

Name _____

Date _____

Trigonometry – Graphing Review

Period _____

Graph the following trig functions and state all of the important information.

1.

a) $y = -4 \sin(3x) + 1$

b) $y = 2 \cos(4x) - 5$

c) $y = 5 \sin\left(\frac{x}{2} - \pi\right) - 2$

d) $y = -2 \cos\left(4x + \frac{\pi}{2}\right)$

e) $y = \frac{1}{2} \csc\left(\frac{x}{2}\right)$

f) $y = -3 \sec\left(\frac{x}{3}\right) + 4$

g) $y = -4 \csc(4x - \pi) - 2$

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

2.

a) $y = 2 \tan\left(\frac{1}{2}x\right) - 6$

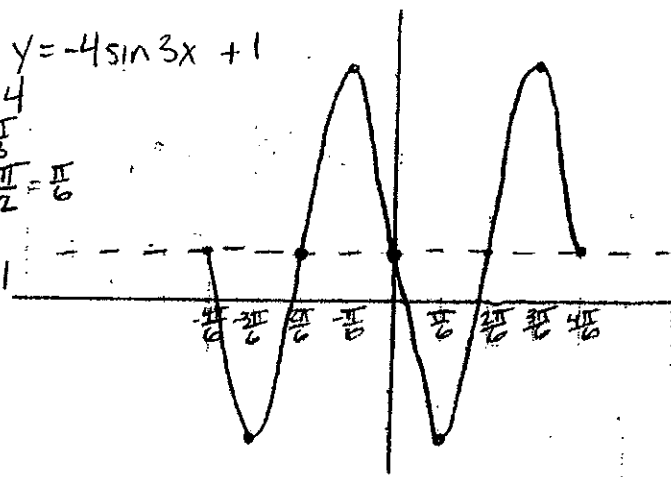
b) $y = 3 \cot(2x) + 3$

c) $y = 4 \tan\left(3x - \frac{\pi}{6}\right) - 1$

d) $y = \cot\left(\frac{x}{2} - \pi\right)$

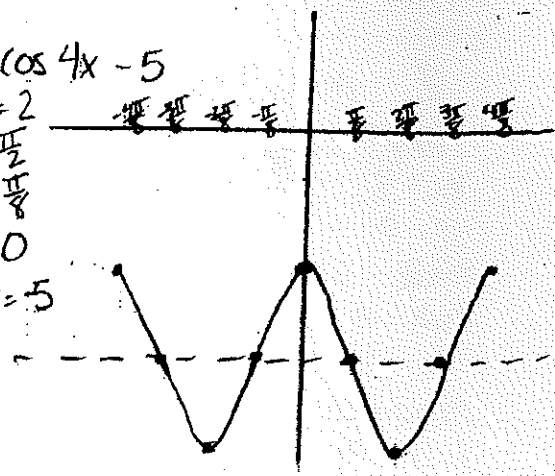
1a. $y = -4\sin 3x + 1$

Amp = 4
 P = $\frac{2\pi}{3}$
 Inc = $\frac{2\pi}{12} = \frac{\pi}{6}$
 SP = 0
 SA = y = 1



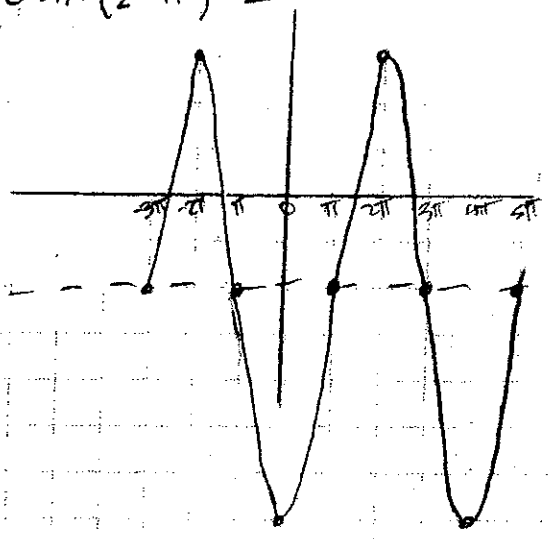
b. $y = 2\cos 4x - 5$

Amp = 2
 P = $\frac{\pi}{2}$
 Inc = $\frac{\pi}{8}$
 SP = 0
 SA = y = -5



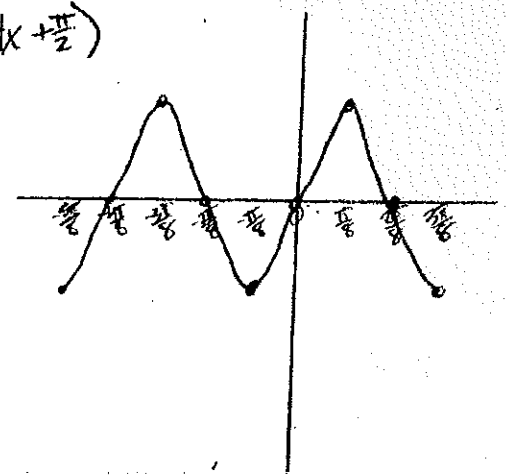
c. $y = 5\sin(\frac{x}{2} - \pi) - 2$

Amp = 5
 P = 4π
 Inc = π
 SP = 2π
 SA = y = -2



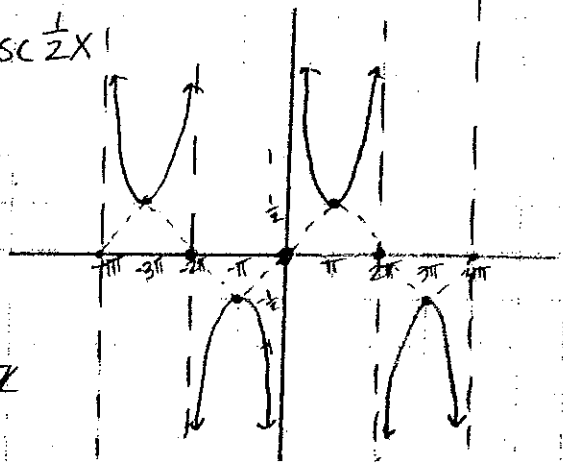
d. $y = -2\cos(4x + \frac{\pi}{2})$

Amp = 2
 P = $\frac{\pi}{2}$
 Inc = $\frac{\pi}{8}$
 SP = $-\frac{\pi}{8}$
 SA = y = 0



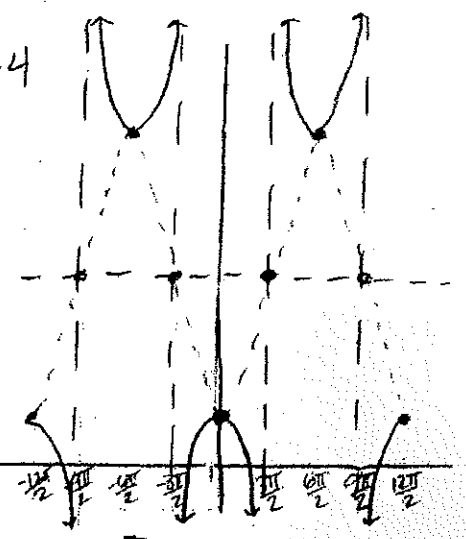
e. $y = \frac{1}{2}\csc \frac{1}{2}x$

Amp = $\frac{1}{2}$
 P = 4π
 Inc = π
 SP = 0
 SA = y = 0
 Asymp Gen.
 $x = 2\pi n, n \in \mathbb{Z}$



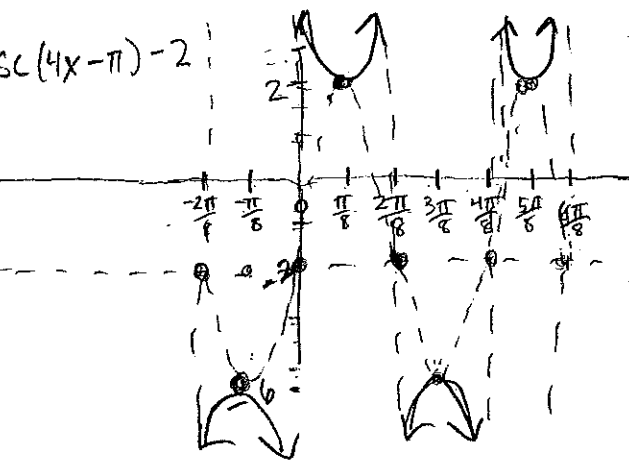
f. $y = -3\sec \frac{1}{2}x + 4$

Amp = 3
 P = 6π
 Inc = $\frac{6\pi}{4} = \frac{3\pi}{2}$
 SP = 0
 SA = y = 4
 Asymp Gen.
 $x = \frac{6\pi}{2}n + \frac{3\pi}{2}n \in \mathbb{Z}$
 $= 3\pi n + \frac{3\pi}{2}n \in \mathbb{Z}$



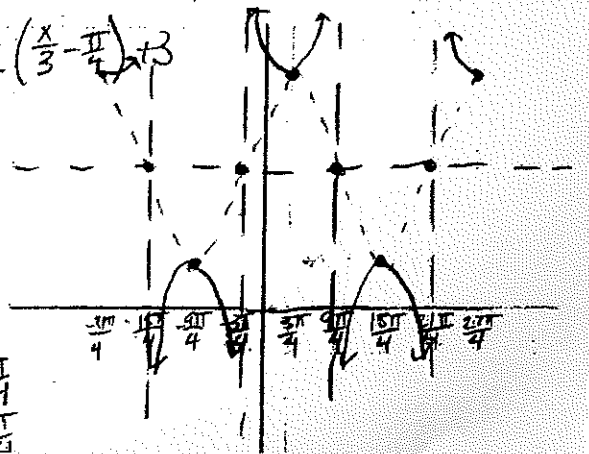
g. $y = -4(\csc(4x - \pi)) - 2$

Amp = 4
 P = $\frac{\pi}{4}$
 Inc = $\frac{\pi}{8}$
 SP = $\frac{\pi}{4} = \frac{2\pi}{8}$
 Asymp Gen.
 $x = \frac{\pi}{4}k$

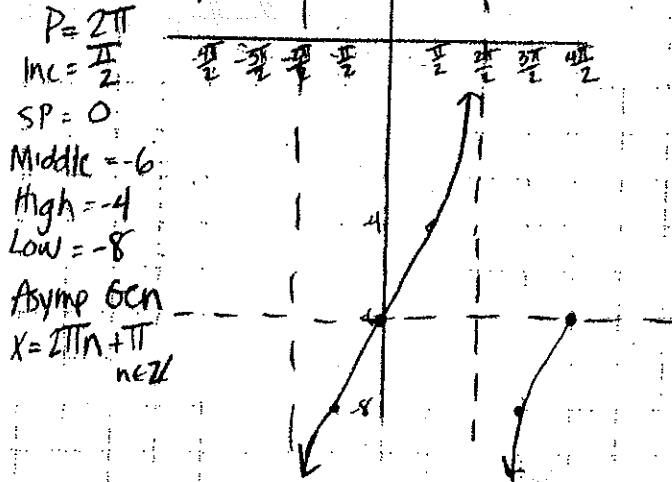


h. $y = 2\sec(\frac{x}{3} - \frac{\pi}{4}) + 3$

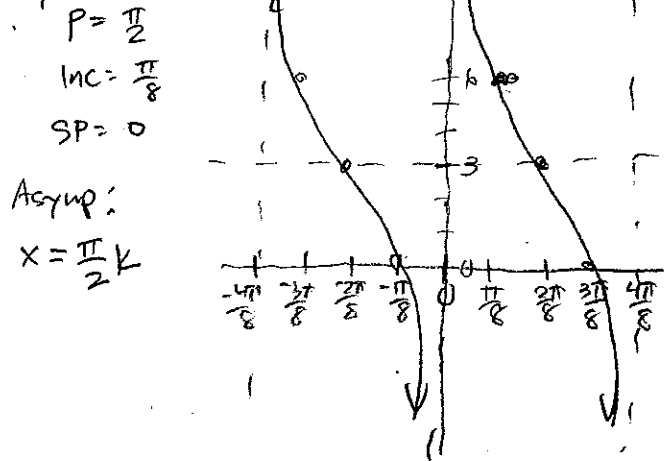
Amp = 2
 P = 6π
 Inc = $\frac{6\pi}{4}$
 SP = $\frac{3\pi}{4}$
 SA = y = 3
 Asymp Gen.
 $x = 6\pi n + \frac{9\pi}{4}$
 or $6\pi n - \frac{3\pi}{4}$



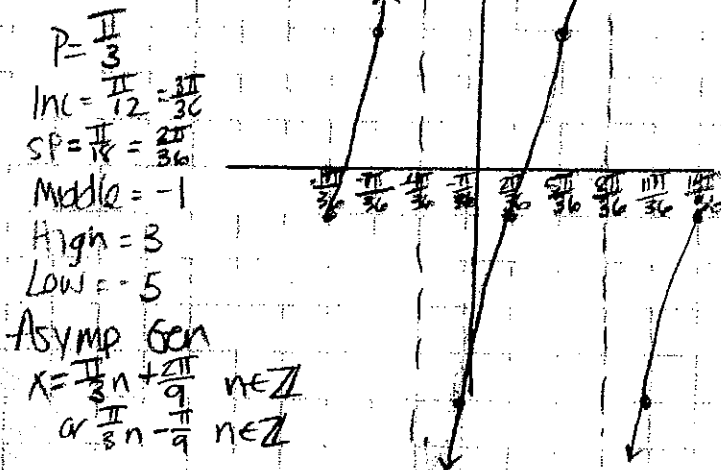
2. a. $y = 2 \tan \frac{1}{2}x - 6$



b. $y = 3 \cot 2x + 3$



c. $y = 4 \tan(3x - \frac{\pi}{6}) - 1$



d. $y = \cot(\frac{x}{2} - \pi)$

