

Pre-Calculus Worksheet

Cosecant and secant

Name: Jeeny

Per: _____

I. Fill in the chart for each function. **DO NOT GRAPH.** And **FACTOR** first when needed!

1. $y = -5\csc(2x) + 2$

Amplitude:	none
Flip?	yes
Vertical Shift:	up 2
Period:	π
Phase Shift:	none

2. $y = \frac{1}{2} \sec\left(3x - \frac{\pi}{2}\right) - 5$ $3\left(x - \frac{\pi}{6}\right)$

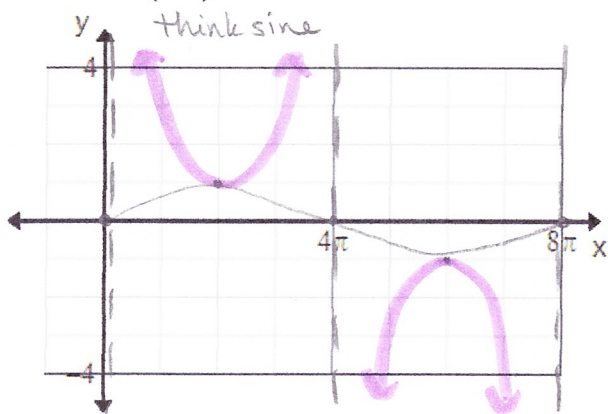
Amplitude:	none
Flip?	no
Vertical Shift:	down 5
Period:	$\frac{2\pi}{3}$
Phase Shift:	$\frac{\pi}{6}$ right

3. $y = -\frac{1}{5} \csc(4x + \pi)$ $4\left(x + \frac{\pi}{4}\right)$

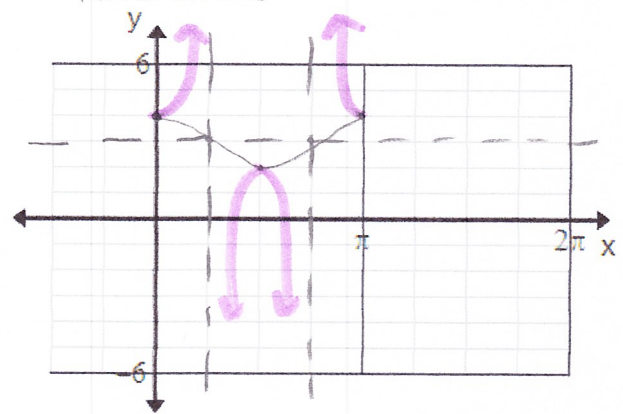
Amplitude:	none
Flip?	yes
Vertical Shift:	none
Period:	$\frac{\pi}{2}$
Phase Shift:	$\frac{\pi}{4}$ left

II. Graph each function, over one period, showing the vertical asymptotes.

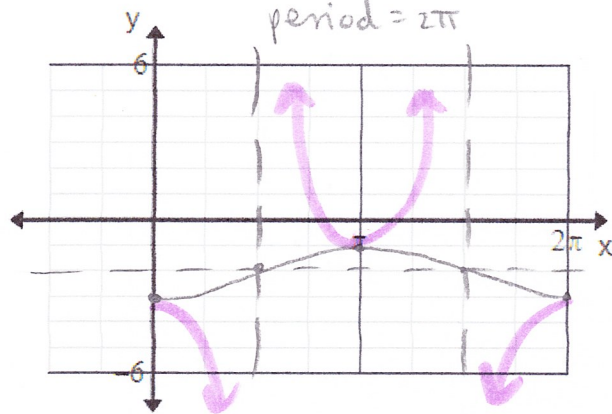
4. $y = \csc\left(\frac{1}{4}x\right)$ period: $\frac{2\pi}{\frac{1}{4}} = 8\pi$



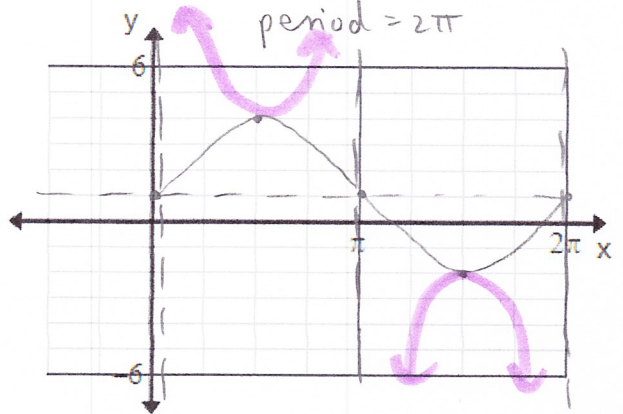
5. $y = \sec(2x) + 3$ up 3 period $\frac{2\pi}{2} = \pi$



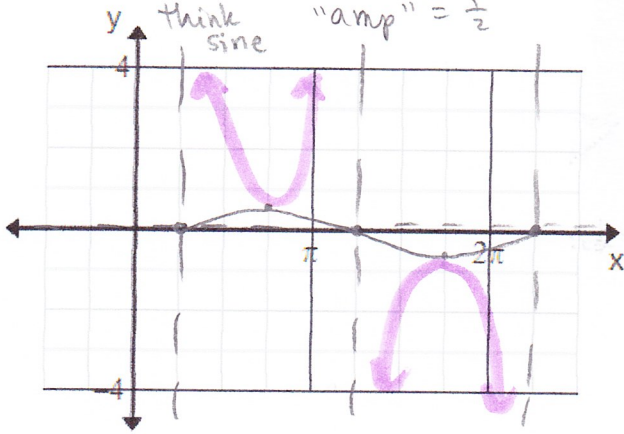
6. $y = -\sec x - 2$ down 2 FLIP period = 2π



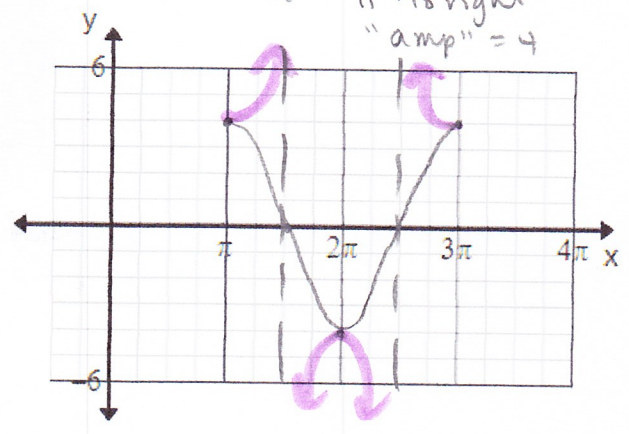
7. $y = 3\csc x + 1$ up 1 "amp" = 3 period = 2π



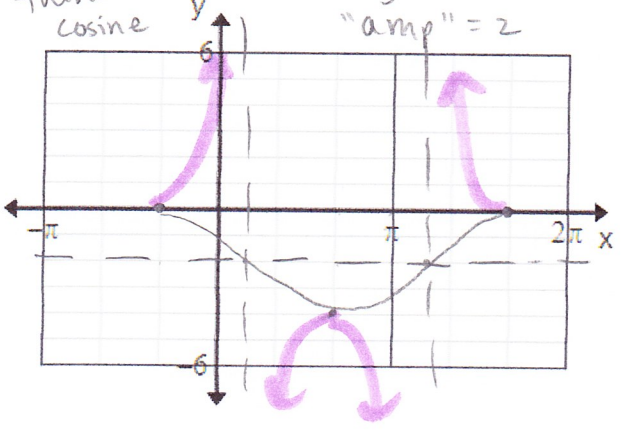
8. $y = \frac{1}{2} \csc\left(x - \frac{\pi}{4}\right)$ $\frac{\pi}{4}$ right period = 2π



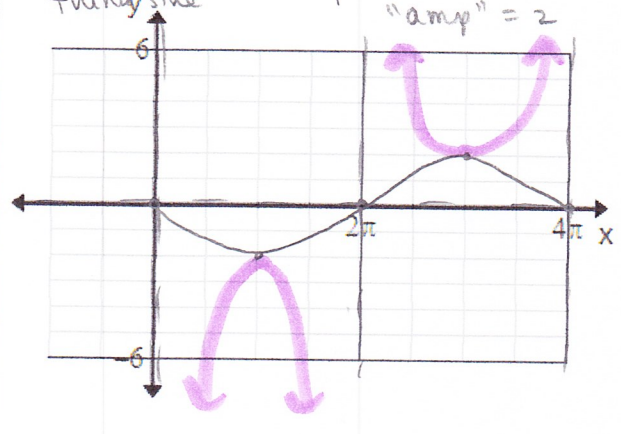
9. $y = 4 \sec(x - \pi)$ period = 2π



10. $y = 2 \sec\left(x + \frac{\pi}{3}\right) - 2$ down 2 period = 2π

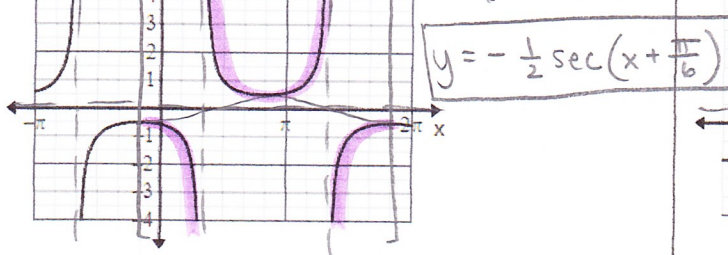


11. $y = 2 \csc\left(\frac{1}{2}x\right)$ FLIP! period = 4π

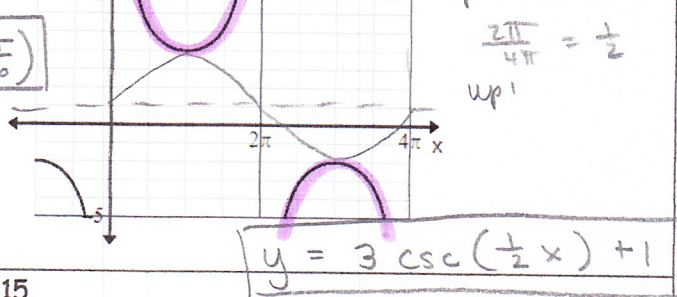


III. Write the equation for each function.

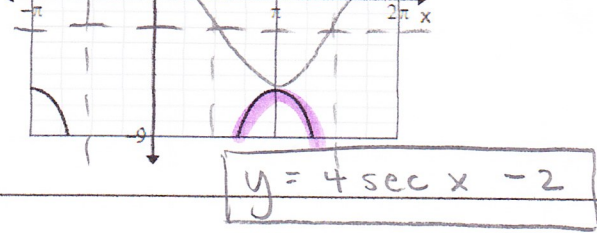
12. FLIP! "amp" = $\frac{1}{2}$ period = 2π
 $\frac{\pi}{6}$ to left



13. "amp" = 3 period = 4π
 $\frac{2\pi}{4\pi} = \frac{1}{2}$
up!



14. "amp" = 4 period = 2π
down 2



15. period = π
 $\frac{2\pi}{\pi} = 2$
 $\frac{\pi}{2}$ to left
FLIP!

