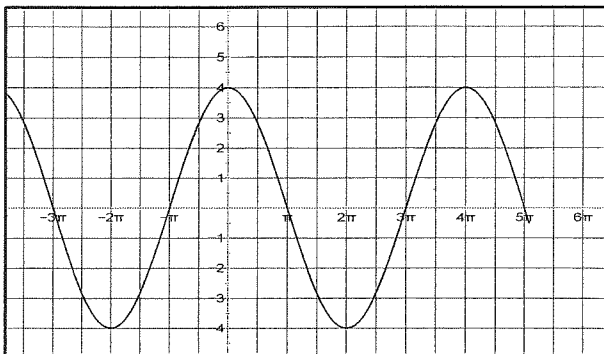


Name: \_\_\_\_\_

## Writing Trigonometric Functions From a Graph

1.



Amp (a) : 4 V. S, (d) 0

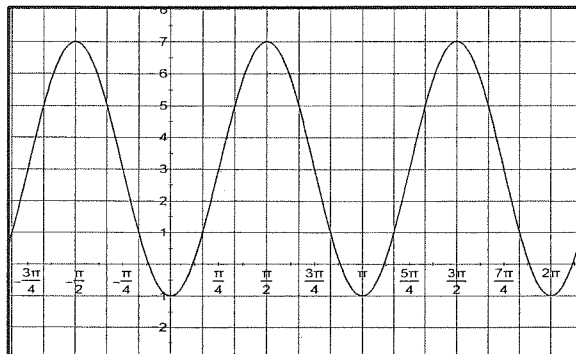
Period: 4π b = 1/2

P.S. (-C<sub>sin</sub>) = C = π/2 P.S (-C<sub>cos</sub>) - 0

f(x) 4 sin(1/2 x + π/2)

g(x) 4 cos(1/2 x)

3.



Amp (a) : 4 V. S, (d) 3

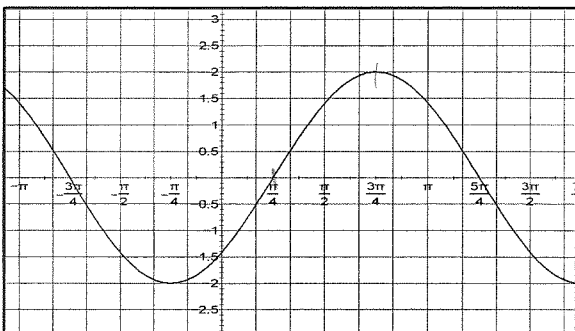
Period: π b = 2

P.S. (-C<sub>sin</sub>) = -π/2 P.S (-C<sub>cos</sub>) - -π

f(x) 4 sin(2x - π/2) + 3

g(x) 4 cos(2x - π) + 3

2.



Amp (a) : 2 V. S, (d) 0

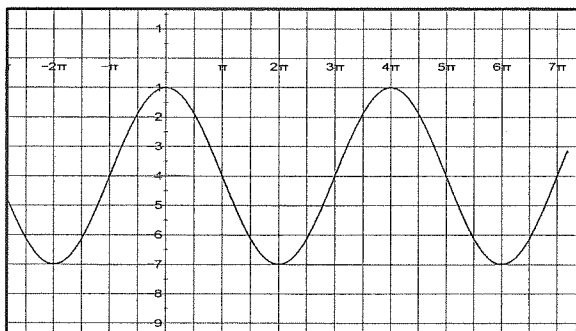
Period: 2π b = 1

P.S. (-C<sub>sin</sub>) = C = -π/4 P.S (-C<sub>cos</sub>) - -3π/4

f(x) 2 sin(x - π/4)

g(x) 2 cos(x - 3π/4)

4.



Amp (a) : 3 V. S, (d) -4

Period: 4π b = 1/2

P.S. (-C<sub>sin</sub>) = -π/2 P.S (-C<sub>cos</sub>) - 0

f(x) 3 sin(1/2 x - π/2) - 4

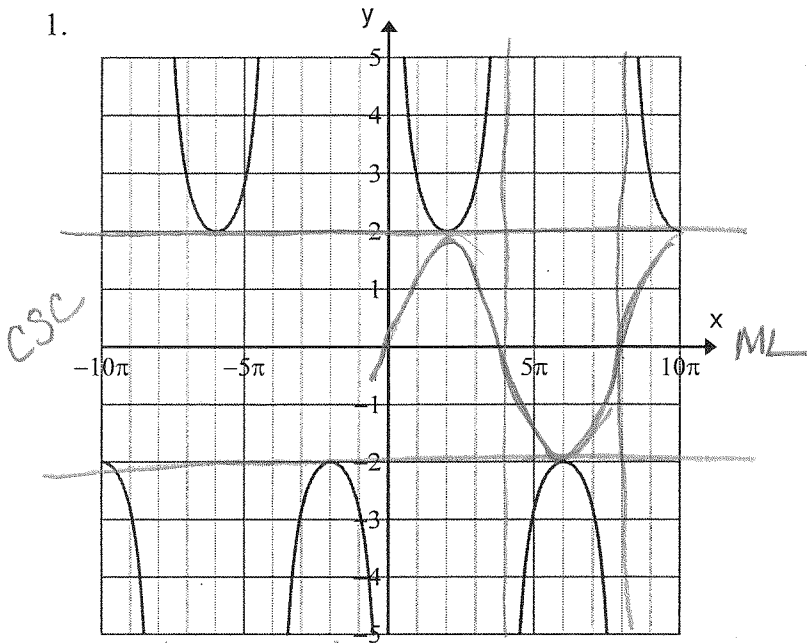
g(x) 3 cos(1/2 x) - 4

$\frac{\pi}{4} = \frac{c}{1}$

$-\pi = \frac{c}{1/2}$

Pre Calculus Graph to Equation Practice – Tan/Cot/Sec/Csc

1.

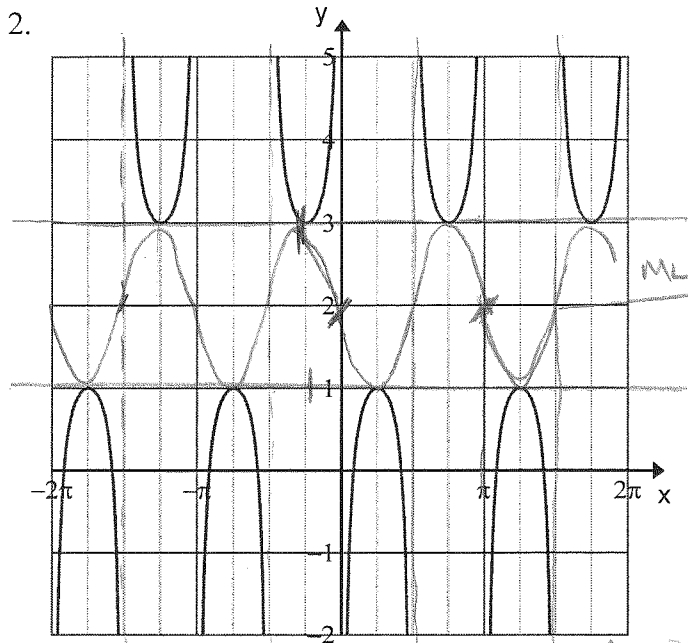


csc

$a=2$   $b=\frac{1}{4}$   $c=0$   $d=0$

$P=8\pi$   $8\pi = \frac{2\pi}{b}$   $b=\frac{1}{4}$   
 $f(x) = 2 \csc\left(\frac{1}{4}x\right)$

2.

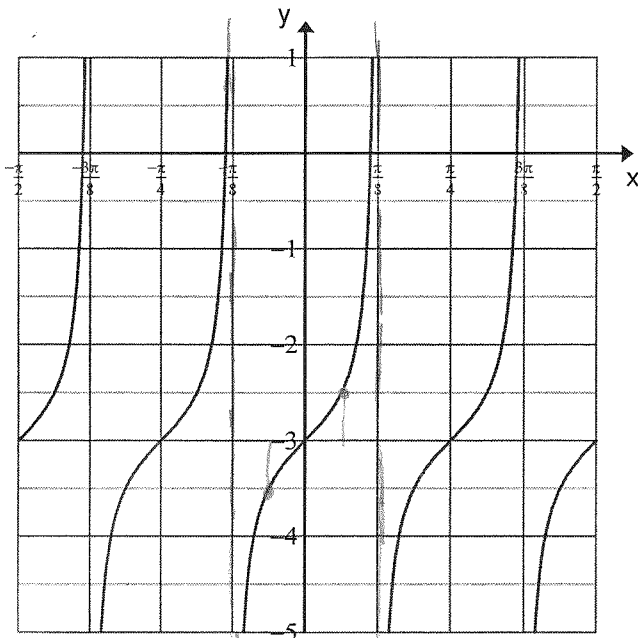


$a=1$   $d=2$   $b=2$   $c=0$  (csc flip)

$P=\pi$   $\pi = \frac{2\pi}{b}$   $b=2$   $c = \frac{1}{2}\pi$  (sec)  
 $PS = -\frac{\pi}{4} = \frac{-c}{b} = \frac{-\frac{\pi}{2}}{2} = -\frac{\pi}{4}$   $c = \frac{1}{2}\pi$

$f(x) = -\csc(2x) + 2$   $g(x) = \sec\left(x - \frac{\pi}{2}\right) + 2$

3.

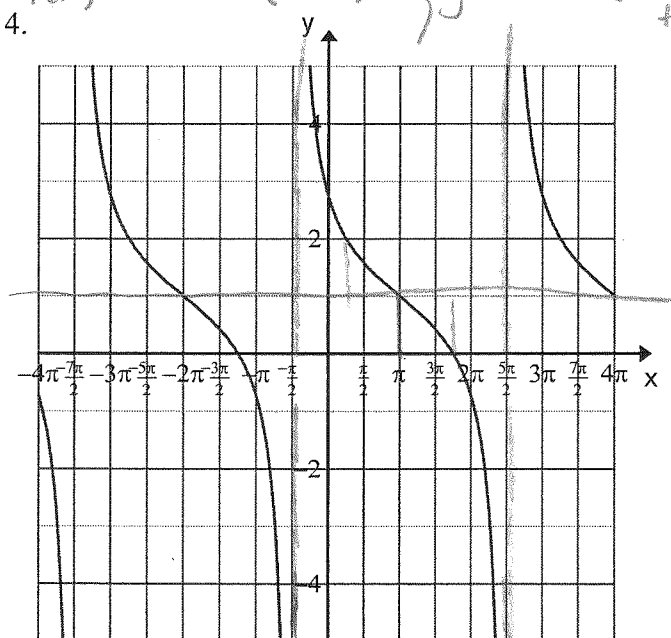


$PS=0$   $P = \frac{\pi}{4} = \frac{\pi}{b}$   $b=4$   $d=-3$

$a=1$

$f(x) = \tan(4x) - 3$

4.



$P=3\pi = \frac{\pi}{b}$   $\leftarrow 3\pi \rightarrow$

$b=\frac{1}{3}$

$d=1$

$PS = -\frac{\pi}{2} = \frac{-c}{b}$   $\left(\frac{1}{3}\right) = -\frac{\pi}{2} \left(\frac{1}{3}\right)$   
 $c = \frac{\pi}{6}$

$f(x) = \cot\left(\frac{1}{3}x + \frac{\pi}{6}\right) + 1$