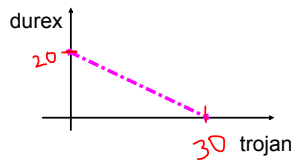


Predictions

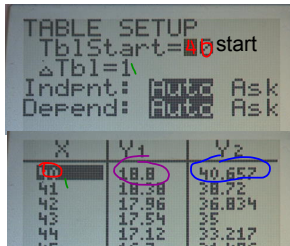
Evaluate: Plug in an x value



evaluate  $x=0$  durex = 20

$y_1$  linear regression

2nd window = tabset = table setup



→ according to the quad regression, if I charge \$40 for a calculator, I expect to sell 41

Also can use calc 1: value

Also can use vars > functions 1:  $y_1$

and type (40) so  $y_1(40)=18.8$

YOUTH Sports age 15-19 (concussion)

Year	Concussion
2009	400
2010	450
2011	492
2012	486
2013	511

Predictions  
Evaluate: x value plug in  
 $y_1$  linear regression  
2nd table set

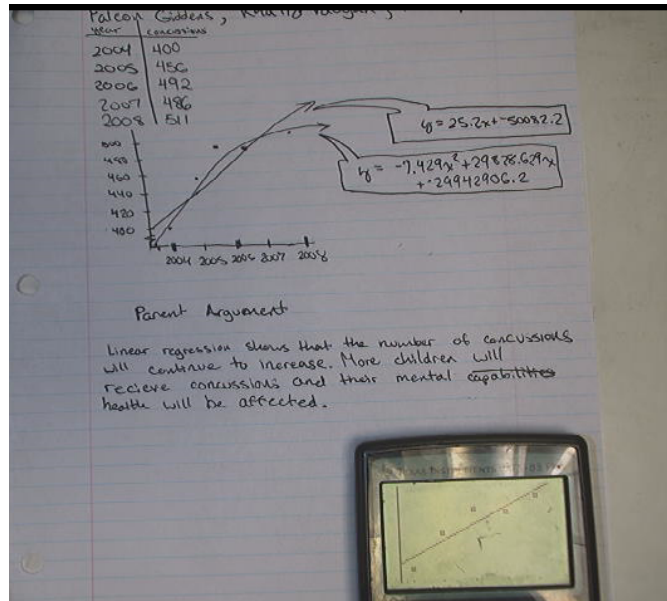
for the school

Linear function shows a steady increase in # of concussions over players while quadratic suggests as awareness increases # of concussions decrease

X	$y_1$ linear	Quadratic $y_2$
2009	544.6	492.6
2010	565.8	465.8
2011	595	424.14
2012	620.2	361.6
2013	645.4	290.26
2014	670.6	210.8
2015	695.8	108.94

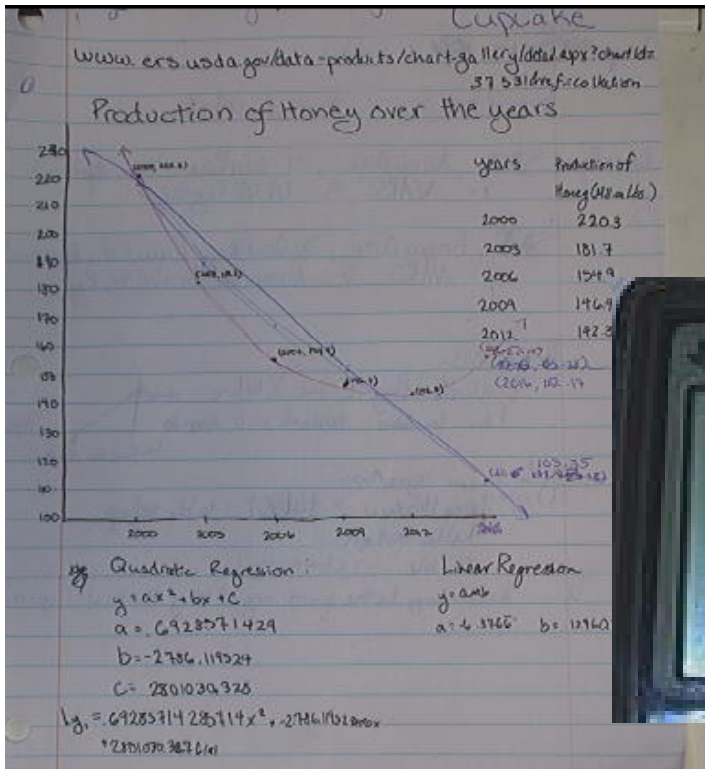
The quadratic regression shows that as awareness and proper testing increase yearly the number of concussions in youth sports between ages 15-19 will decrease dramatically by 2015 to only 108.94

quad regression  
2016 virtually no concussion



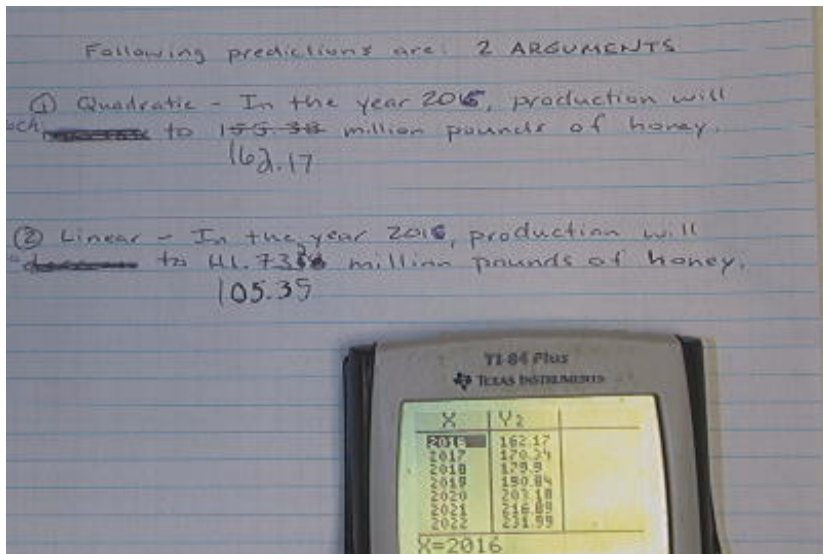
721 injuries in 2016

X	Y1	Y2
11	585	27
12	620.2	27
13	645.4	27
14	670.6	27
15	695.8	27
16	721	27



X	Y2
2007	105.35
2017	98.977
2018	92.6
2019	86.223
2020	79.847
2021	73.47
2022	67.093

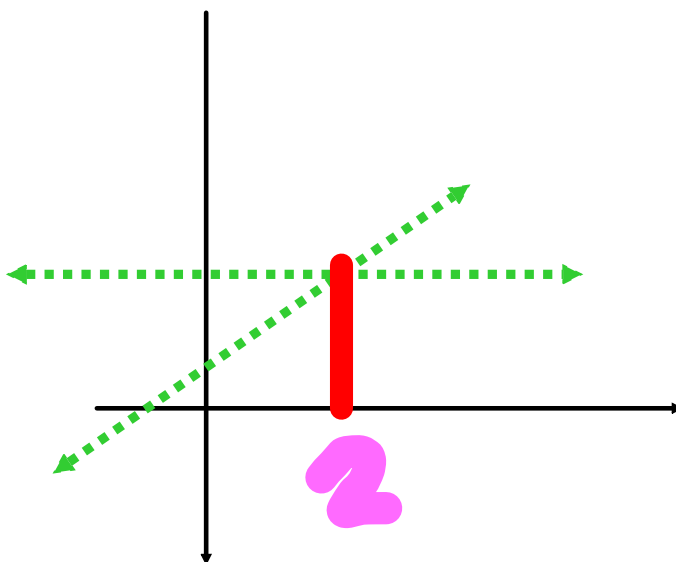
X=2016



Solve  $x+1 = 3$

$$y = x + 1$$

$$y = 3$$



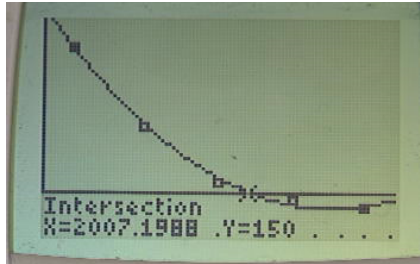
intersection  
method

To solve intersection method

$y_1 = \text{reg Eq}$

$y_2 = 150$

calc (2nd trace) 5:intersect enter enter enter



in 2007.... production was 150

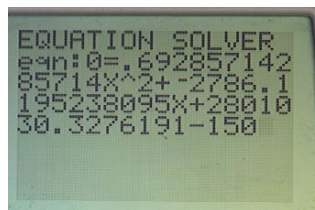
needs to be seen in window

To solve using solver  $A = B$   
 $0 = A - B$

$x + 1 = 3 \quad 0 = x + 1 - 3$

Math 0: solver

vars 5 >> 1  
 - 150



alpha  
 enter

