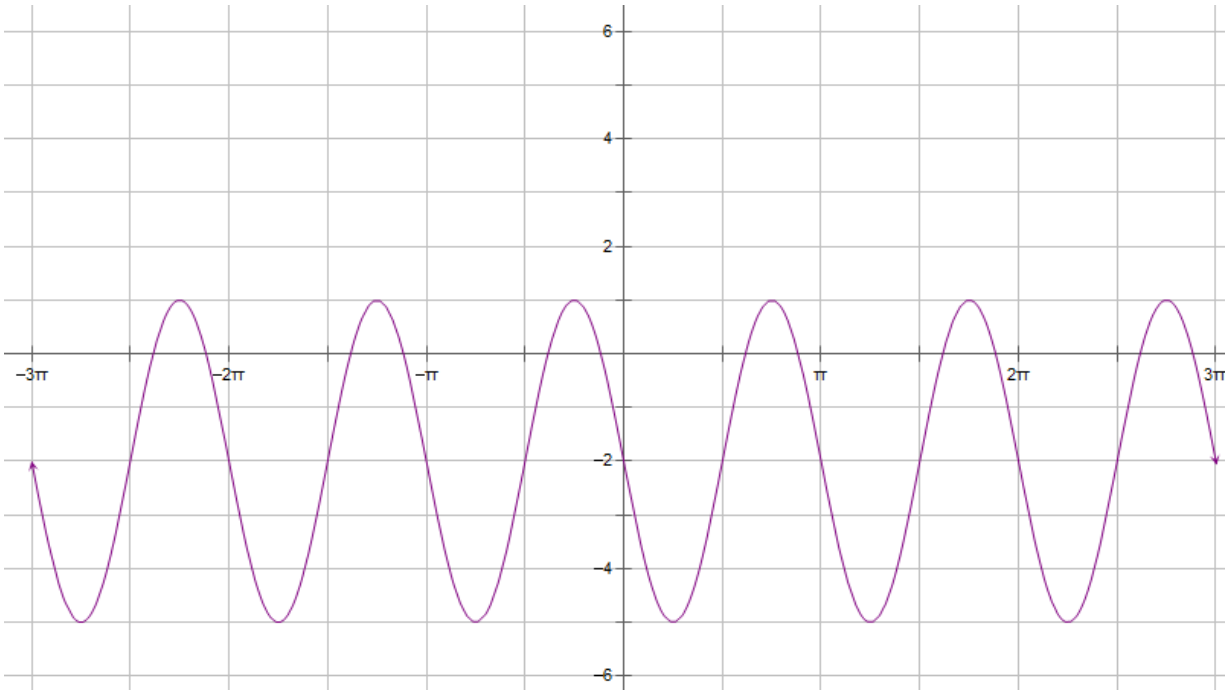
16. $y = 5cos\left(\frac{x}{2}\right) - 1$



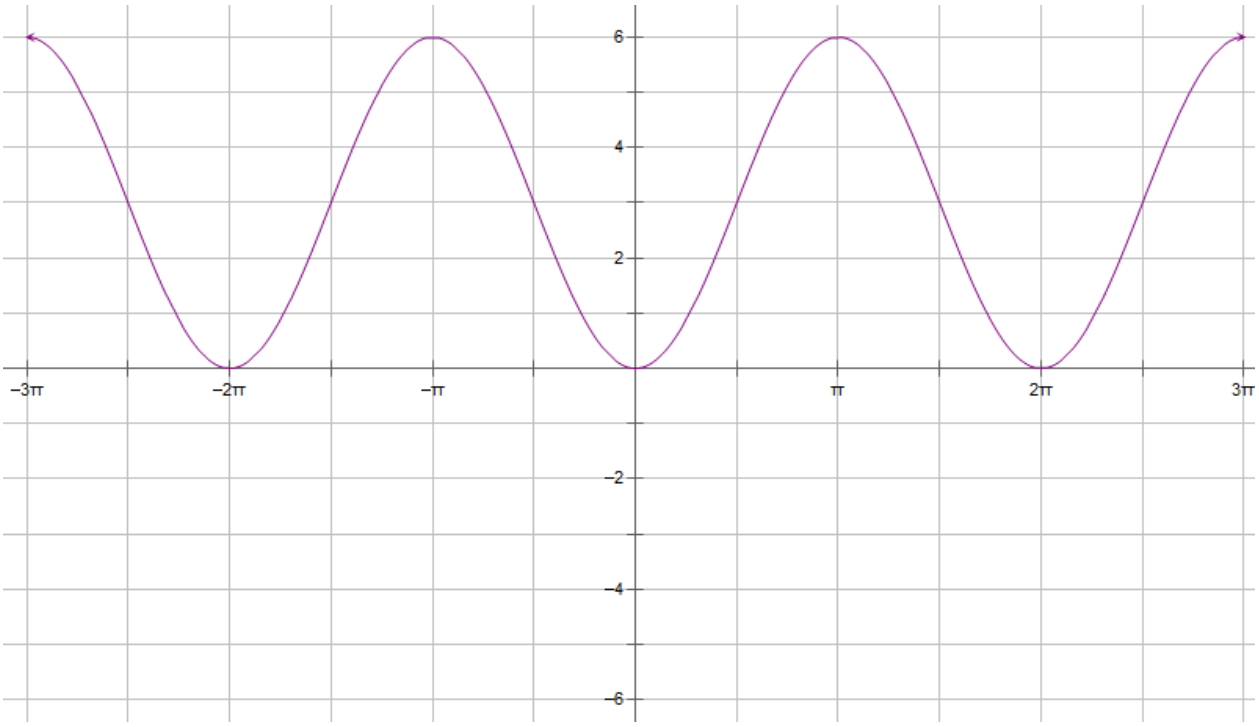
Name: _____ Date: _____ Block: _____

Graph at least one full period of the following functions.

17. $y = -3sin(2x) - 2$



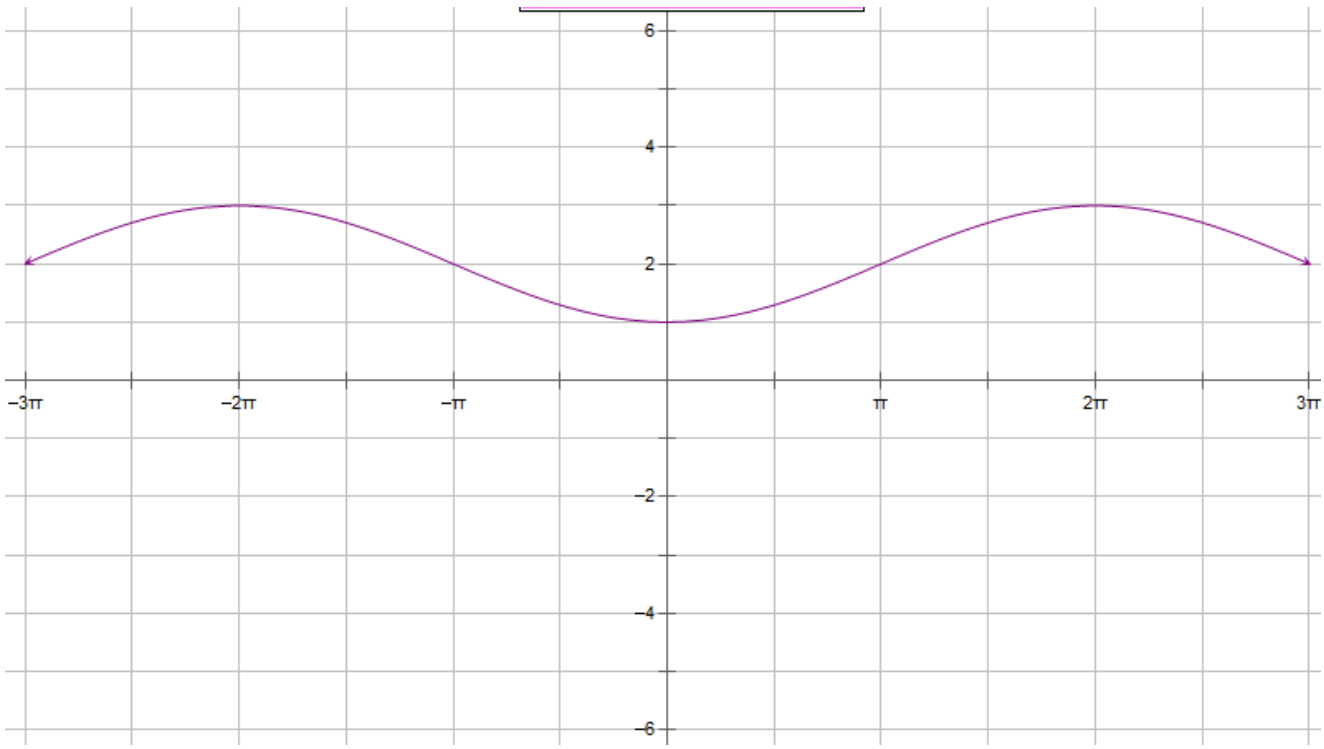
18. $y = -3cos(x) + 3$



Name: _____ Date: _____ Block: _____

Graph at least one full period of the following functions.

19. $y = sin\left(\frac{x}{2} - \frac{\pi}{2}\right) + 2$



20. $y = cos(x + \pi) - 3$