Pre-Calc
4.5 – 4.6 Graphing Practice

Name KEY
Date_____ **Period**___

Graph the following on a one period interval. Find the amplitude/vertical stretch, period, phase shift, and vertical shift. Identify any asymptotes in the graph.

1.) $y = 2\sin\left(\frac{1}{2}x - \frac{\pi}{2}\right) - 2$ (OTOBO)

$\frac{\pi}{2} \div \frac{1}{2} = \pi$

$a = 2$

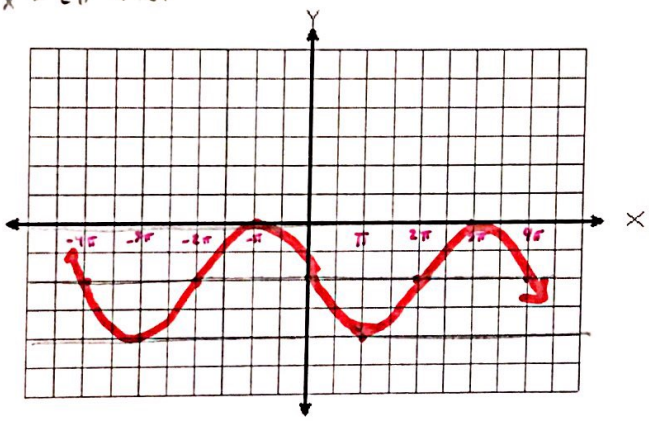
$b = \frac{1}{2}$

$d = -2$

$P = \frac{2\pi}{\frac{1}{2}} = 4\pi$ π intervals

$\frac{1}{2}x = \pi$

$x = 2\pi$ P.S.



2.) $y = 2\cos(2x + \pi) - 1$ TOBOT

$a = 2$

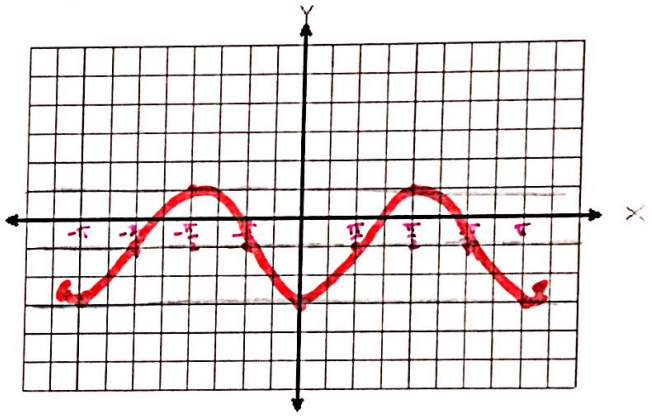
$b = 2$

$d = -1$

$P = \frac{2\pi}{2} = \pi$ $\frac{\pi}{4}$ intervals

$\frac{2x}{2} = \frac{-\pi}{2}$

$x = -\frac{\pi}{2}$ P.S.



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

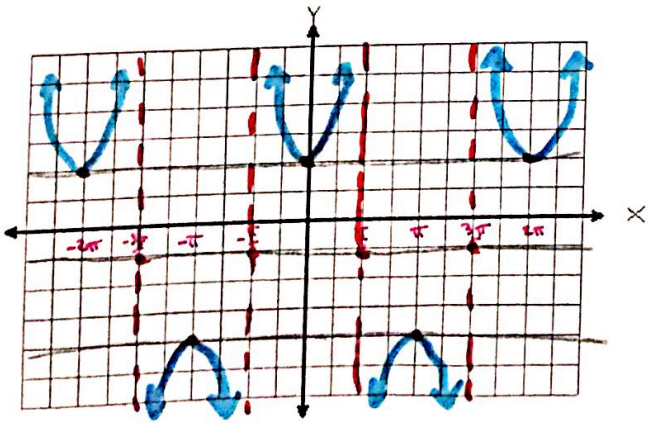
$a = 3$

$b = 1$

$P = 2\pi$ $\frac{\pi}{2}$ = intervals

$x = -\frac{\pi}{2}$ P.S.

$d = -1$



4.) $y = 3\sec(x - \pi) + 1$ TOBUT

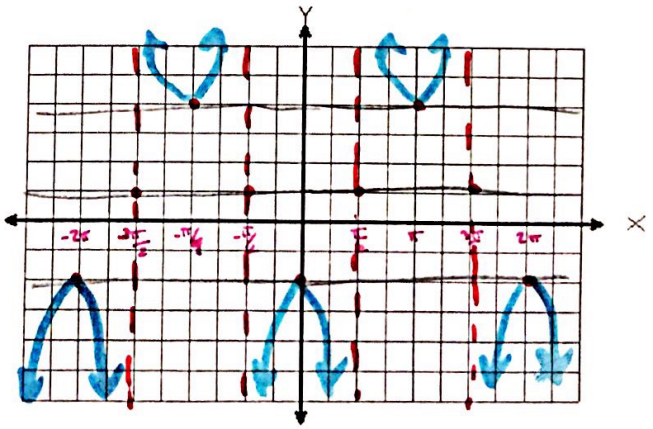
$a = 3$

$b = 1$

$P = 2\pi$ $\pi/2$ intervals

$x = \pi$ P.S.

$d = 1$



$y = 3\tan\left(x - \frac{\pi}{4}\right)$ $x = \frac{\pi}{4}$ zero/P.S.

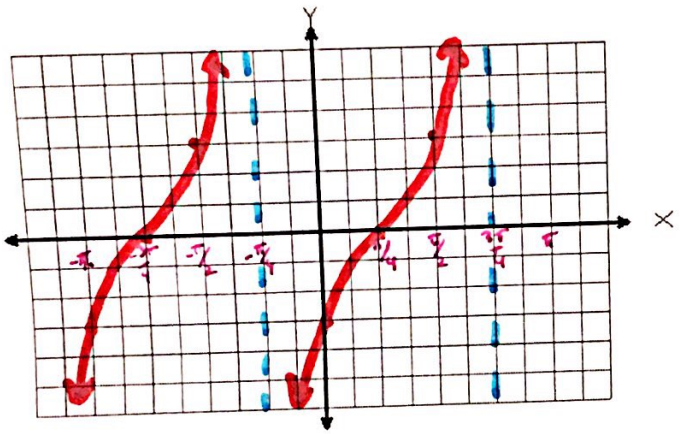
$a = 3$

$b = 1$

$= \pi$ $\pi/4$ intervals

$-\frac{\pi}{2} = x - \frac{\pi}{4} = \frac{\pi}{2}$

$-\frac{\pi}{4} = x = \frac{3\pi}{4}$) Asymptotes

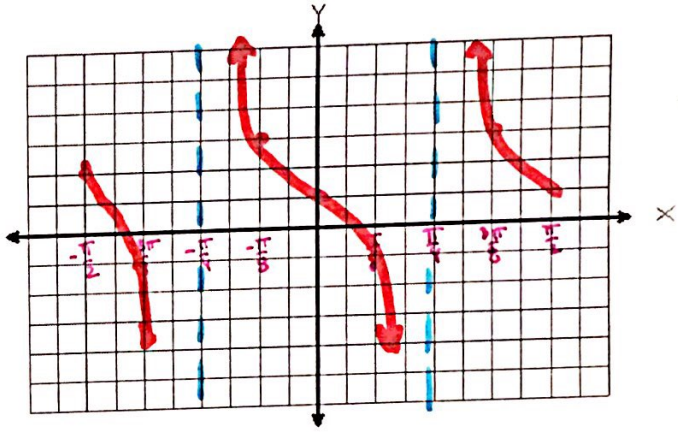


6.) $y = 2\cot\left(2x + \frac{\pi}{2}\right) + 1$

$a = 2$

$b = 2$

$P = \frac{\pi}{2}$ Intervals $\frac{\pi}{8}$



$2x + \frac{\pi}{2} = 0$

$2x = -\frac{\pi}{2}$

$x = -\frac{\pi}{4}$

$2x + \frac{\pi}{2} = \pi$

$2x = \frac{\pi}{2}$

$x = \frac{\pi}{4}$) asymptotes

$2x + \frac{\pi}{2} = \frac{\pi}{2}$

$2x = 0$

$x = 0$) zero.

$2x = -\frac{\pi}{2}$

$x = -\frac{\pi}{4}$ P.S.