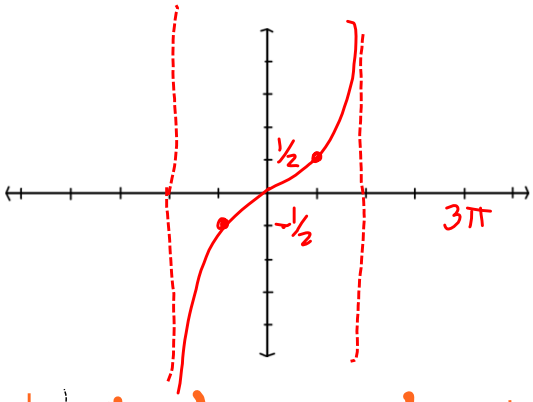
1. $y = \frac{1}{2}\tan\frac{1}{3}x$

"Amplitude": 1/2

Period: $\frac{\pi}{1/3} = 3\pi$

Horizontal shift: N/A

Vertical shift: N/A



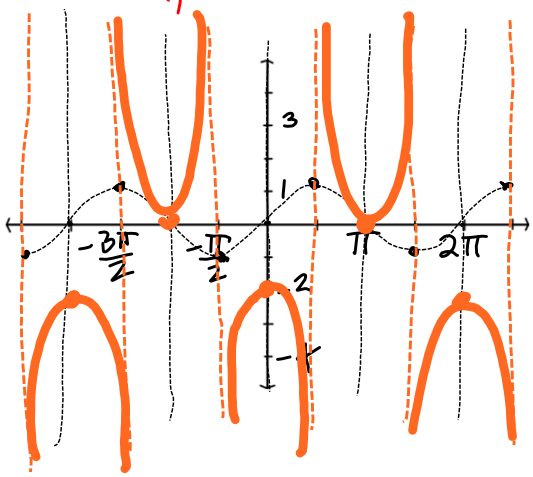
2. $y = \csc\left(x + \frac{3\pi}{2}\right) - 1$

"Amplitude": 1

Period: 2π

Horizontal shift: $-\frac{3\pi}{2}$ (left) 3 ticks

Vertical shift: -1 (down)



Part 2. Print the letter of the correct answer in the blank provided. Note that for the phase shift in #5, a positive value indicates a shift to the right and a negative value indicates a shift to the left.

Consider the function $y = 4\cos\left(3x + \frac{\pi}{2}\right) + 2$

phase shift $\frac{-c}{b}$

3. d Find the amplitude. a) 3 b) $\frac{1}{2}$ c) 2 d) 4

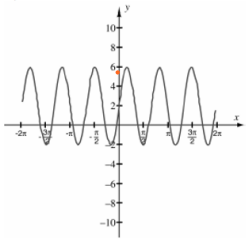
4. d Find the period. a) 2π b) $\frac{\pi}{2}$ c) $\frac{3\pi}{2}$ d) $\frac{2\pi}{3}$ $\frac{-\pi/2}{3}$

5. a Find the phase shift. a) $-\frac{\pi}{6}$ b) $\frac{\pi}{6}$ c) $-\frac{\pi}{2}$ d) 2

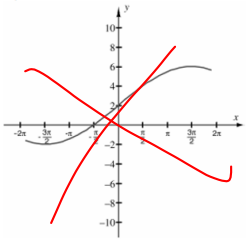
6. d

Which is the graph of the function?

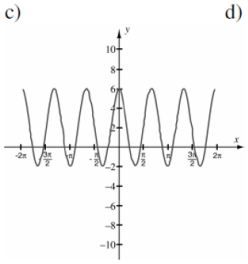
a)



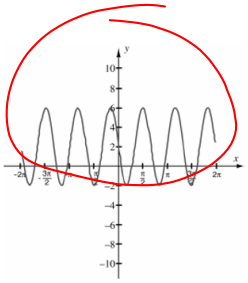
b)

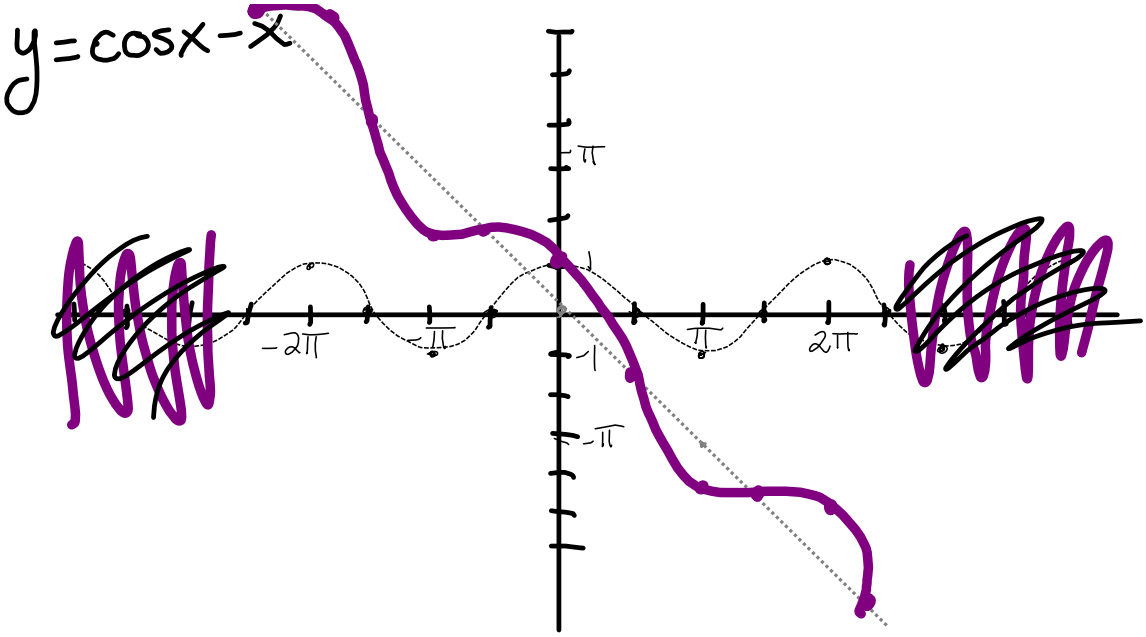


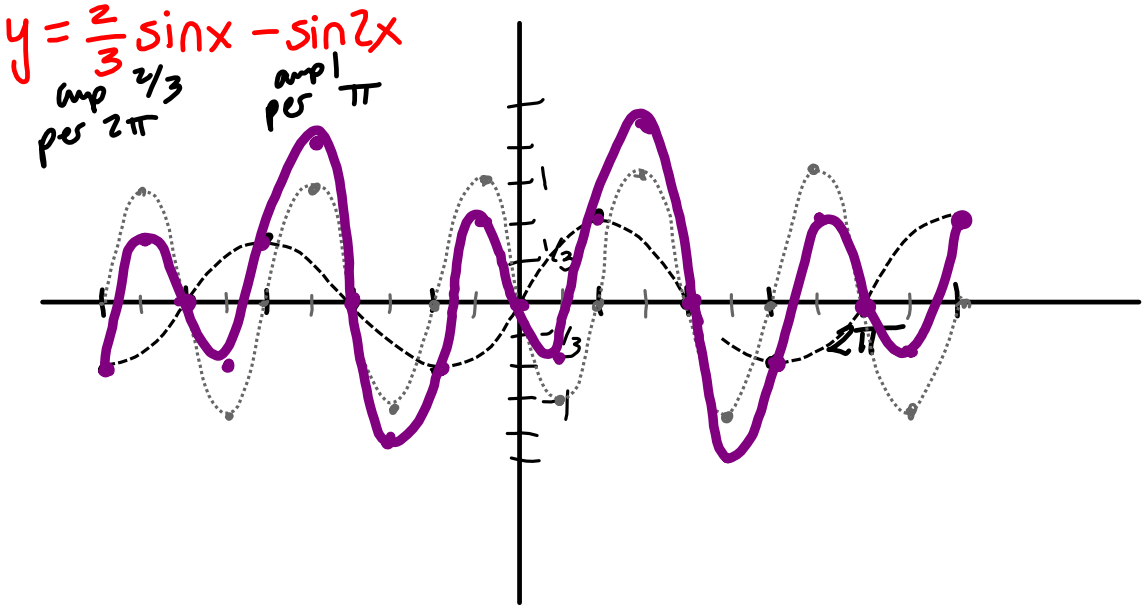
c)

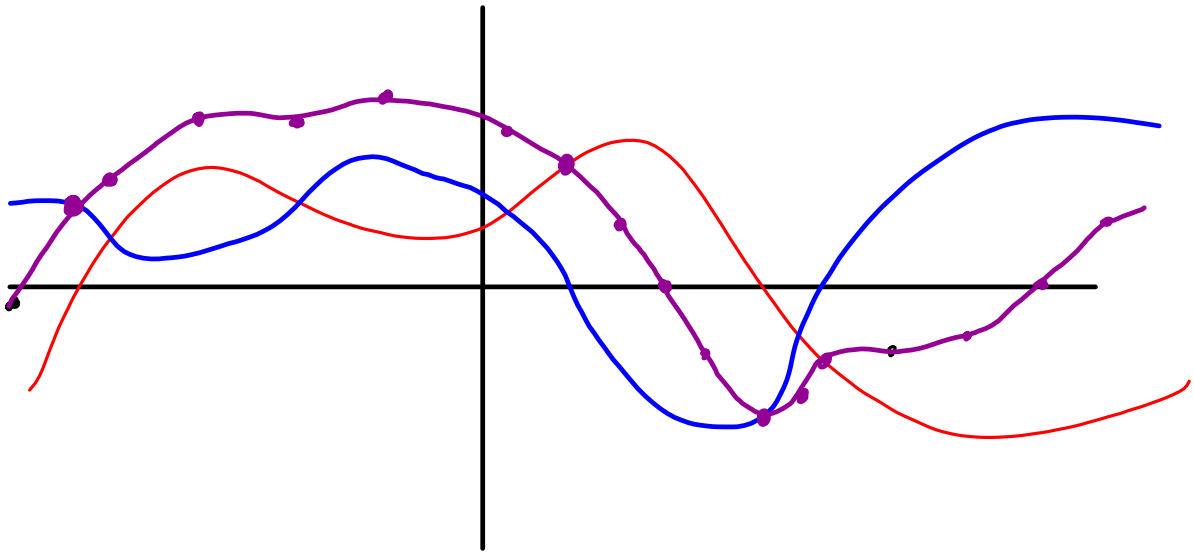


d)




y = cosx − x
π
1
−2π
−π
π
2π
−1
−π


y = 2/3 sinx − sin2x
amp 2/3
per 2π
amp 1
per π
1
1/3
−1/3
−1
2π



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

"amp": 2/3
per: $\pi / 2/3 = 3\pi/2$
left $\frac{\pi/4}{2/3} = \frac{3\pi}{8}$ tick
down 1 3 ticks