DATA from "Real World"

RAM	Movie Wait Time
60 GB	.05 sec
30 GB	.09 sec
15 GB	.25 sec
5 GB	1.2 sec
1 GB	3.5 sec

ENTER DATA IN CALCULATOR

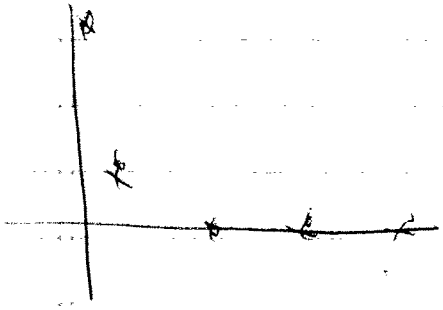
STAT 1: EDIT

L1	L2
60	.05
30	.09
15	.25
5	1.2
1	3.5

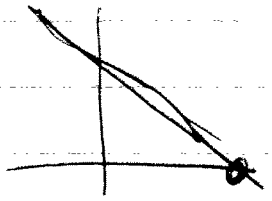
To Plot Data in Calculator

Y= ^ ("up") ENTER

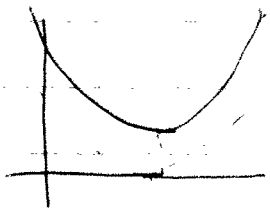
ZOOM 9:



Regressions



Linear



Quadratic

$f(x) = ax + b$

$f(x) = ax^2 + bx + c$

To Find a Regression Equation

STAT > calc 5: QuadReg

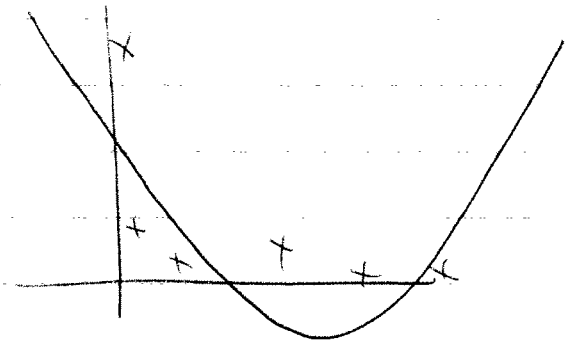
$y = .002x^2 - .174x + 2.83$

~~$y = 2x^2 - x + 3$~~

Y= VARS 5 Statistics > >

1:

GRAPH



Polynomials of Degree "n"

Fundamental Theorem of Algebra

Have Exactly "n" factors. Always

EX Poly of Degree 4

$y = (x-x_1)(x-x_2)(x-x_3)(x-x_4)$

Factors $(x-2)(x-3)(x+4)(x)$

zeros: $2, 3, -4, 0$

Special EX $y = x(x-2)(x-2)(x-2)$

zeros: $0, 2, 2, 2$

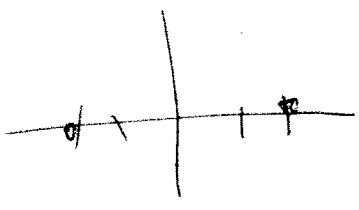
special EX $y = x \cdot x \cdot (x-3)(x-3)$

$0, 0, 3, 3$

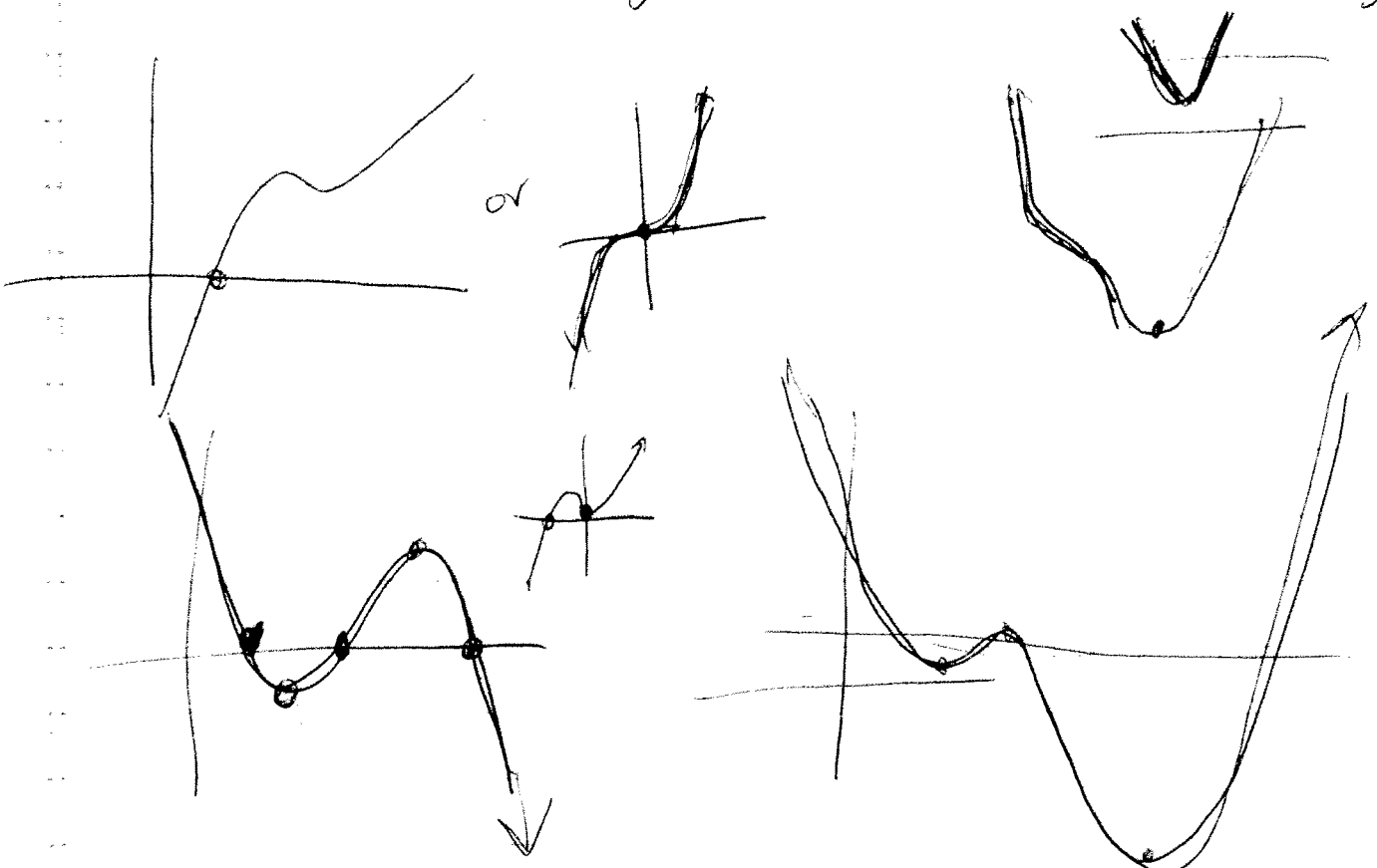
Special EX $y = (x^2+4)(x-2)(x+2)$

x^2 → 2 complex or imaginary

$2, -2$

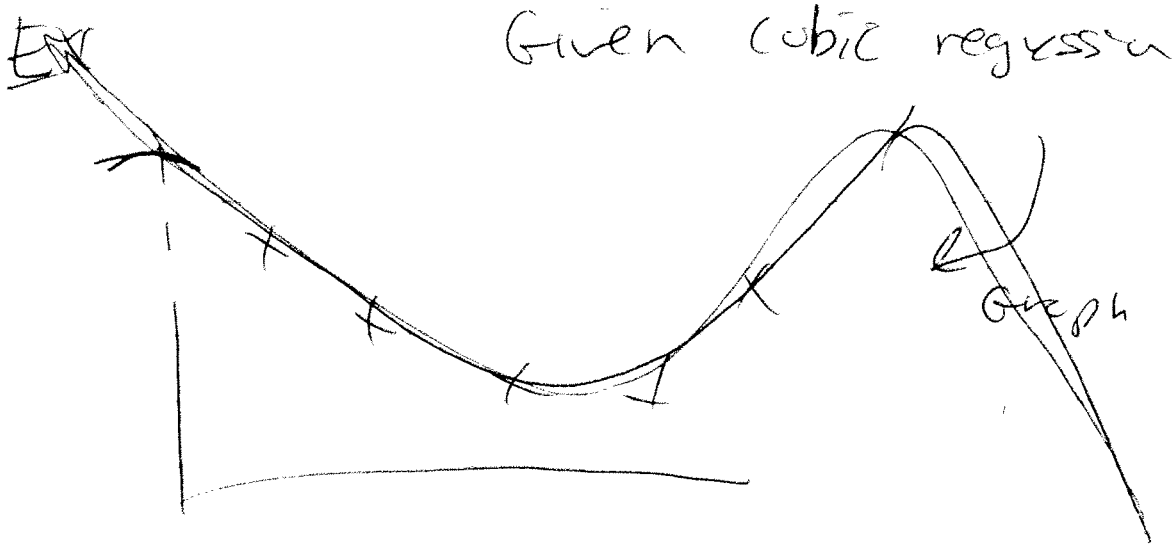


Cubic Regression (Degree 3) Quartic Regression (Degree 4)



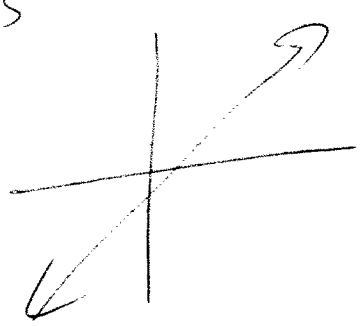
Cubic Quartic

Geography "Faces"	Line 1	Quadratic 2	Cubic 3 (or jig)	Quartic 2 or 4
Degree	1	2	3	4 (1 2 jig) or
MAX/MINS (Turning Points)	0	1	2, 0 (jig)	3, 1
Zeros	1	2, 1, 0 ↑ repeated Twice Graph Touch	3, 2, 1 repeated Twice Graph Touch	4, 2, 0



$y = -3.\ldots x^3 + \ldots x^2 \ldots$

Degree is ODD

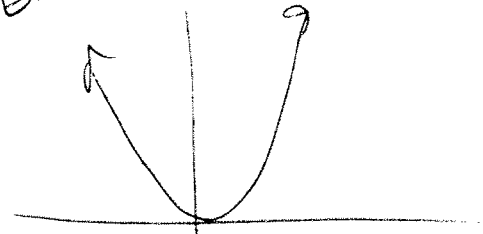


"Disco Right"

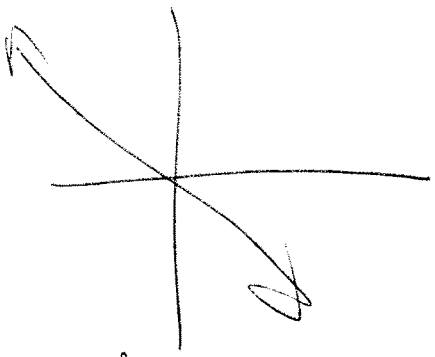
Lead is (+)

Degree is Even

Lead is (+)



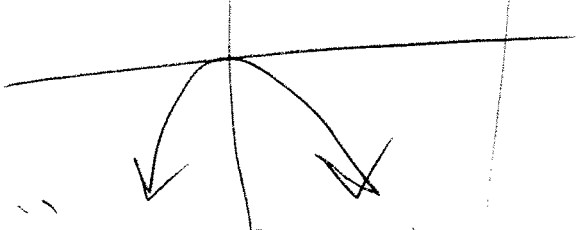
"Happy Parabola"



"Disco Left"

Lead is (−)

Lead is (−)



"Sad Parabola"

GROUP NAME:	Student Names (First and Last)
Logo:	Speaker/Presenter: Trey M
Date: 9/9	Writer/Prep: Dominique
Topics:	QC/Leader: Tatiana C.

Instructions:

L1	L2
12	35
11	20
10	9
09	9
08	8

Quartic Regression

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

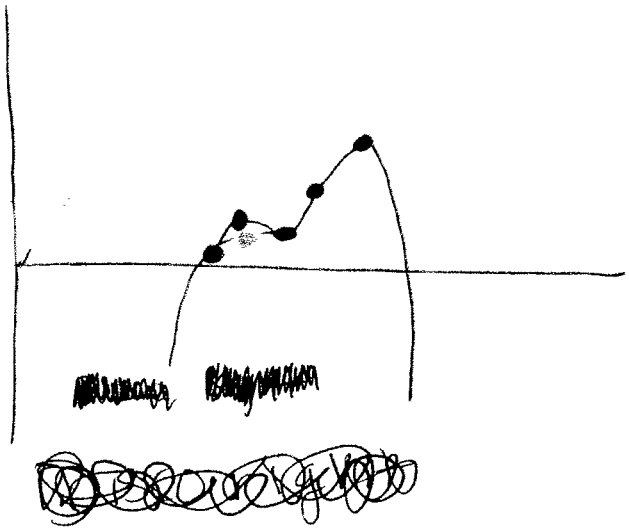
$b = 35.58333$

$c = -536.125$

$d = 3552.416667$

$e = -8736$

$R^2 = 1$



Minimum

$x = 10$ $y = 9$

GROUP NAME: Math	Student Names (First and Last)
Logo:	Speaker/Presenter: Sharon
Date: 9/9/13	Writer/Prep: Avik
Topics: RAM VS Buffer time	QC/Leader: Omar

Instructions:

RAM L_1	Buffer time L_2
60 gb	.08 sec
30 gb	.15 sec
22 gb	1.8 sec
7 gb	2.3 sec
2 gb	3.9 sec

Cubic

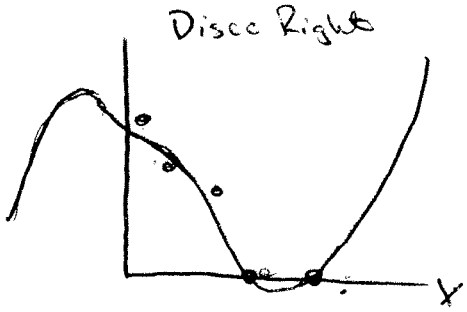
$y = ax^3 + bx^2 + Cx + d$

$a = 1.2$

$b = 4.8$

$C = -.13$

$d = 3.83$



Quartic

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

$a = 1.76$

$b = -.001$

$C = .05$

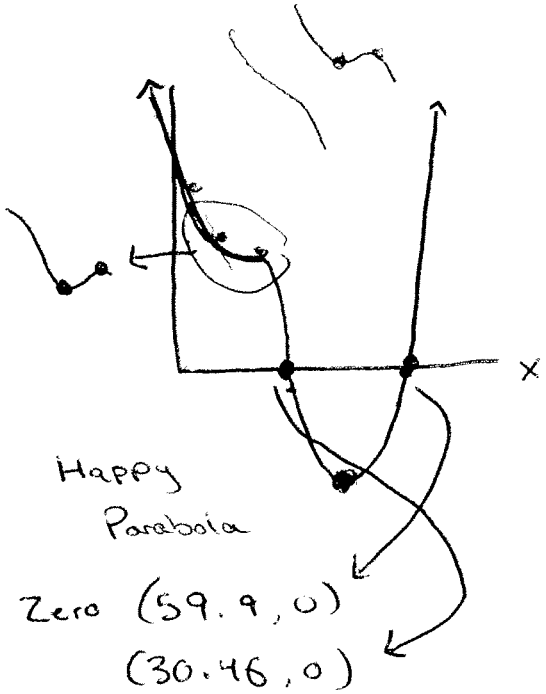
$d = -.73$

$e = 5.14$

(11.1, 1.9)

Min = (49.2, -6.57)

Max = (19.1, 1.9)



GROUP NAME: I L M

Logo:

Student Names (First and Last)

Speaker/Presenter: Jake

Date: 09/09/13.

Writer/Prep: Hiral.

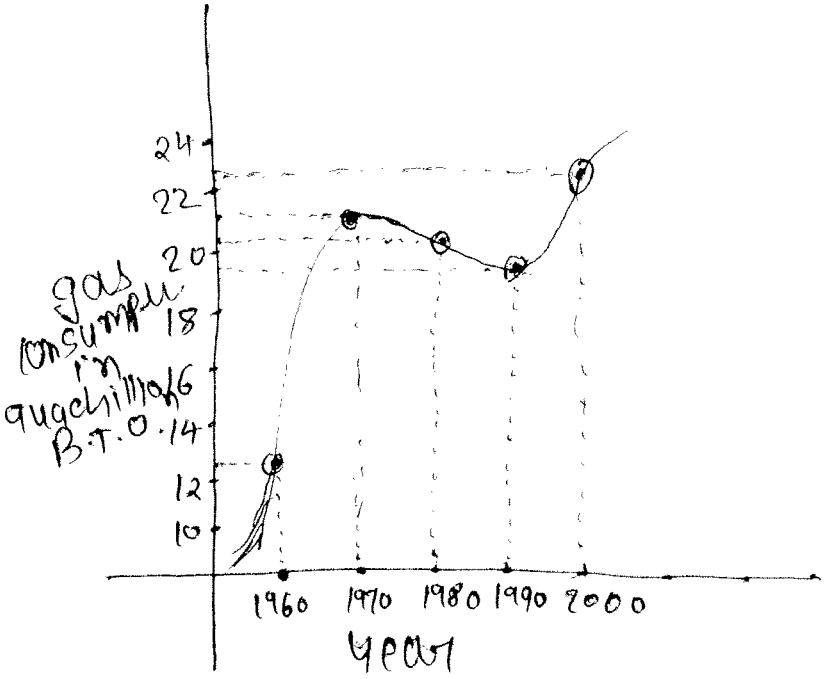
Topics: 6. Natural Gas Consumption

QC/Leader: Kevin.

Instructions:
- year on x-axis
- consumption on y-axis.
- Find, zeros, Minimum & Maximum.

→ Natural gas consumption.

x	y.
1960	12.4
1970	21.8
1980	20.4
1990	19.3.
2000	22.6.



Max - (1973, 21.9)

Min - (1990, 18.8)

Zero - (1954, 0).

GROUP NAME:	Student Names (First and Last)
Logo:	Speaker/Presenter: Rachel Joyce
Date: 9/9/2013	Writer/Prep: Kausalya Mannuru
Topics:	QC/Leader:

Instructions:

$(x+3)(x-2)(x+7)(x+2)$

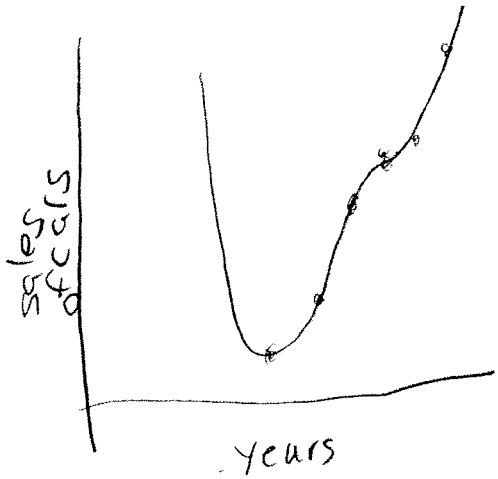
zeros: $-3, 2, -7, -2$

cubic reg

From 1990 - 1995 Toyota advertising increased which helped increase they're sales.

Toyota cars sold

1990	500
1991	560
1992	700
1993	750
1994	900
1995	

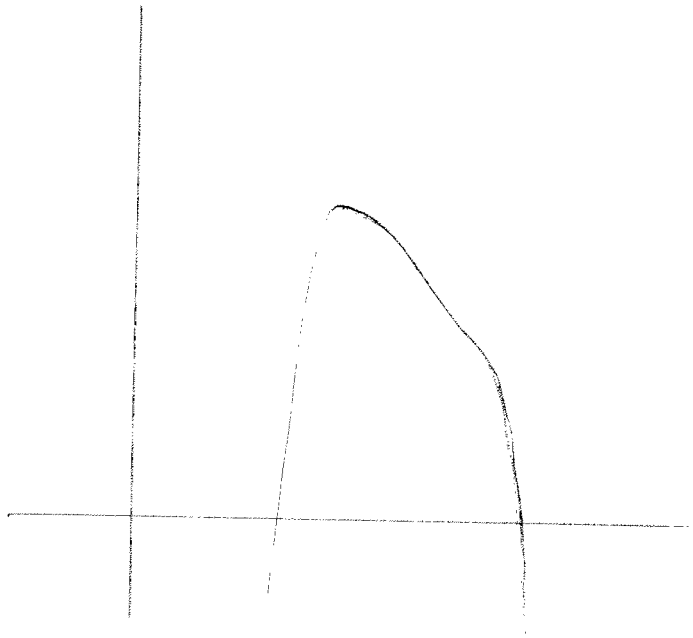


Quartic Regression

GROUP NAME: DA Engineers Logo:	Student Names (First and Last) Speaker/Presenter: Joe Kpaway
Date: 9/9/15 Topics:	Writer/Prep: Vinnie Avhad QC/Leader: Harrison Sandra

Instructions:

Min = 2018.18
Max = 1967.61
Zero = 2015.36



GROUP NAME: Nesquik

Logo:

Date: 9/9/13

Topics:

Student Names (First and Last)

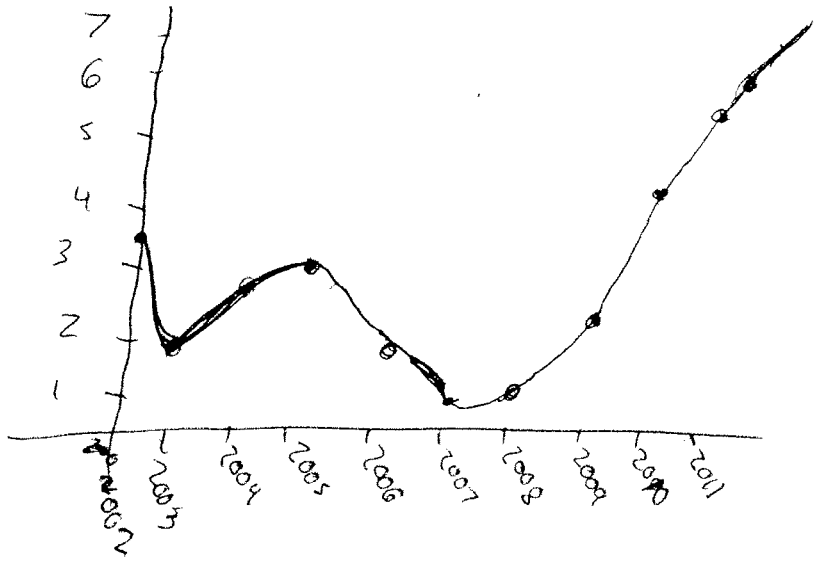
Speaker/Presenter: Brandon Rivera

Writer/Prep: Daishit Javiyala

QC/Leader: Simon Guzman

Instructions:

L1	L2
2	3.5
3	2
4	2.5
5	3
6	2
7	1
8	1.5
9	2.5
10	4.5
11	5.5



GROUP NAME:	Student Names (First and Last)
Logo:	Speaker/Presenter: Natalie Castillo
Date: 09/29/13	Writer/Prep: LAUREN DOBO
Topics: Digital Cameras	QC/Leader: Both N, L

Instructions: Digital cameras (prices through the year...

X	Y
2006	5172
2007	6957
2008	7980
2009	4287
2010	5082
2011	6294
2012	4967
2013	6129
2014	5238

QUARTIC

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

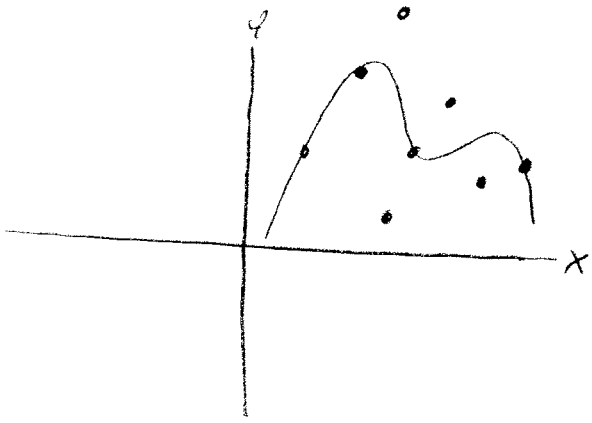
$a = -0.024509906$

$b = 1.003162764$

$c = -14.98791803$

$d = 96.47868642$

$e = -219.0206282$



- SAD PARABOLA
- 4 FACES
- YEAR 2014.8 (SEPT 2014), PRICE = 2004.67
- 2 MAX, 1 MIN

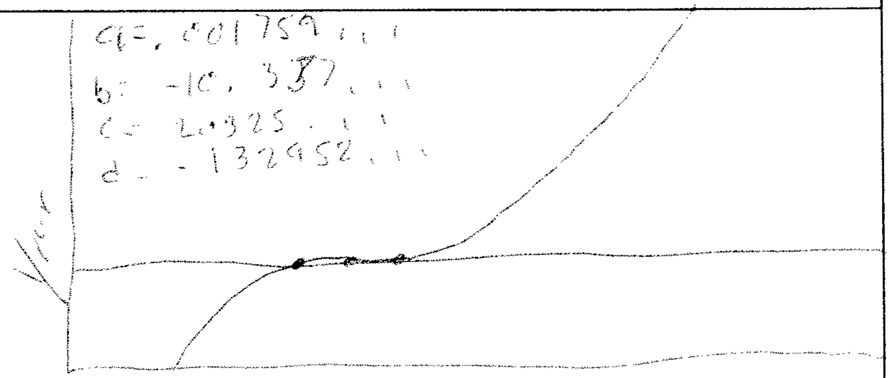
GROUP NAME: Logo:	Student Names (First and Last) Speaker/Presenter: Stan Kaplan Writer/Prep: [illegible]
Date:__________ Topics:	QC/Leader: [illegible]

Instructions:

Cubic regression

- Jag - 3 zero's
- Two faces
- Disc right

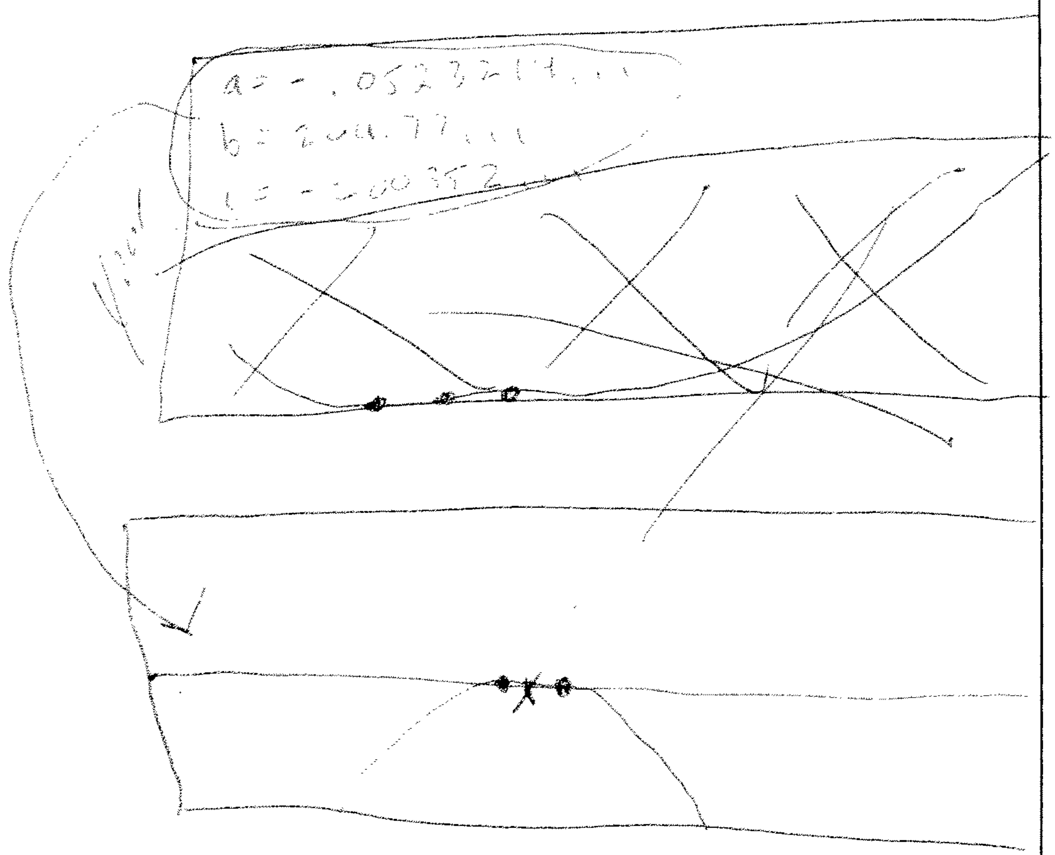
$Y = ax^3 + bx^2 + cx + d$



Quadratic regression

- Happy Parabola
- ~~Three~~ Two zero's

$Y = ax^2 + bx + c$



Name: Lucy, Rex

x	y
1	24
3	30
6	36
9	48
12	60
15	72

CubicReg:

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

$a = -.00473$

$b = .20166$

$c = 1.324$

$d = 23.02$

$R^2 = .99$

QuadReg

$y = ax^2 + bx + c$

$a = .087$

$b = 2.05$

$c = 22.065$