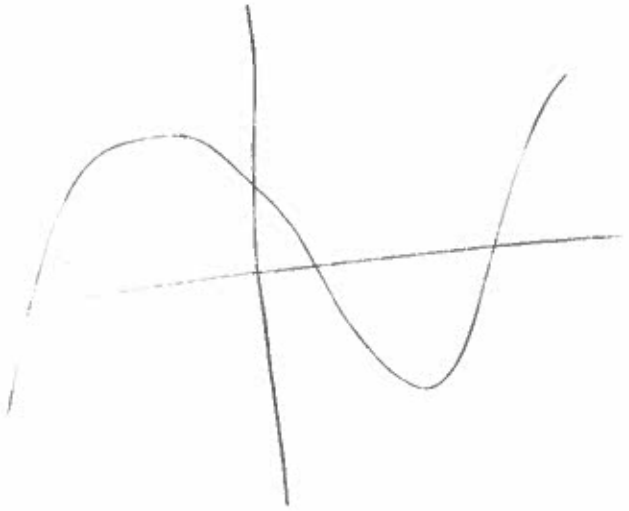
Polynomial Inequalites

$P(x) \geq 0$ or $P(x) < 0$



GROUP NAME: Precalc Inverters

Date: 2/6/2014

Student Names (First and Last)

Speaker/Presenter: [illegible]

Writer/Prep: Zoilos Brasuel

Leader/Collaborator: [illegible]

Independant Variable (x-axis): # pounds ground

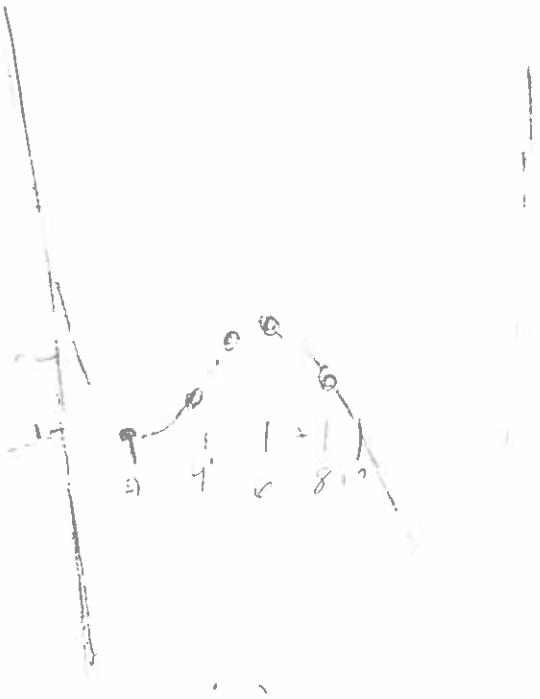
Dependant Variable (y-axis): # of soda cans collected

Conclusion (in words):

You will not gain more cans after 8 cans of soda
Up to 10 cans you'll stop gaining.

Supporting Work: Quadratic Regression

x	y
2	1
4	3
6	7
8	8
10	4



$y = .007_{...}x^4 - .76_{..}x^3 + 2.59x^2 + -8.20_{..}x + 9.00_{..}$

$y(x) > 0 \; (-\infty, 4) \cup (4, 6) \cup (6, 8) \cup (8, 10]$

GROUP NAME: LL

Date: 2-6-14

Student Names (First and Last)

Speaker/Presenter: Victor H.

Writer/Prep: Cristobal

Leader/Collaborator: Zach Lobaugh

Independant Variable (x-axis): Price

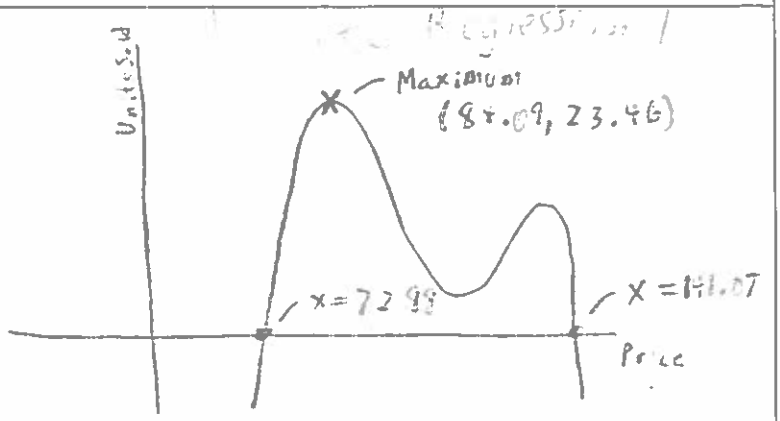
Dependant Variable (y-axis): Units Sold (books)

Conclusion (in words): The number of units sold are greater than zero between $72.89 and $141.07.

Supporting Work:

Price

x	y
80	22
90	21
100	8
120	5
140	3



$f(x) = -.00004875x^4 + .02126x^3 - 3.42175x^2 + 240.37x - 6199$

$f(x) > 0$ from $(72.89, 141.07)$

GROUP NAME: Newbies

Date: 2/6/14

Student Names (First and Last)

Speaker/Presenter: _____

Writer/Prep: Khrystyna Pavlyuchyk

Leader/Collaborator: Li Tang Lin

Independant Variable (x-axis): Prices of Laptops

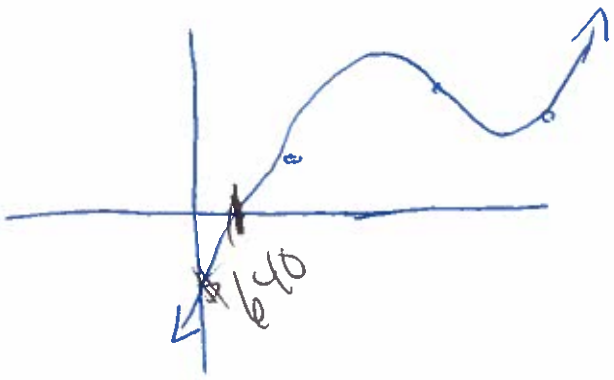
Dependant Variable (y-axis): Revenue of Laptops

Conclusion (in words): ~~We make 0 dollars~~ if we sell a laptop for 640.85 640 or more we make $

Supporting Work:

X	Y
700	7000
[illegible]	[illegible]
1000	17000
1250	375000
2000	30000
3000	18000

X=0 at 640.85



$Y = 1.38x^3 - .093x^2 + 190.91x - 87571.2$

$y > 0 \ (640.25, \infty)$

TEAM MATH Jedi's

GROUP NAME:

Date: 2/6/14

Student Names (First and Last) Paul Klos

Speaker/Presenter: ~~Paul Klos~~

Writer/Prep: Byron Wilson

Leader/Collaborator: Ricky Wilson

Independant Variable (x-axis): Miles

Dependant Variable (y-axis): Price of gas

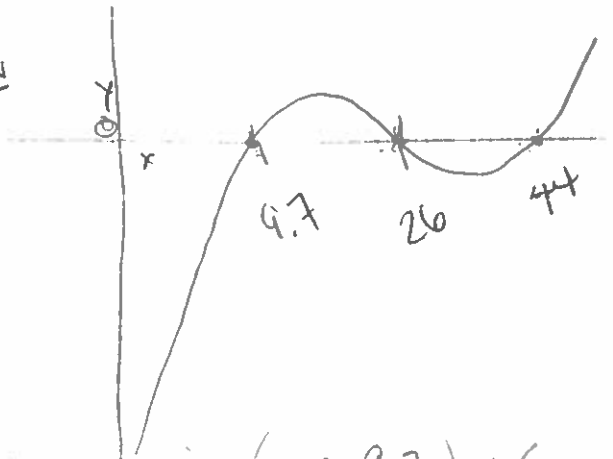
Conclusion (in words): If you travel 44.2, 9.7, 26.00 miles from a one area, gas will cost @3.25.

Supporting Work:

Cubic Regression = ax^3+bx^2+cx+d

X	Y
10	3.3
20	3.15
30	3.45
40	3
50	3.55

Cubic regression



The ideal gas price (-∞ 9.7) U (26, 44)

to find is between 26 miles to 44 miles the gas is below 3.25

left bound = 0

Right bound = (20, 35, 50)

Calculate for zero

2nd Trace 2: Enter

Values of zero

X = 44.2

X = 9.7

X = 26.00

* needed to zoom out to view the whole graph to calculate values of zero.

GROUP NAME: Money Bags

Date: 2/6/14

Student Names (First and Last)

Speaker/Presenter: Kevin Enriquez

Writer/Prep: Melissa Scarpati

Leader/Collaborator:

Independant Variable (x-axis): price

Dependant Variable (y-axis): sales (cell phones)

Conclusion (in words): The cellphones that are sold between .00269 ≤ 0 ≥ 971

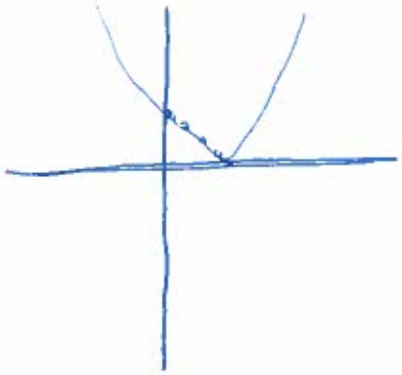
Supporting Work:

STAT 1: ZOOM 9.

Y= STAT ⊳ 7:

Y= VARS 5: ⊳⊳

graph



STAT 2: ZOOM 9:

Y= STAT ⊳ 5:

Y= VARS 5 ⊳⊳ 1.

graph

2nd TRACE 2:

Quartreg

$y = ax^4 + bx^3 + cx^2 + dx + e$

a = 1.735536 E-10

b = -3.430843 E-7

c = 2.17386984 E-4

d = -.12356699 77

e = 29.150258739

Quad

$ax^3 + bx + c$

a = 4.699616 E-5

b = -.06797555521

c = 25.50342912

80	21
100	19
200	13
400	6
600	2
800	1

Cubic

$y = ax^3 + bx^2 + cx + d$

a = -4.258657E-8

b = 1.0339538 E-4

c = -.0881327793

D = 27.08216076

x = 971 y = .00269

GROUP NAME: We love science

Date: 2-6-14

Student Names (First and Last)

Speaker/Presenter: Lar, Kenneh

Writer/Prep: Marta Truszkowski

Leader/Collaborator:

Independant Variable (x-axis): ~~# cupcakes~~ time min

Dependant Variable (y-axis): ~~time~~ # cupcakes

Conclusion (in words): In 6.6 min. we will make 0 cupcakes & Between 6.6 min & 152 min we have cupcakes

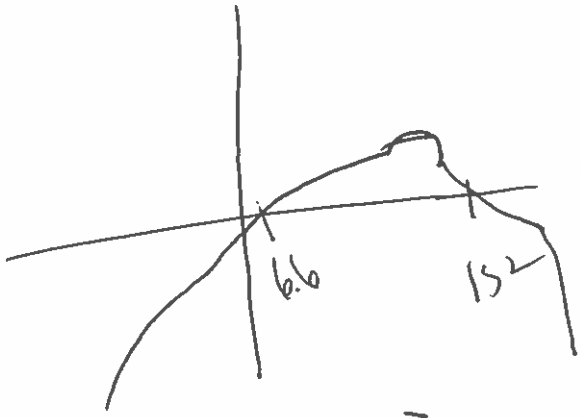
Supporting Work:

x	y
24	24
48	35
72	47
96	67
120	76

stat ⓒ 7:

$y = -3.01\ldots x^4 + 8.077\ldots x^3 + -.072\ldots x^2 + 3.01\ldots x - 17$

y= Vars 5: ⓞ ⓒ enter



Zero

$x = 6.609$ $y = 0$

GROUP NAME:

Date: 02/6/14

Student Names (First and Last)

Speaker/Presenter: Eli Amparo

Writer/Prep: Clifford

Independant Variable (x-axis): cost of Bob Marley

Dependant Variable (y-axis): # Bob Marley sold

Leader/Collaborator:

Conclusion (in words): The number of Bob Marley sold are 675

If we change $67.5 for Bob Marley I will sell a lot of bob Marley

Supporting Work:

Data

15	30
25	20
50	10
60	9
120	6

$f(x) > 0$

(67.5)

Stat Plot

Zoom 9!

Stat/ ▶ Calc 6: Cubic

$y = ax^3 + bx^2 + cx + d$

a = -1,11711-

b: 0256--

c: -1 8562

d: 52 33757

2nd Trace 1: Graph

x=67.5

$675

GROUP NAME:

Date: 6/1/14

Student Names (First and Last)

Speaker/Presenter: Osman Rahman

Writer/Prep: Karthik

Leader/Collaborator: Noor Kheema

Independant Variable (x-axis): Coach bags Price

Dependant Variable (y-axis): Sell

Conclusion (in words): when we sell coach bags for $28.76 — 384.63 we sell some bags

Supporting Work:

Price	Sell
$100	50
$150	45
$200	30
$260	15
$300	10

Quartic Reg

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

a = -5.0184

b = 5.097

c = -.013

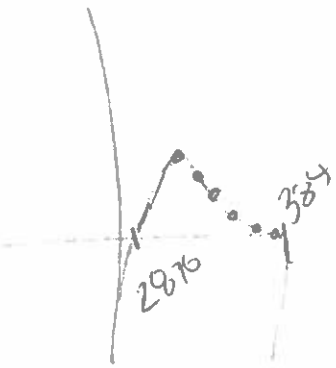
d = 2.395

e = -55.170

Zero

X = 28.76, X = 384.63

Y = 0 Y = 0



GROUP NAME: This Group, Best Group

Date: 2-6-14

Student Names (First and Last)

Speaker/Presenter: Jose Johnnie

Writer/Prep:

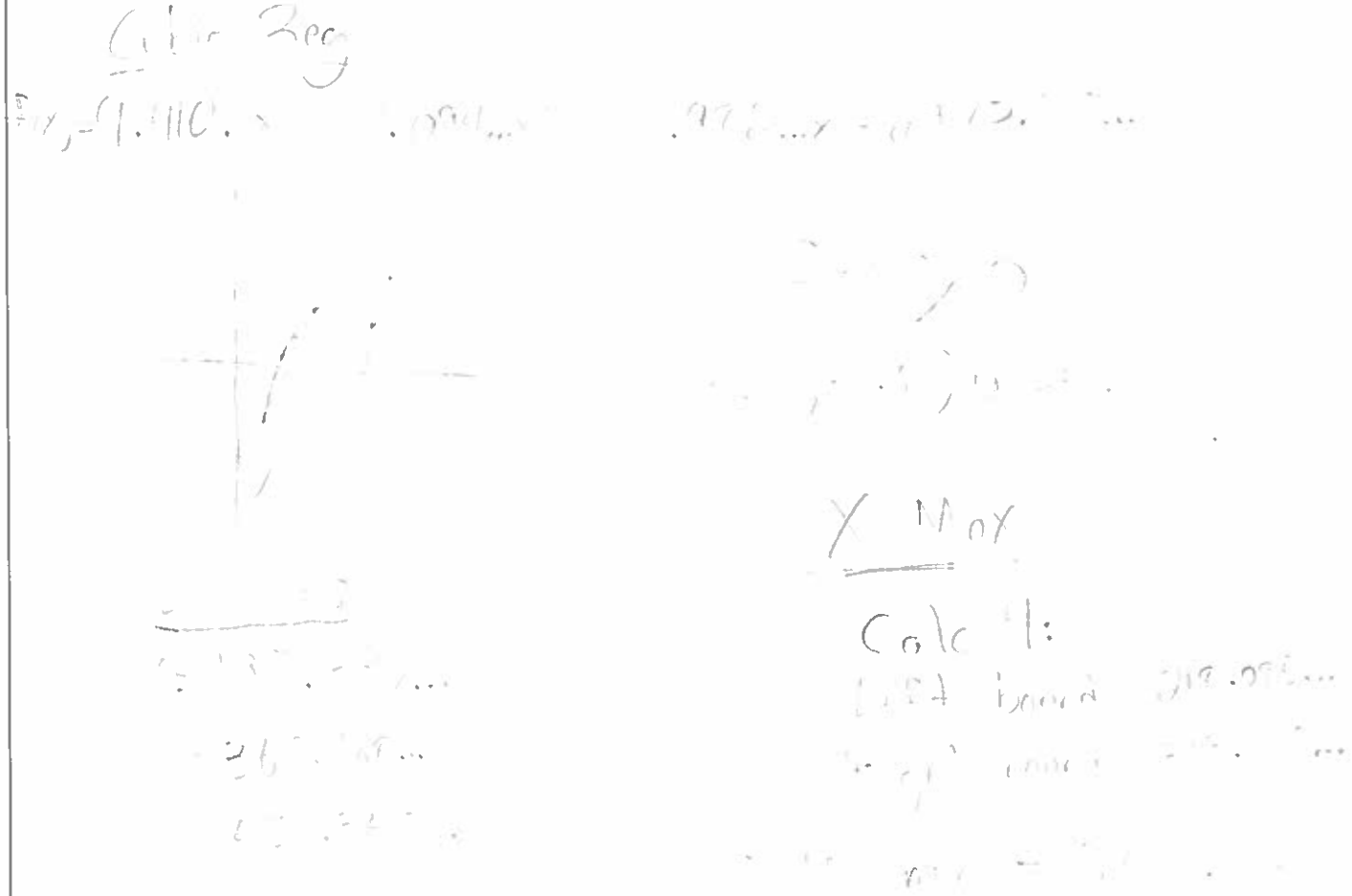
Independant Variable (x-axis): Laptop Price

Dependant Variable (y-axis):

Leader/Collaborator: Stephen Burns

Conclusion (in words):

Supporting Work:



GROUP NAME:

Date: February 6, 2014

Independant Variable (x-axis): height (inches)

Dependant Variable (y-axis): weight (lbs.)

Student Names (First and Last)

Speaker/Presenter: Benjamin Infosino

Writer/Prep: Blake Pirtle

Leader/Collaborator: Kevin Leonardi

Conclusion (in words): the ~~data~~ is only positive between 66.101 and 76.374
— Weight —

Supporting Work:

X (height)	y (weight)
70"	130
75"	225
71"	150
64"	125
68"	120

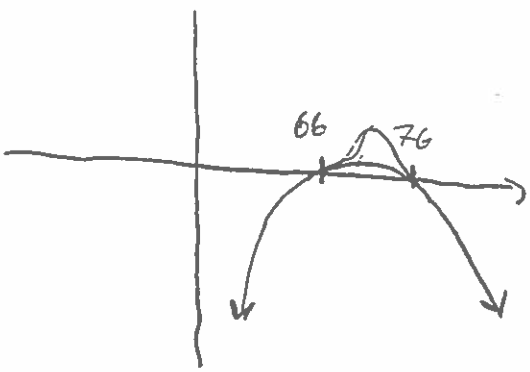
Quartic Regression

$y = ax^4 + bx^3 + cx^2 + dx + e$

$y = -0.54x^4 + 153x^3 - 16214x^2 + 762876x - 13452575$

Positive Domains: [66.101, 76.374]

$P_{x>0}$ [66.101, 76.374]



66.101 76.374

max (74.0[illegible], 255.[illegible])

GROUP NAME: ♡ Science

Date: 6 FEB 19

Student Names (First and Last)

Speaker/Presenter: Corrina Hansen

Writer/Prep: Lindsy Lansberry

Leader/Collaborator:

Independant Variable (x-axis): Time (hrs)

Dependant Variable (y-axis): Drug Concentration (PPM)

Conclusion (in words): According to a quadratic function (y_2) at 8 hours the drug concentration is increasing by 25.857 PPM/hr.

Supporting Work:

Time hrs	Drug Concentration (PPM)
0	100
1	80
2	50
3	40
4	35

$y_1 = -17$

$y_2 = 2 * 3.57 \ldots x' + 51.28 \ldots$

$y_3 = 3 * 1.25 \ldots x^2 + 2 * -3.92 \ldots x' - 20.53 \ldots$

$y_4 = 4 * -1.87 \ldots x^3 + 3 * 16.24 \ldots x^2 + 2 * -40.62 \ldots x' + 6.24 \ldots$

X	Y_1	Y_2	Y_3	Y_4	Y_5
1	-17	-24.141	-24.64	-33.15	-33.75
2	-17	-17	-21.25	-21.25	-21.25
3	-17	-9.857	-10.56	-1.25	-1.25