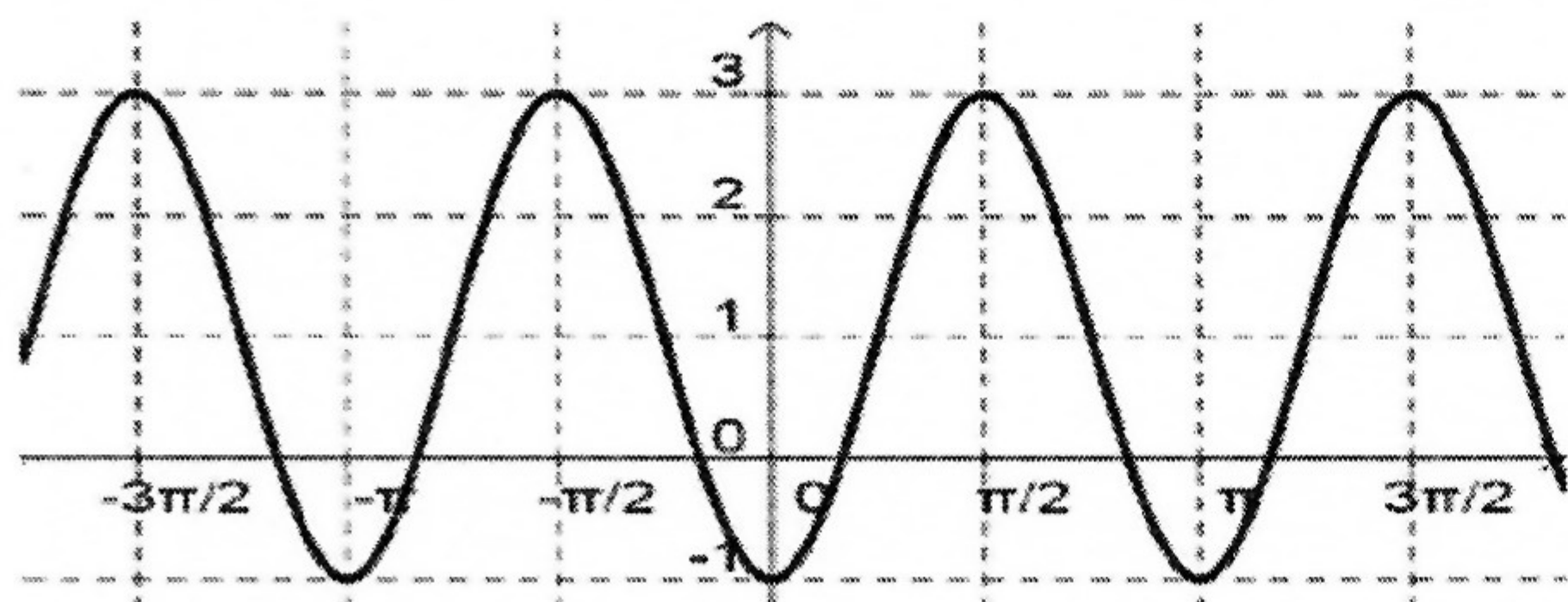


Complete the information for each graph and write its equation in terms of sine and/or cosine.

1)

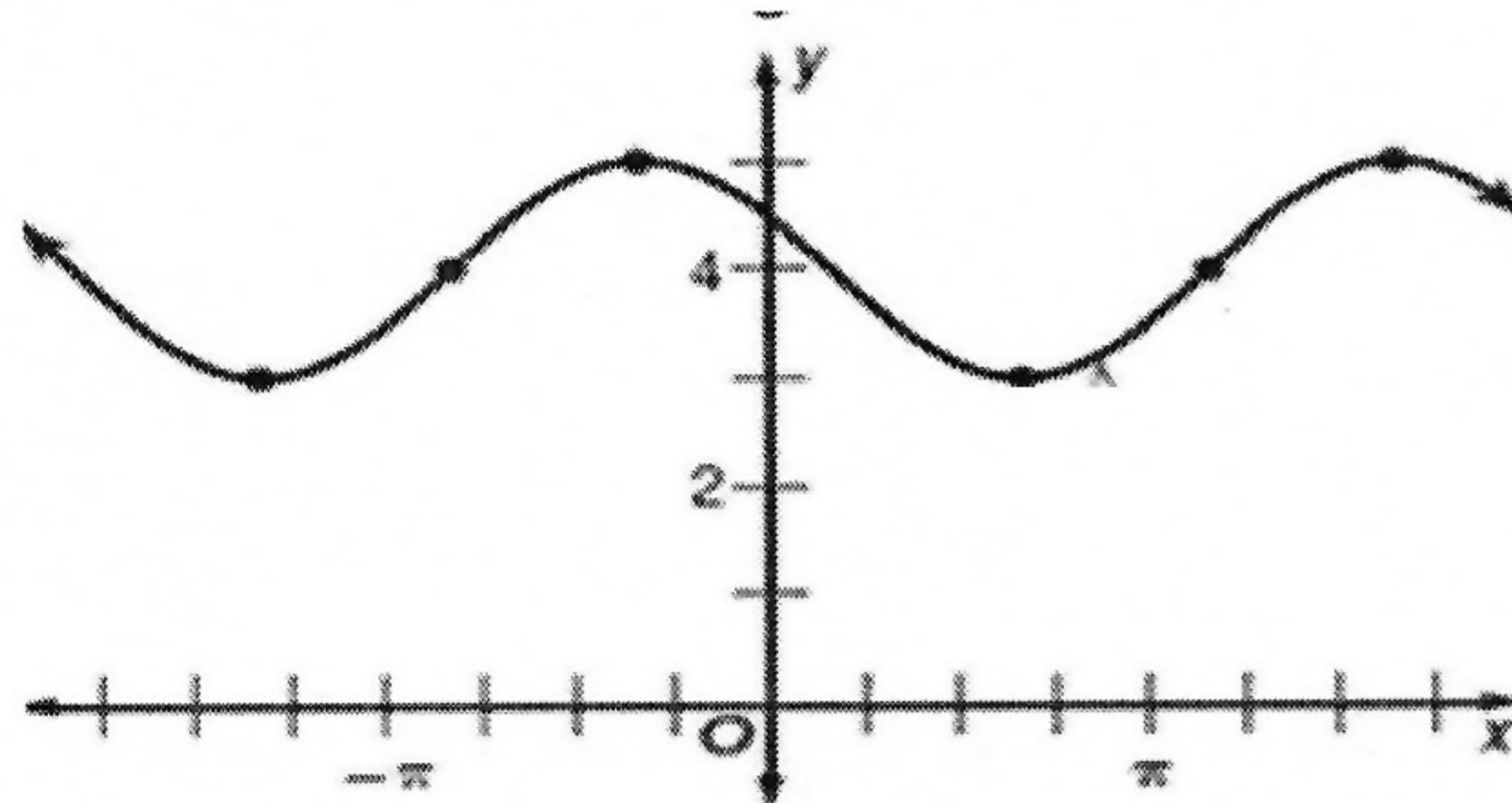


Amplitude: 2 Period: π

Phase Shift: left $\frac{\pi}{2}$ Vertical Shift: up 1

Cosine Equation: $y = 2 \cos 2(x + \frac{\pi}{2}) + 1$

2)

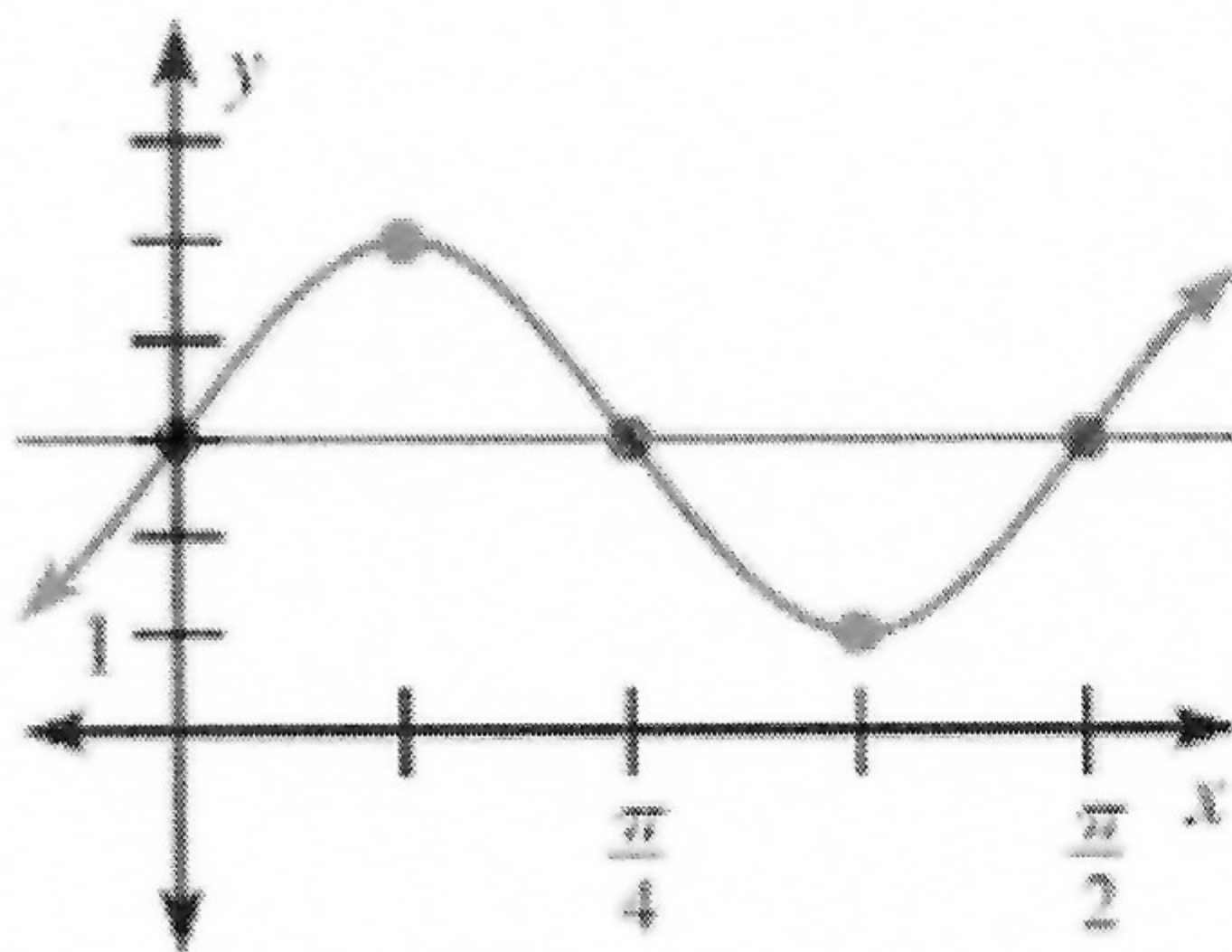


Amplitude: 1 Period: 2π

Phase Shift: Left π Vertical Shift: up 4

Sine Equation: $y = \sin(x + \pi) + 4$
or $5\pi/6$

3)



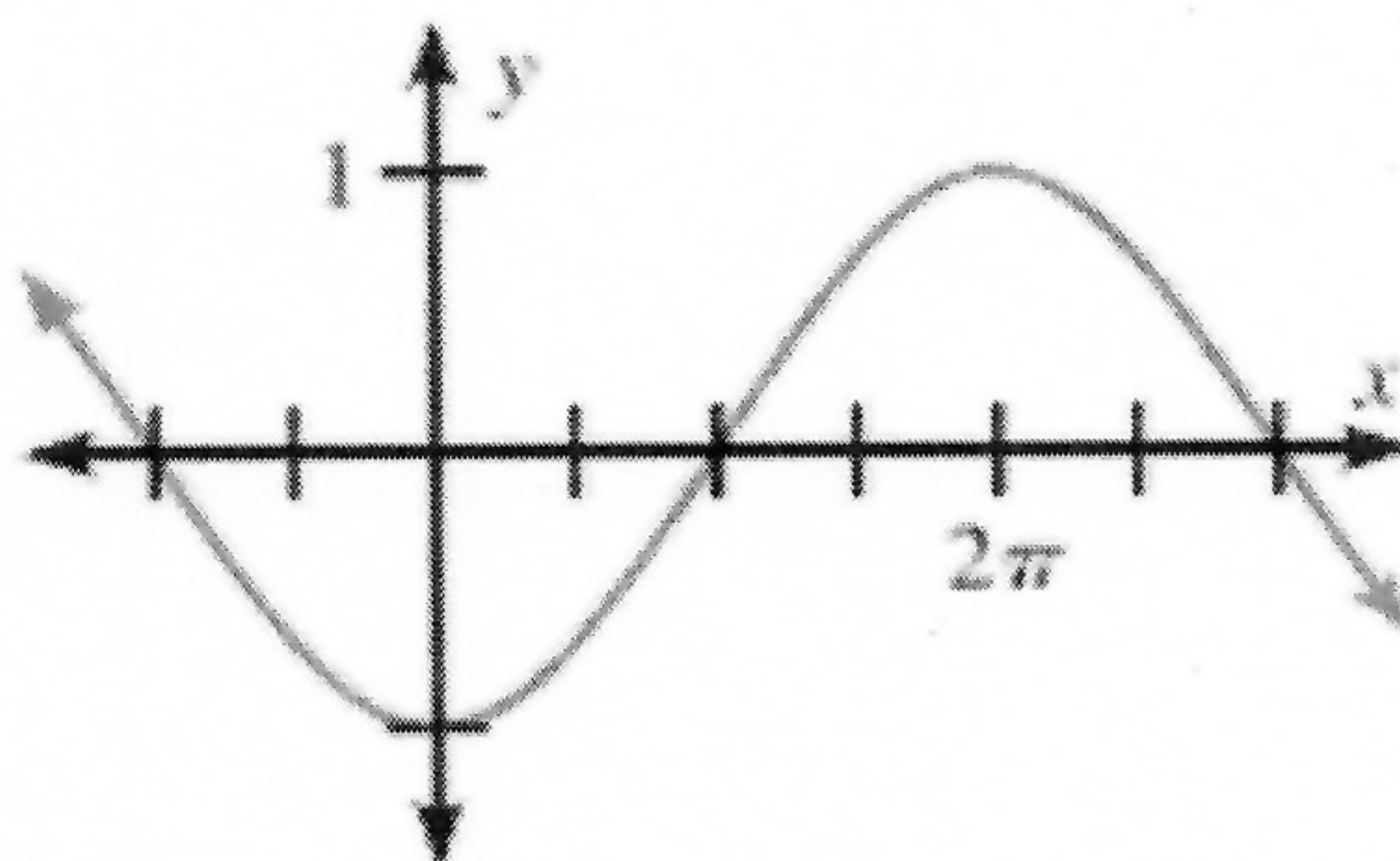
Amplitude: 2 Period: $\frac{\pi}{2}$

Phase Shift: sin: none
cos: Right $\frac{\pi}{8}$ Vertical Shift: up 3

Cosine Equation: $y = 2 \cos 4(x - \frac{\pi}{8}) + 3$

Sine Equation: $y = 2 \sin 4x + 3$

4)



Amplitude: 1 Period: 4π

Phase Shift: sin: π
cos: 2π Vertical Shift: None

Cosine Equation: $y = \cos \frac{1}{2}(x - 2\pi)$

Sine Equation: $y = \sin \frac{1}{2}(x - \pi)$

Use the following information about the trig function to write a possible equation for each.

5) Sine function with amplitude of 7, period is 4π , and phase shift of left $\frac{\pi}{3}$.

$$y = 7 \sin \frac{1}{2}(x + \frac{\pi}{3})$$

6) Cosine function with an amplitude of 1, period is 2π , phase shift is right $\frac{5\pi}{6}$ and vertical shift of up 3.

$$y = \cos(x - \frac{5\pi}{6}) + 3$$

7) Cosine function with an amplitude of 3, period is π , phase shift is left π and vertical shift of down 1.5.

$$y = 3 \cos 2(x + \pi) - 1.5$$