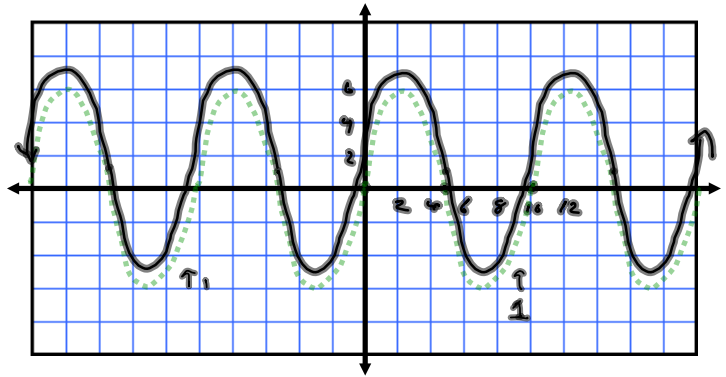


1)  $f(x) = 6\sin\left(\frac{\pi x}{5}\right) + 1$  ← 4P1

Amp: 6

pd:  $\frac{2\pi}{\frac{\pi}{5}} = 10$

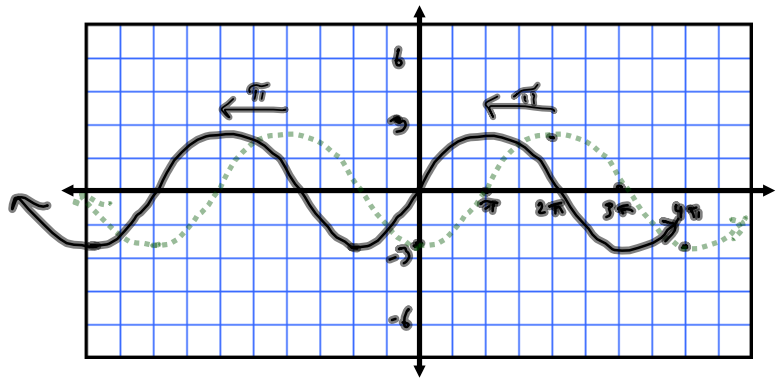


2)  $g(x) = -2\cos\left(\frac{1}{2}x + \frac{\pi}{2}\right)$

Amp:  $2 = |-2|$

pd:  $\frac{2\pi}{\frac{1}{2}} = 4\pi$

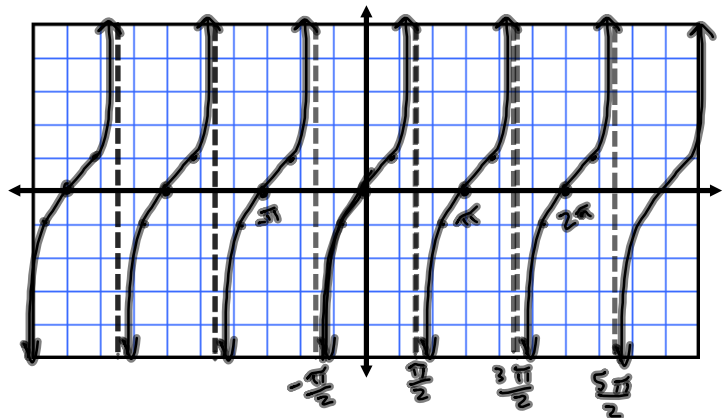
p.s.  $-\frac{\pi}{2} = \frac{\pi}{2} \cdot \frac{1}{2} = \pi$  to the left  
or  $-\pi$



3)  $h(x) = \tan x$

pd:  $\pi$

asymptotes:  $x = \frac{\pi}{2} + \pi n, n \in \mathbb{Z}$



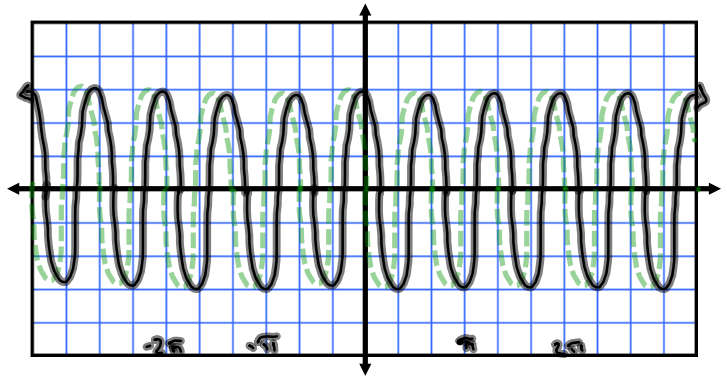
4)  $f(x) = -3\sin\left(3x - \frac{\pi}{2}\right)$

amp:  $| -3 | = 3$

pd:  $\frac{2\pi}{3}$

phase shift  $-\frac{c}{b} = -\frac{-\frac{\pi}{2}}{3} = \frac{\pi}{2} \cdot \frac{1}{3} = \frac{\pi}{6}$  to the right

$-\frac{c}{b}$       $-\frac{-\frac{\pi}{2}}{3}$



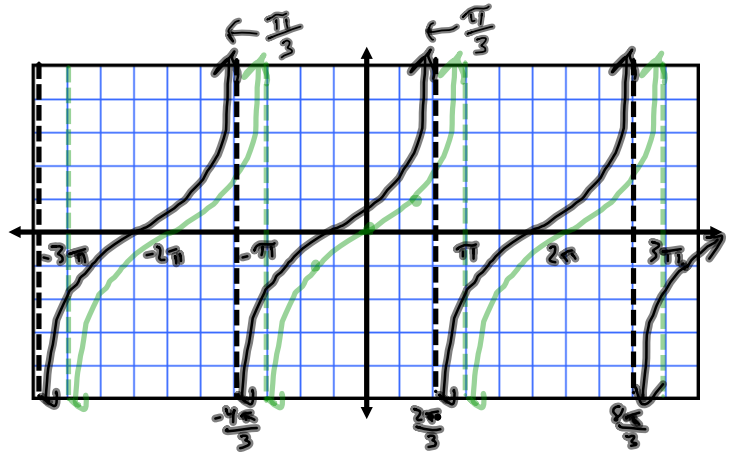
5)  $f(x) = \tan\left(\frac{1}{2}x + \frac{\pi}{6}\right)$

pd:  $\frac{\pi}{\frac{1}{2}} = 2\pi$

phase shift:  $-\frac{c}{b} = -\frac{\frac{\pi}{6}}{\frac{1}{2}} = -\frac{\pi}{6} \cdot \frac{2}{1} = -\frac{\pi}{3}$

$\frac{\pi}{3}$  to the left

asymptotes:  $x = \frac{2\pi}{3} + 2\pi n, n \in \mathbb{Z}$



6)  $f(x) = 2\sec x$

pd:  $2\pi$

asymptotes:  $x = \frac{\pi}{2} + \pi n, n \in \mathbb{Z}$

where  $2\cos x = 0$

