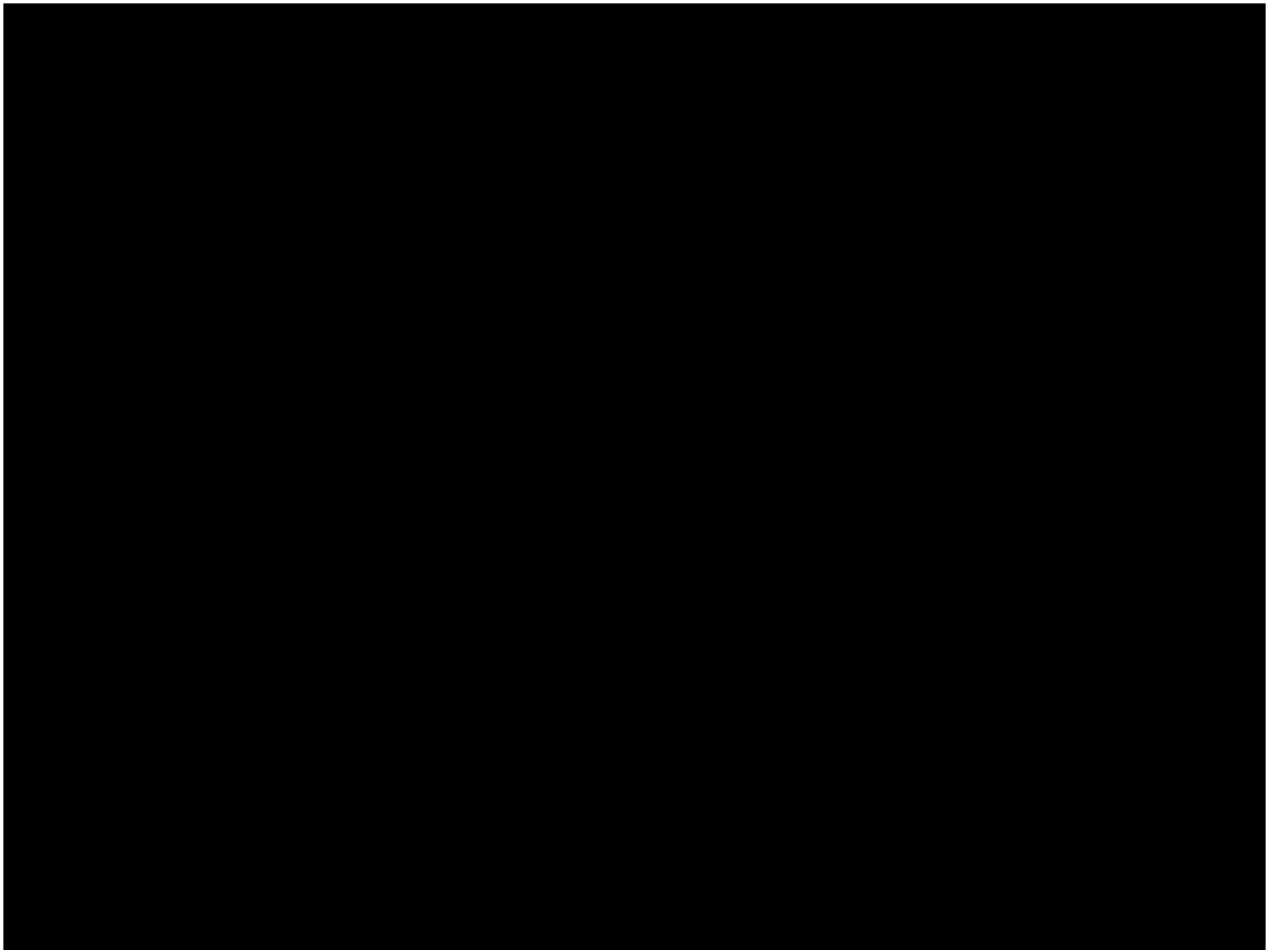
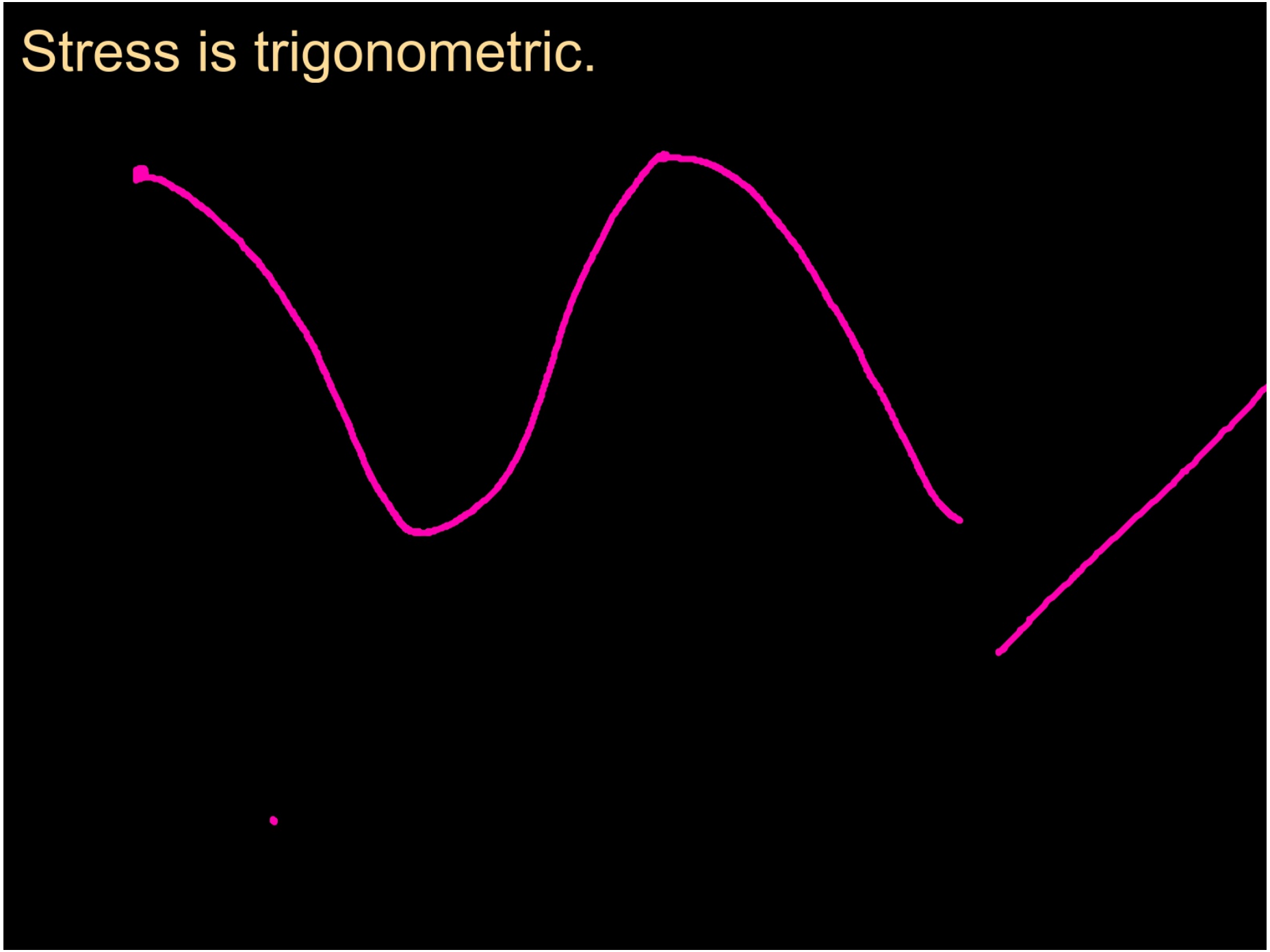


Stress is trigonometric.



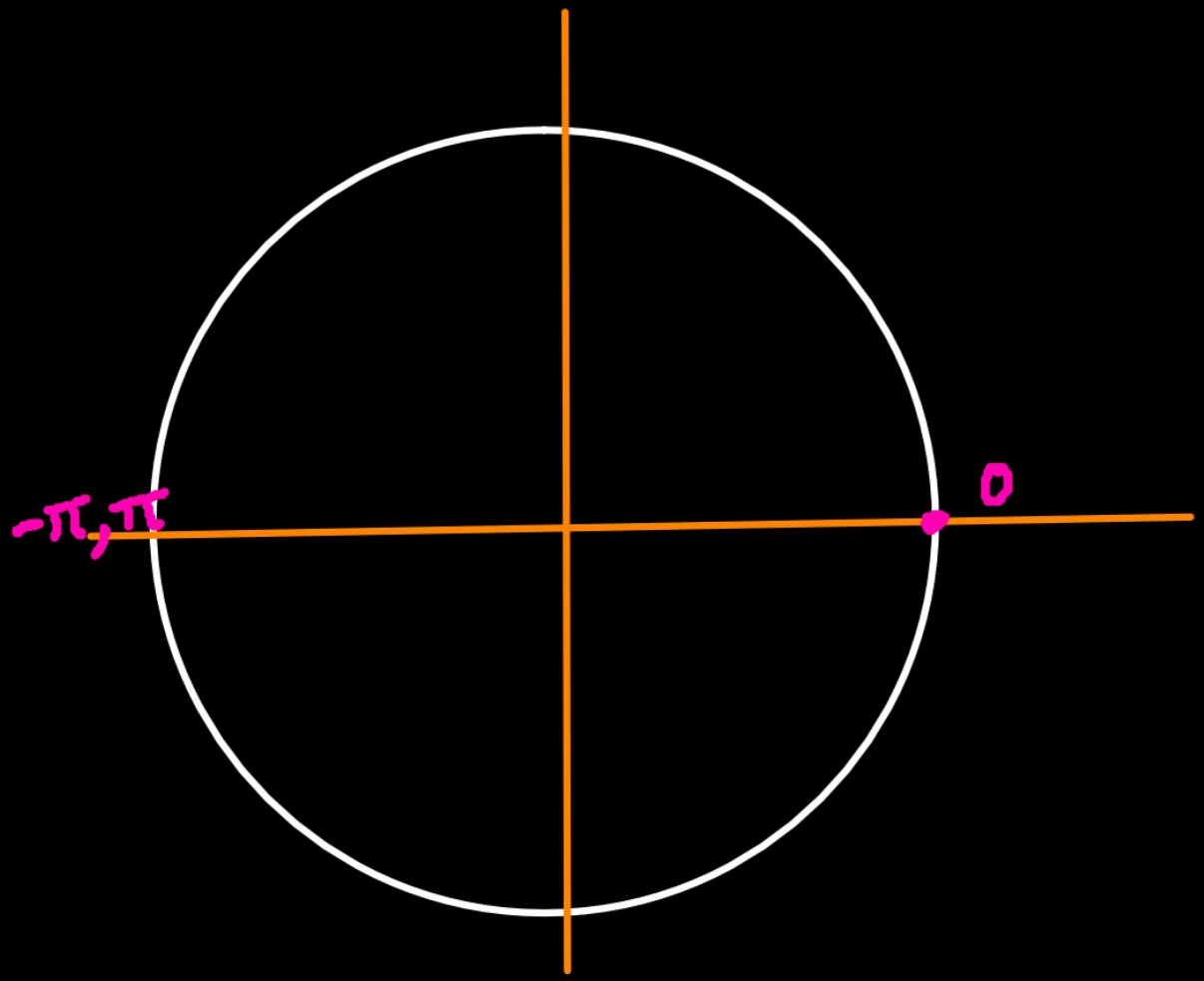
Graph f(x) = sin x in Y1 on your calculator

*In "Radian" mode
*In "Degree" mode

$x_{min} = -360$
$x_{max} = 360$

Make an inference about radian and degree mode when graphing trigonometric functions.

The Unit Circle



$-\pi, \pi$

Today's learning objective:

By the end of class, I will be able to transform trigonometric functions.

Today's language objective:

I will use the following terms when graphing my trigonometric functions.

Amplitude; Period; Unit Circle; Radians; Sinusoidal

Amplitude: is the magnitude of the oscillation of a sinusoidal function

Period: the distance required for a sinusoidal function to complete one cycle

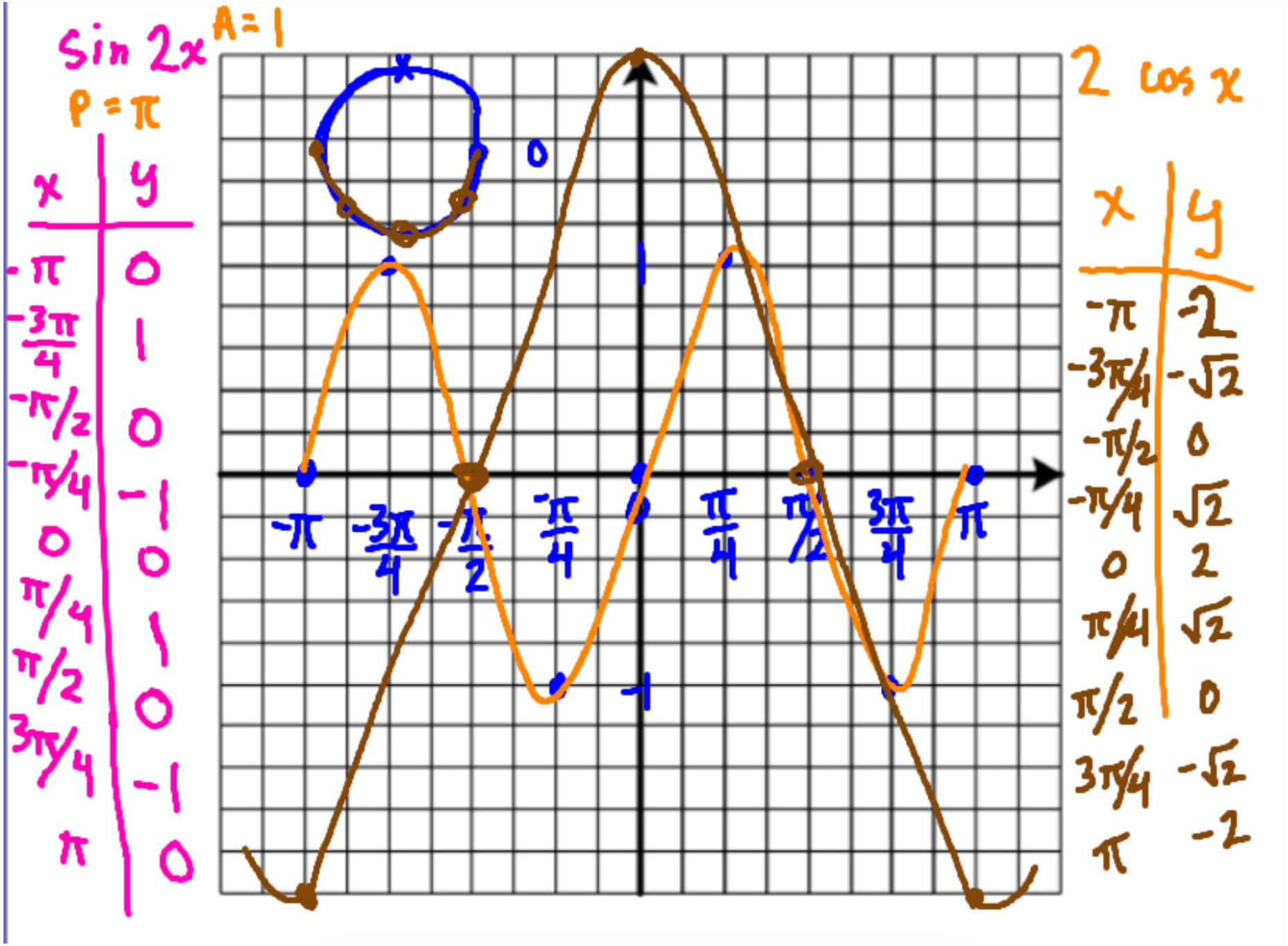
Graph f(x) = sin 2x

and

$-\pi, \pi$ $\frac{\pi}{4}$

Graph g(x) = 2 cos x

on your graphing boards. Find amplitude & period


Sin 2x
A=1
P=π
x | y
-π | 0
-3π/4 | 1
-π/2 | 0
-π/4 | -1
0 | 0
π/4 | 1
π/2 | 0
3π/4 | -1
π | 0
2 cos x
x | y
-π | -2
-3π/4 | -√2
-π/2 | 0
-π/4 | √2
0 | 2
π/4 | √2
π/2 | 0
3π/4 | -√2
π | -2
1
0
-1
-π
-3π/4
-π/2
-π/4
π/4
π/2
3π/4
π

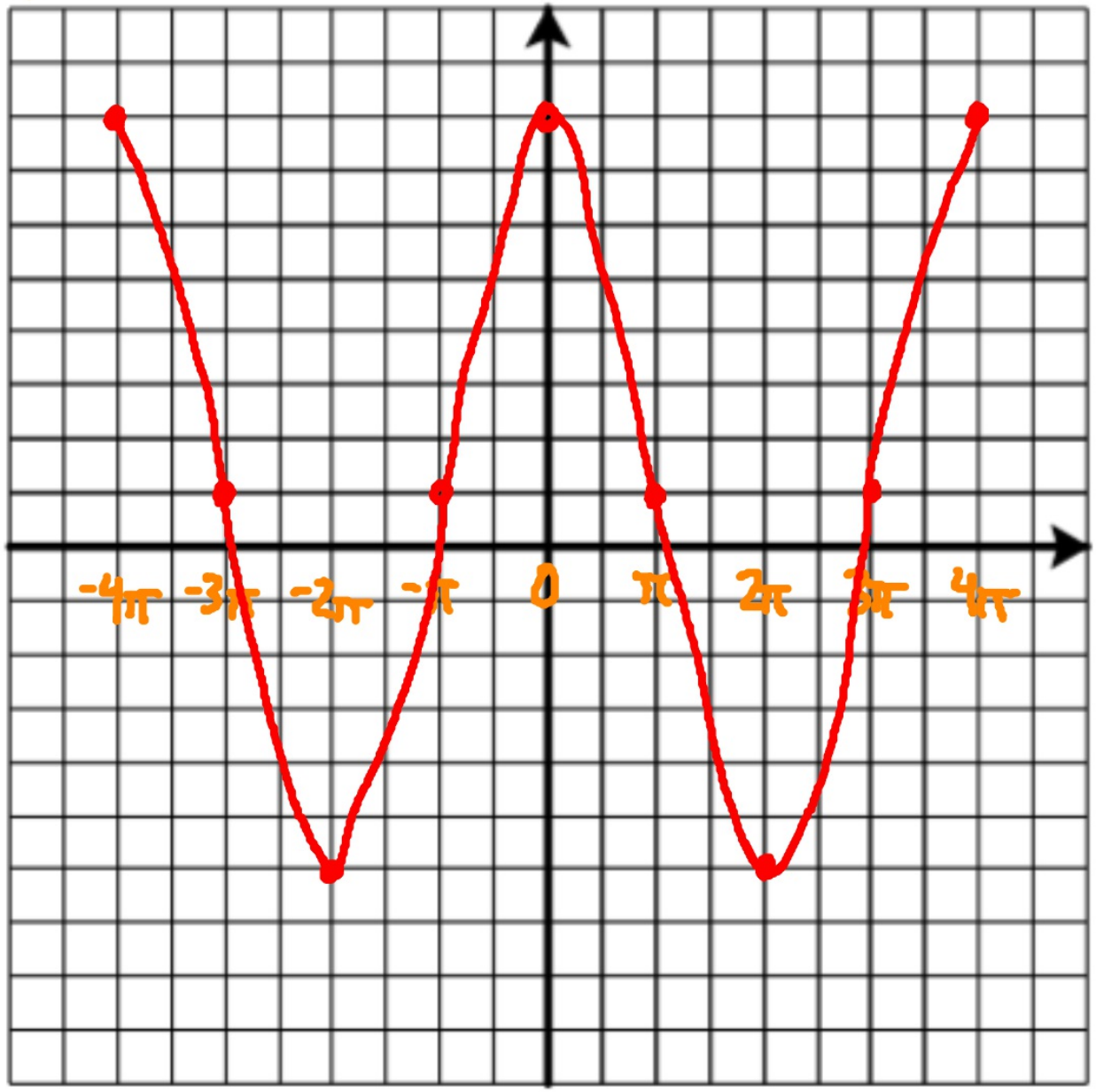
Graph $f(x) = 7\cos\left(\frac{x}{2}\right) + 1$

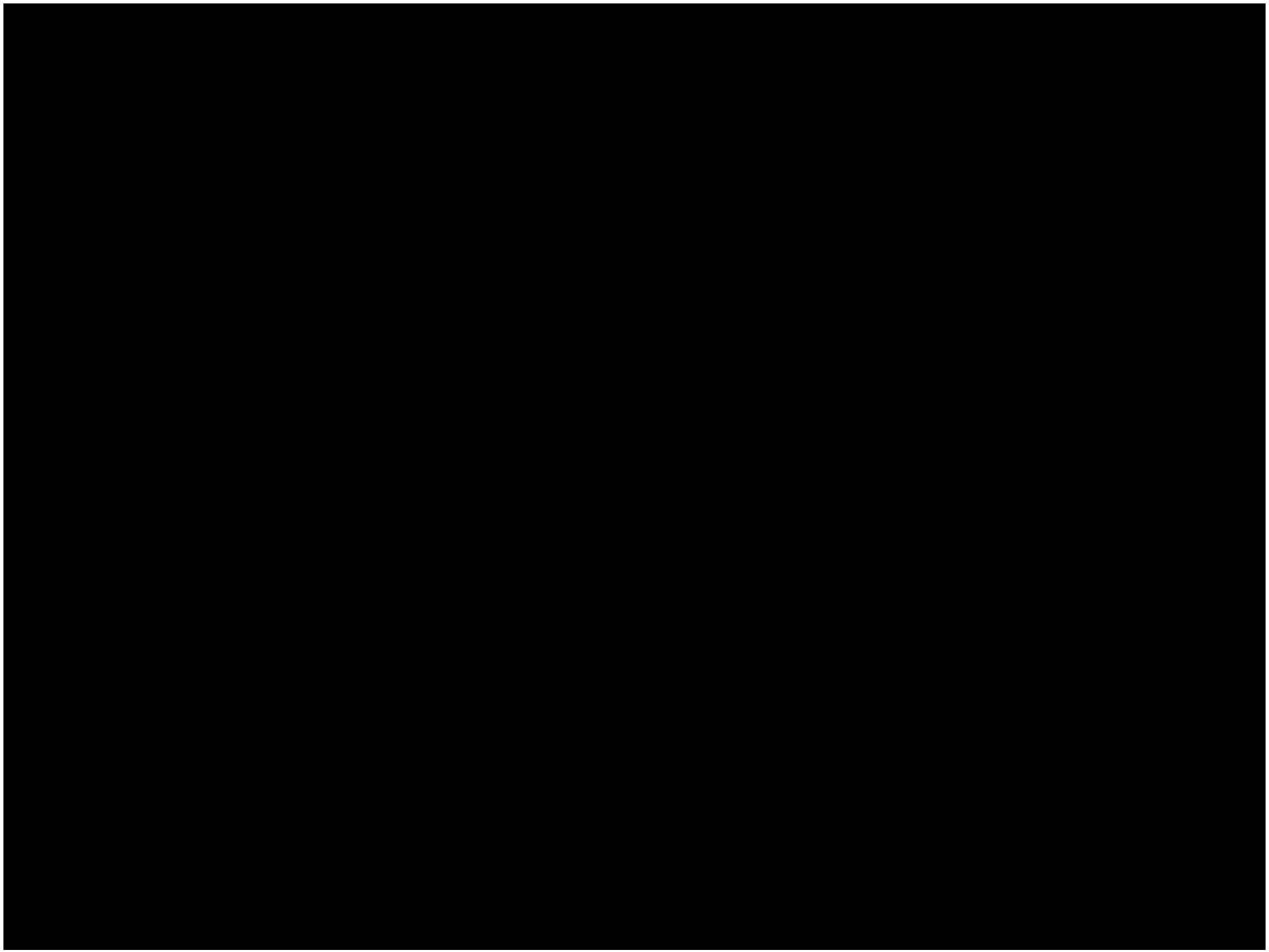
$-4\pi \leq x \leq 4\pi$

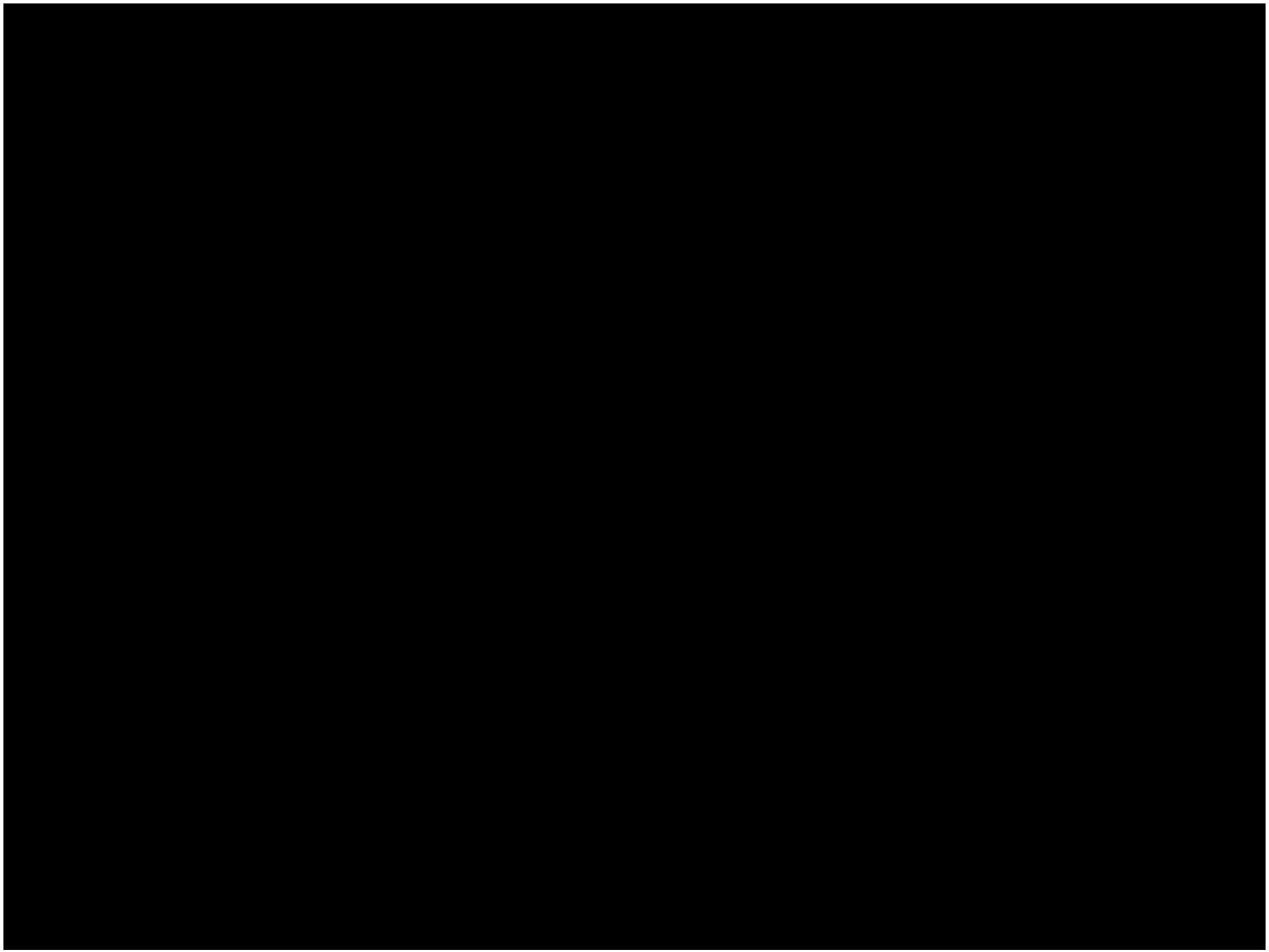
π increments

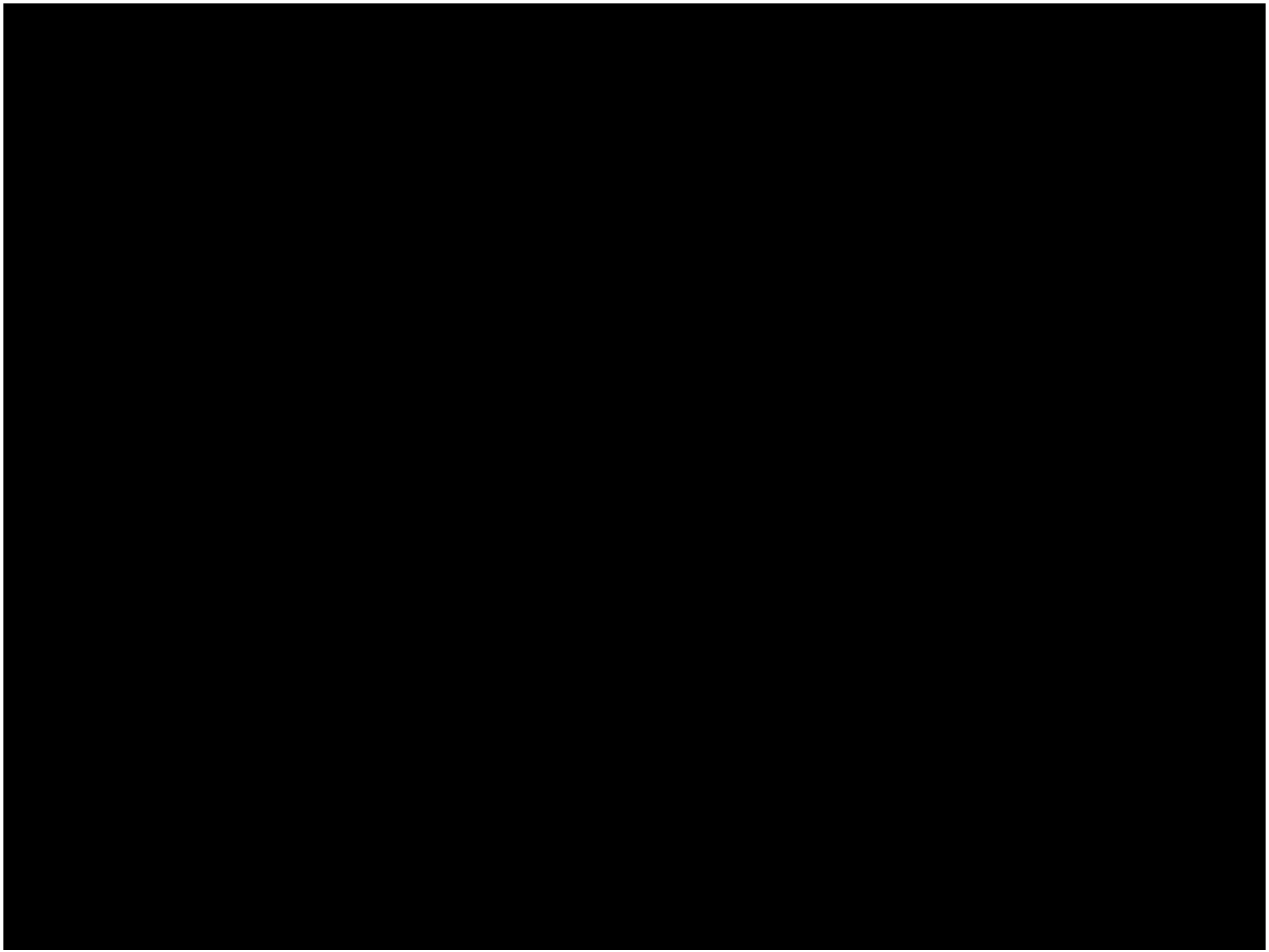
$7\cos\frac{x}{2} + 1$

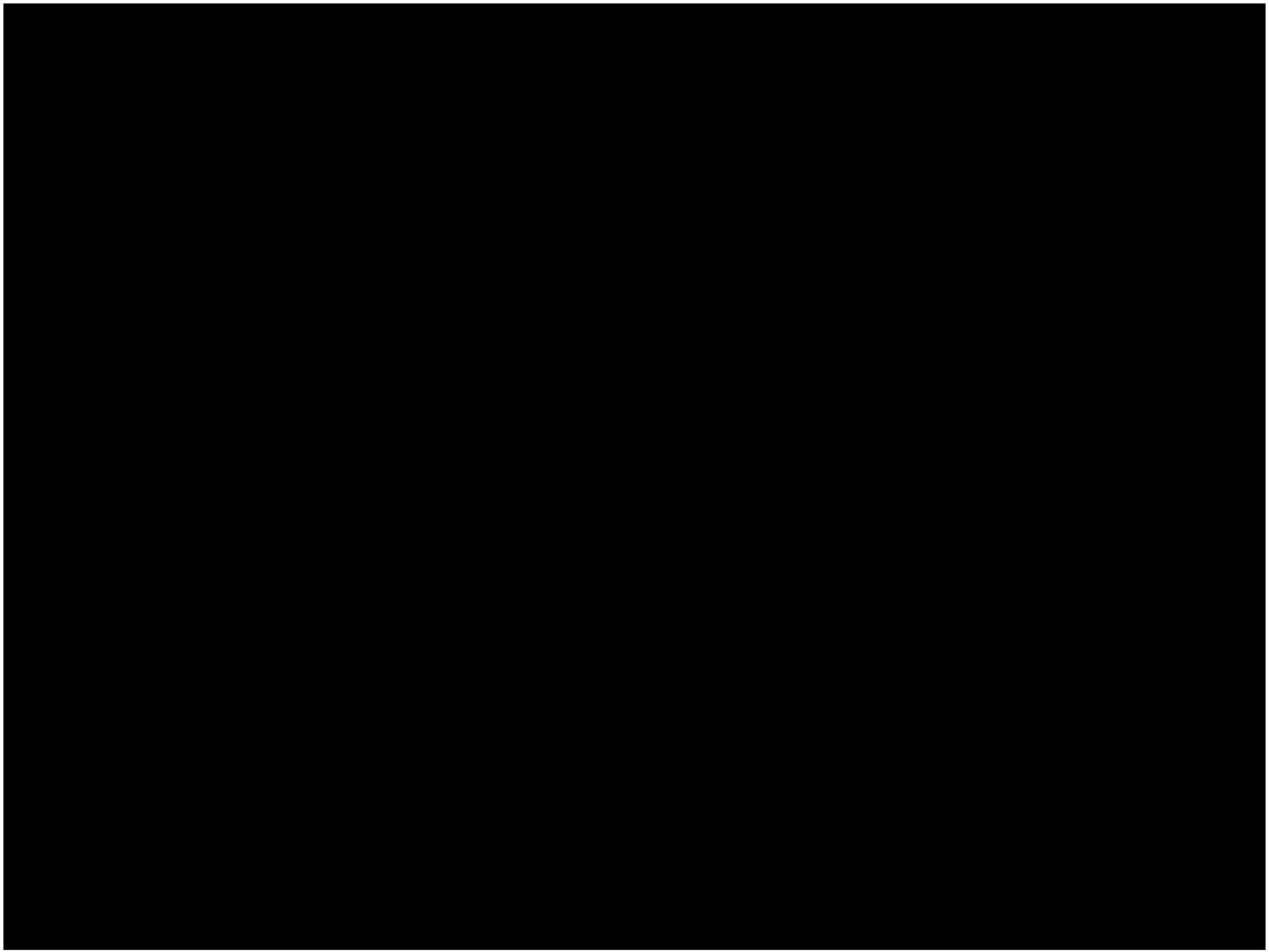
x	y
-4π	8
-3π	1
-2π	-6
$-\pi$	1
0	8
π	1
2π	-6
3π	1
4π	8











Extrapolation: dangerous; fitting your model to points that exceeds your data set. Do not do this. Financial analysts attempt to extrapolate and *often* fail.

"Past performance is no indication of future performance." Luck doesn't change probability.

Interpolation --> :)
fitting your model to points within your data set. Feel free to do this.