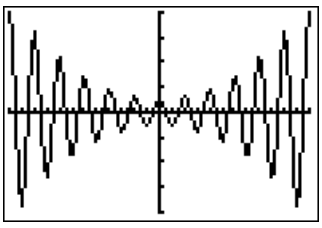
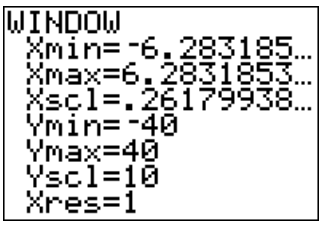
Section 4.6 B Damping factors of Trig graphs

You can graph a product of two functions using properties of the individual functions to create a "damped function".

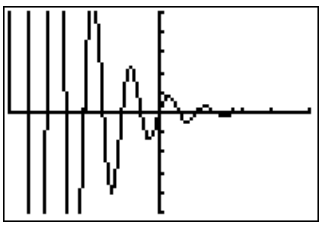
Name the damping factor

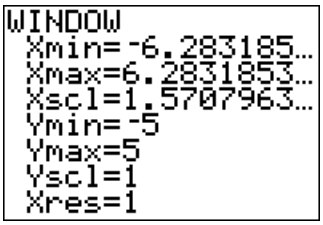
$y = (x^2 + 5)\cos 6x$





$f(x) = 2^{-x}\sin 4x$





Graph. Name the damping factor.

$f(x) = x\sin x$

$f(x) = e^{-x}\sin 3x$

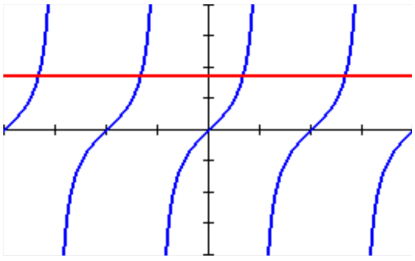
$f(x) = 3\cos 2x$

$y = -2x\cos x$

Pull

Use a graph to solve the equation on the interval [-2π, 2π]

$\tan x = \sqrt{3}$



```
WINDOW
 Xmin=-6.283185307
 Xmax=6.283185307
 Xscl=1.5707963267949
 Ymin=-4
 Ymax=4
 Yscl=1
 Xres=1
 ΔX=0.047599888689394
 TraceStep=0.095199777378…
```

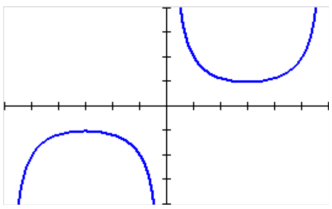
$\sec x = 2$

Determine if the function is even, odd, or neither. Verify your answer algebraically.

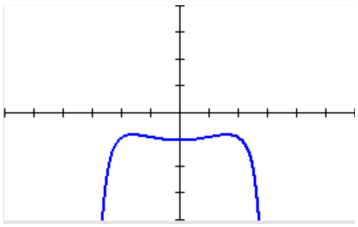
$f(-x) = f(x)$ even

$f(-x) = -f(x)$ odd

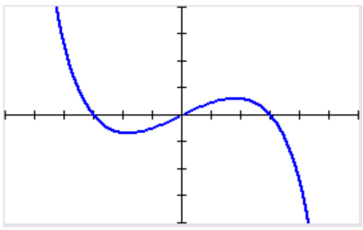
$g(x) = \csc x$



$g(x) = x^2 - \sec x$

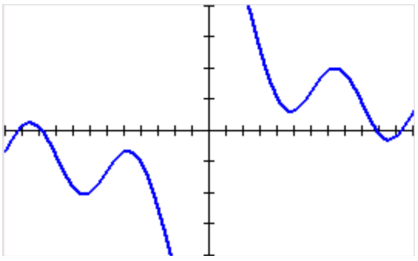


$g(x) = x^2 \cot x$

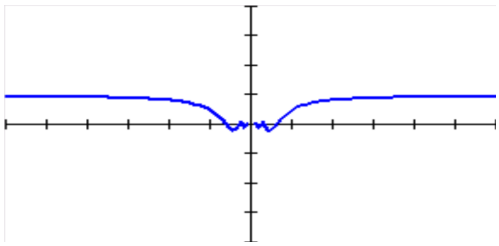


Graph the function and describe the behavior of the function as x approaches zero.

$y = 4/x + \sin 2x, \quad x > 0$



$h(x) = x\sin(1/x)$



Section 4.6 B Pgs. 315-317: #49-63 odd, 65-68, 73-76, 77-81 odd, 86, 87, 90