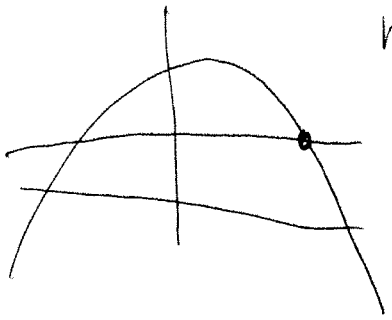
Intersection Method



Calc 5: Intersect

First Curve: Y_1 <Enter>

2nd Curve: Y_2 <Enter>

Guess: 2 <Enter>

$X = 3.02...$ $Y = 15$

Solver Method

Math 0: Solver

$0 = X^2 - 4$ $(X^2 = 4)$

$X = 3$ (guess)

Alpha Enter

- $X = 2$

  $X = -4$ guess

- $X = -2$

Transformation of Functions

$f(x)+A$	Raise function by 'A'	
$f(x)-A$	Lower " by 'A'	
$Bf(x)$	$B>1$	Stretch the function by 'B'
	$0<B<1$	Shrinking " " by 'B'
	$B<0$	Reflecting about x-axis
$f(x+C)$	Moves to left by 'C'	
$f(x-C)$	move to Right by 'C'	
$f(Dx)$	$D>1$	'Smushes' the function
	$0<D<1$	'Pulls' the function
	$D<0$	Reflects about y-axis

Ex

$$y = 3f(x-2)+7$$

Parent Function is $f(x)$ Remember PEMDAS

1. move right by '2'
2. Stretch the function by '3'
3. Raise by '7'

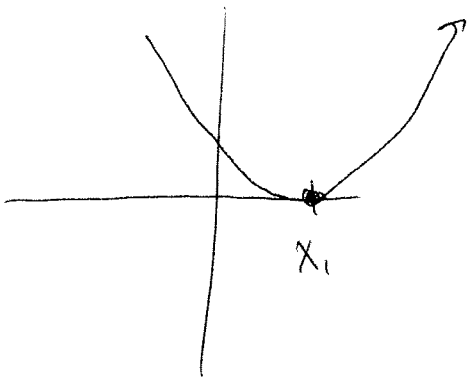
Zeros of Polynomials

$y = (x - x_1)(x - x_2)$ etc. Zeros: x_1, x_2

$(x - x_1)(x - x_1)$ ← Zero: x_1 repeated Twice

$(x - x_1)(x - x_1)(x - x_1)$ x_1 repeated Thrice

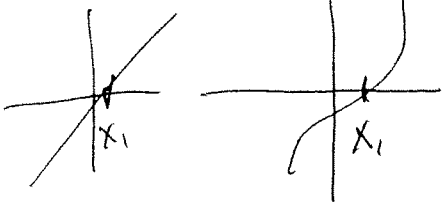
EVEN



"Touch"

ODD

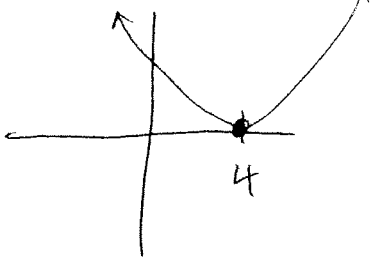
'Pass Thru'



Three or more

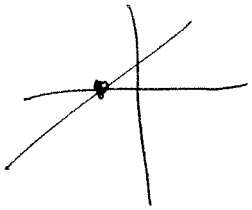
Ex

$y = (x - 4)^{20}$



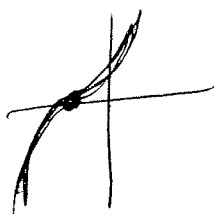
Ex

$y = x + 1$



Ex

$y = (x - 1)^3$



$$y = -4x^3 + 8x^2$$

$$= -4x^2(x-2)$$

$$= -4 \cdot x \cdot x \cdot (x-2)$$

$$0 \quad 0 \quad 2$$

Zero: 0; 0. TOUCHES AT $x=0$ — 2 PASS THRU $x=2$

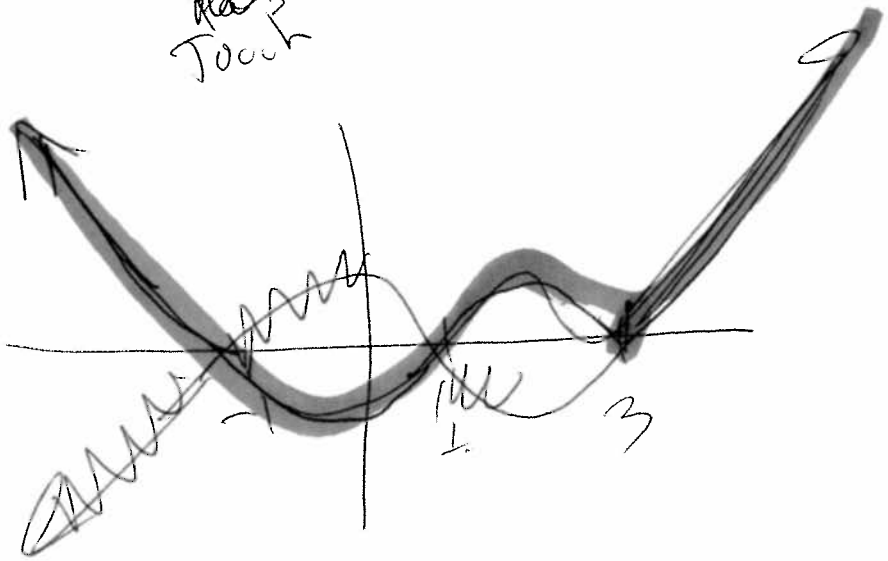
$$y = 3(x-3)^2(x^2-1)$$

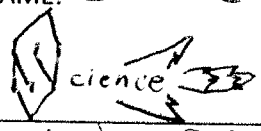
Degree: ↓ 4

$$3(x-3)^2(x-1)(x+1)$$

Zeros: $3, 3, 1, -1$

Pass Touch — Pass — Pass



GROUP NAME: Science Logo:  Date: September 5, 2013 Topics:	Student Names (First and Last) Speaker/Presenter: David Grall Writer/Prep: Nisha Pateswardhan QC/Leader: Jenna Giarrafalo

Instructions:

Quartic regression:

$y = ax^4 + bx^3 + \ldots + e$

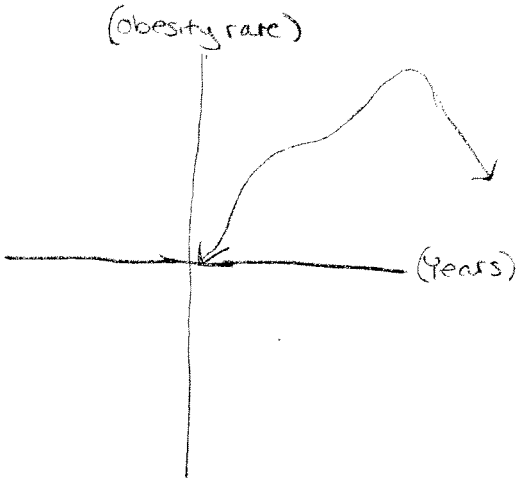
$a = -9.955015 \quad E-4$

$b = 7.967684342$

$c = -23913.99057$

$d = 31899976.04$

$e = -1.595708 \quad E\ 10$



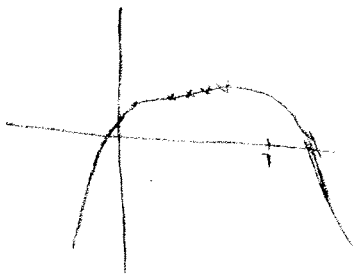
Maximum:

the obesity rate was at its highest at the end of 2009 (roughly around mid-December)

GROUP NAME: MEAB Logo:	Student Names (First and Last) Speaker/Presenter: Ahmed L
Date: Topics:	Writer/Prep: Jenn G., Kevo B. QC/Leader: Daniella S.

Instructions:

quadric regression



6.68 is the maximum amount of time a student can study to get a 4.03

As you reach 6.66 hours the highest GPA will be a 4.03

max. 6.68 hours, 4.0 GPA

min none

GROUP NAME: Biz Wizards

Logo: 

Date: 9-5-2013

Topics: Microsoft

Student Names (First and Last)

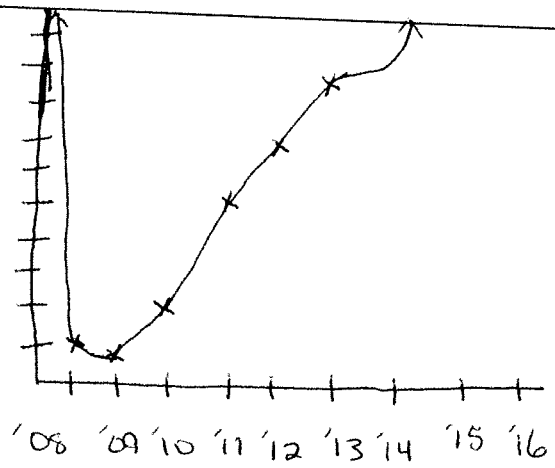
Speaker/Presenter: Jason

Writer/Prep: Rachel

QC/Leader: ~~Giuliana~~

Instructions: Find the end behavior of a quartic graph

L1	L2
2013	77.31
2012	74.30
2011	69.94
2010	62.48
2009	58.44
2008	60.42



minimum: 57.9 billion dollars

Microsoft's revenue was at its lowest point midway through the fiscal year 2008, totaling 57.9 billion. We are predicting the Microsoft's revenue will steadily increase through the years.

GROUP NAME: Fish	Student Names (First and Last)
Logo:	Speaker/Presenter: Justin B./Dallen B
Date: 9/5/13	Writer/Prep: Elise Z.
Topics:	QC/Leader: Tabbi Meszaros

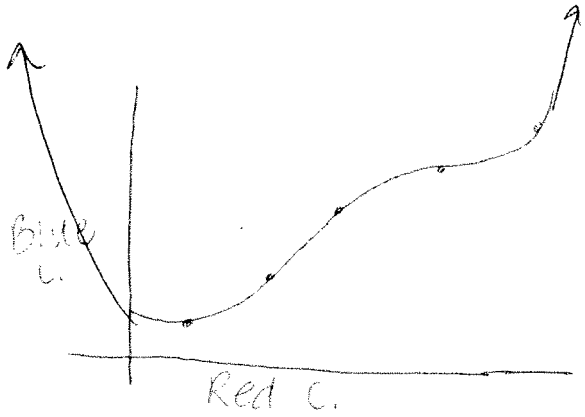
Instructions:

Guardic regression:

$y = 3.022\ldots x^4 - 0.0126\ldots x^3 + 1.933\ldots x^2 - 127.733\ldots x + 3149.930\ldots$

minimum: Red Corvette $43,448

Blue Corvette $79,697



Red Corvettes	Blue Corvettes
$75,000	$80,000
$89,000	$92,000
$97,000	$113,000
$130,000	$124,000
$140,000	$152,000