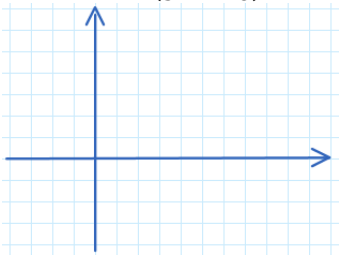


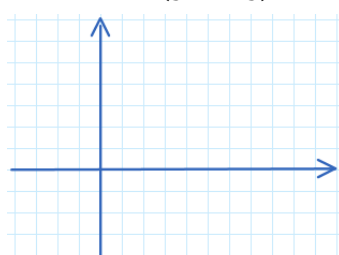
5.7 In-class Practice

1. Find the amplitude, period, phase shift and then sketch the graph of the equation.

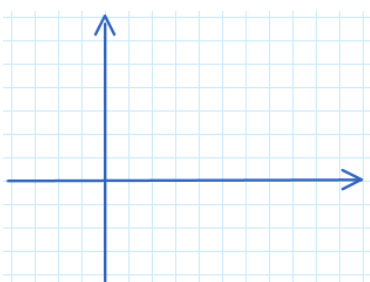
a) $y = -5 \cos\left(\frac{1}{3}x + \frac{\pi}{6}\right) - 2$



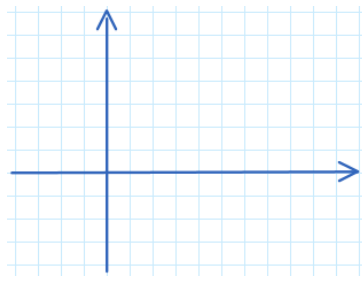
b) $y = 4 \sin\left(\frac{1}{3}x - \frac{\pi}{3}\right) + 1$



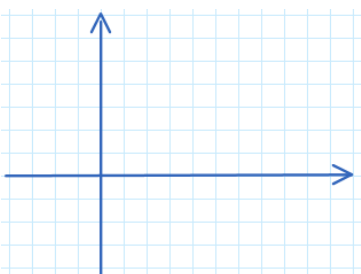
c) $y = 3 \cos(\pi x + 4\pi)$



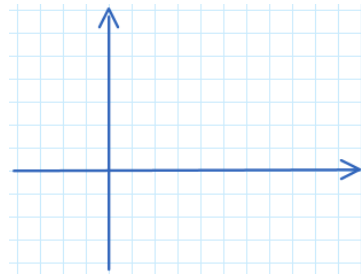
d) $y = -2 \sin(2\pi x + \pi)$



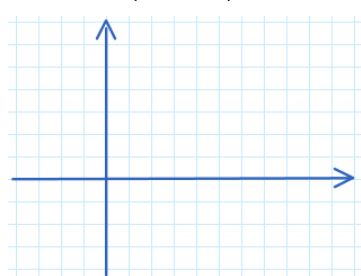
e) $y = -2 \sin(2x - \pi) + 3$



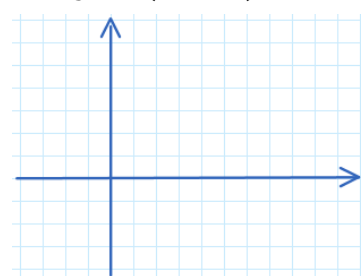
f) $y = 3 \cos(x + \pi) - 1$



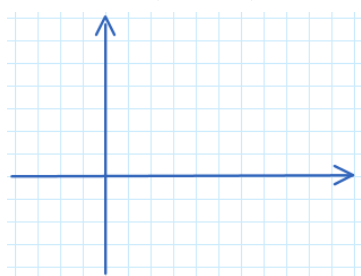
g) $y = 2 \tan\left(2x + \frac{\pi}{2}\right) - 1$



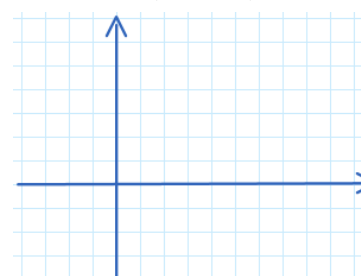
h) $y = \frac{1}{3} \tan\left(2x - \frac{\pi}{4}\right) + 2$



i) $y = -\frac{1}{2} \cot\left(\frac{1}{2}x + \frac{\pi}{4}\right) - 2$

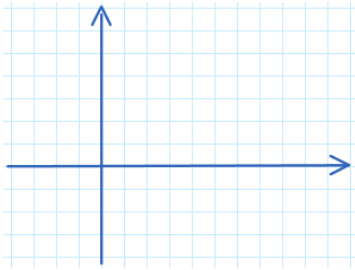


j) $y = 4 \cot\left(\frac{1}{3}x - \frac{\pi}{6}\right) + 2$

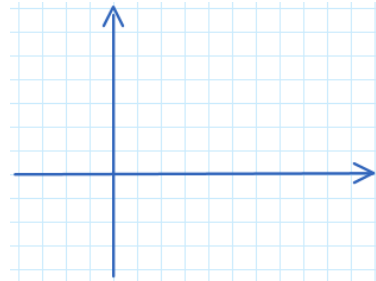


5.7 In-class Practice

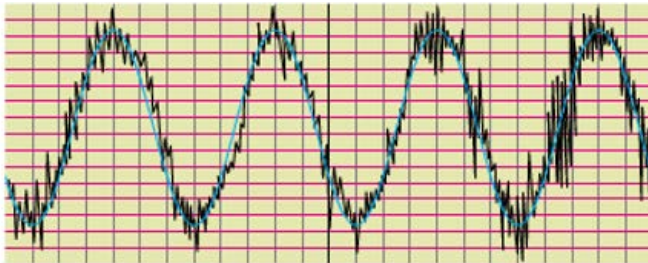
k) $y = 4 \csc\left(\frac{1}{2}x - \frac{\pi}{4}\right) - 1$



l) $y = -3 \sec\left(\frac{1}{3}x + \frac{\pi}{3}\right) + 2$



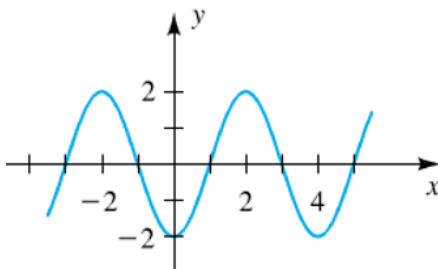
2. The graph shows an electroencephalogram of human brain waves during deep sleep. If we use $W = a \sin(bt + c)$ to represent these waves, what is the value of b ?



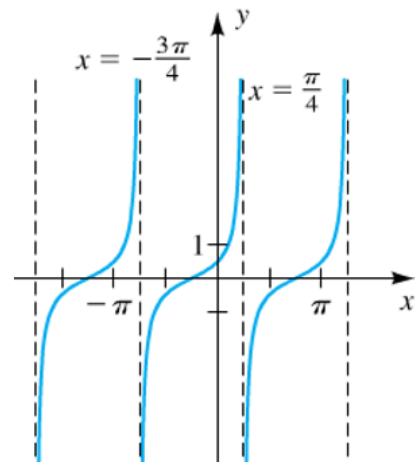
0 1 2 (sec)

3. For the given graph, find the amplitude, period, phase shift, and then write the equation of the graph in the form $y = a \sin(bx + c)$, using $a, b > 0$, and the least positive c .

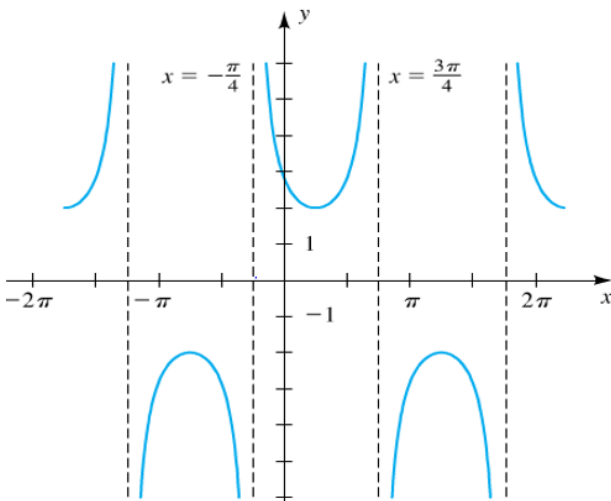
a)



b)



c)



4. Graph $f(x) = 2^{-x} \sin x$.

