

Trig Equations

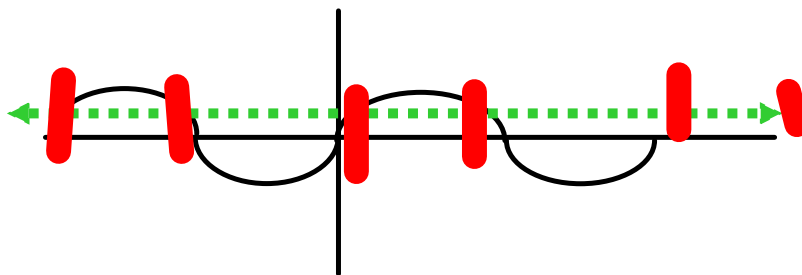
equation with trig functions:

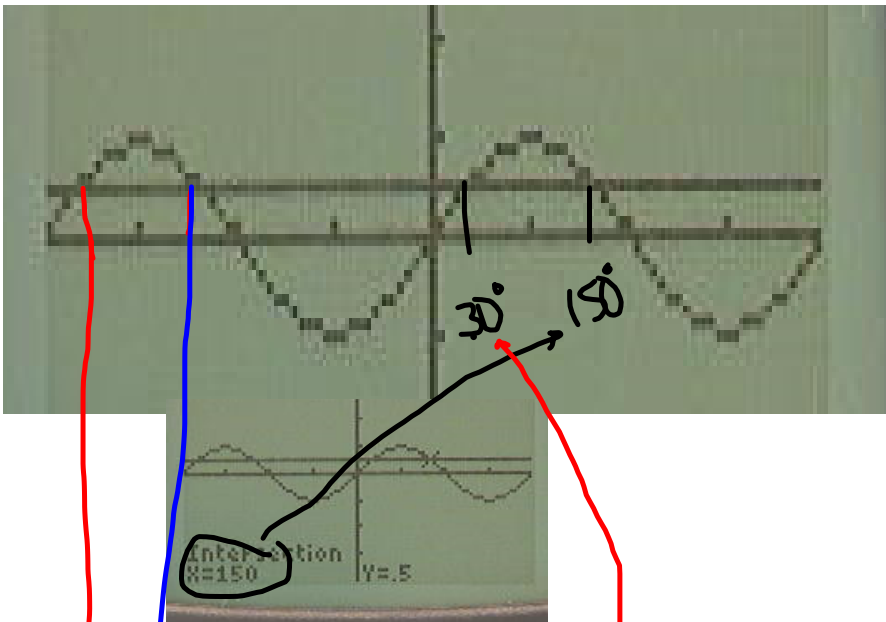
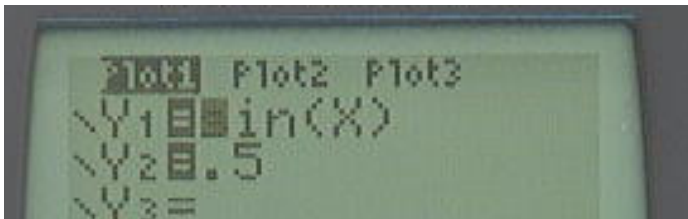
$$\sin(x) = .5$$

by hand $x = \sin^{-1}(.5)$



by intersection





all solutions

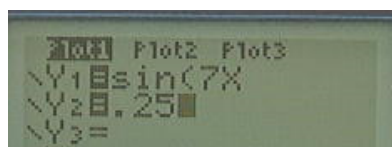
$$30 + 360n$$

$$150 + 360n$$

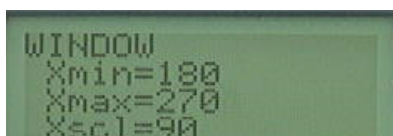
$$30^\circ - 360^\circ = -330$$

$$150 - 360^\circ = -210$$

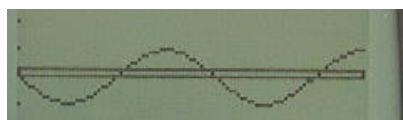
find solutions to $\sin(7x) = .25x$ is in Q3



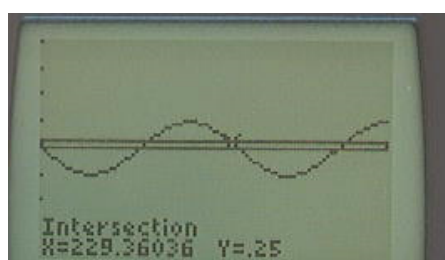
set up equation



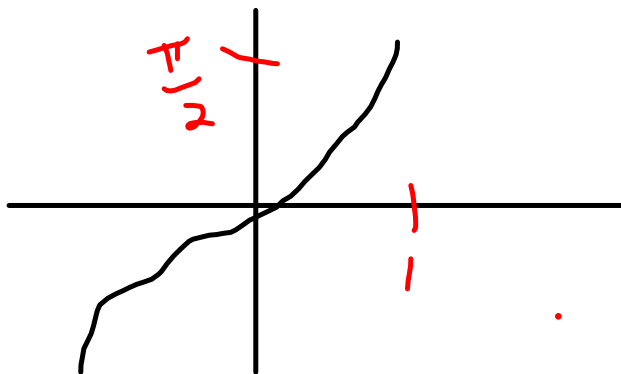
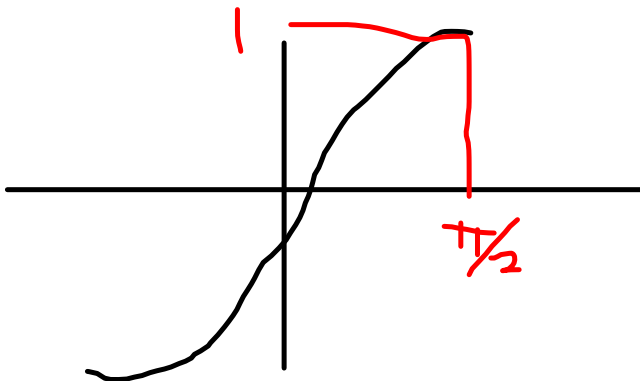
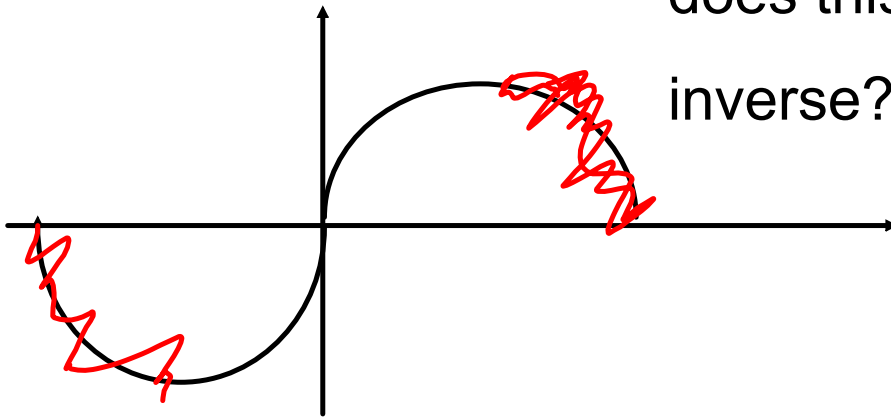
set the window

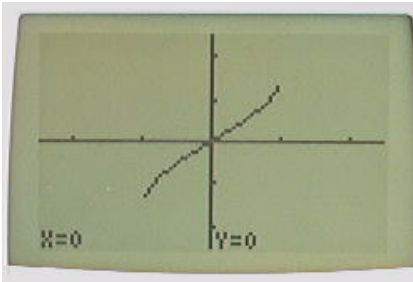


find the intersections



does this have an
inverse? fails HLT



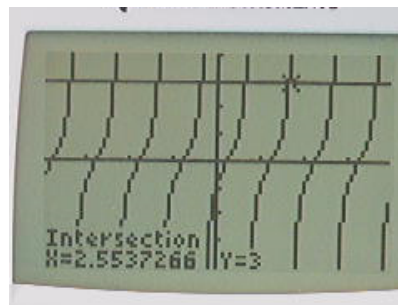
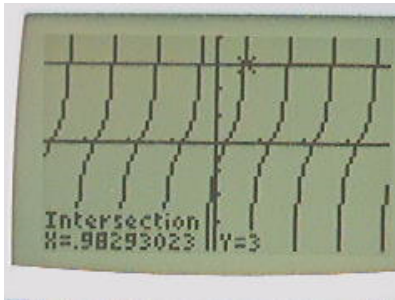
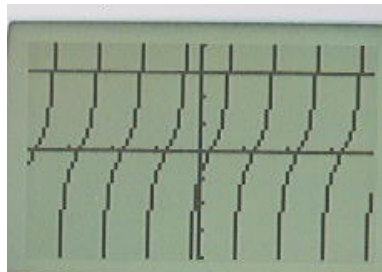


$$y = \sin^{-1}(x)$$

$$\tan(2x-7) = 3$$

$$2x-7 = \tan^{-1}(3)$$

$$x = \frac{\tan^{-1}(3) + 7}{2}$$



solutions
 $.98 + 1.57n$

2.55

- .98

 1.57