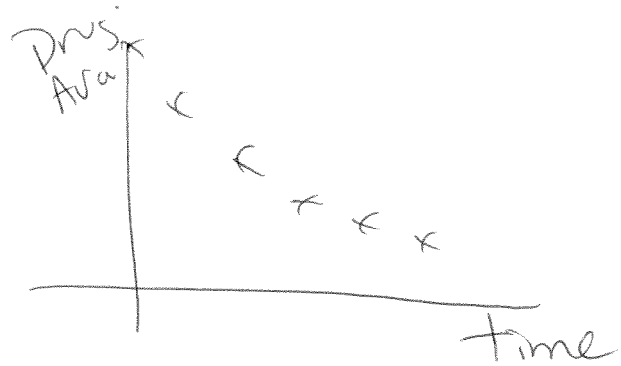
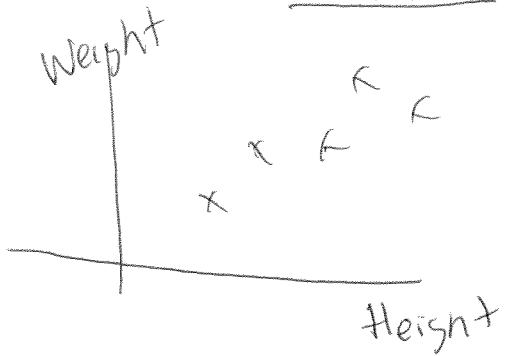
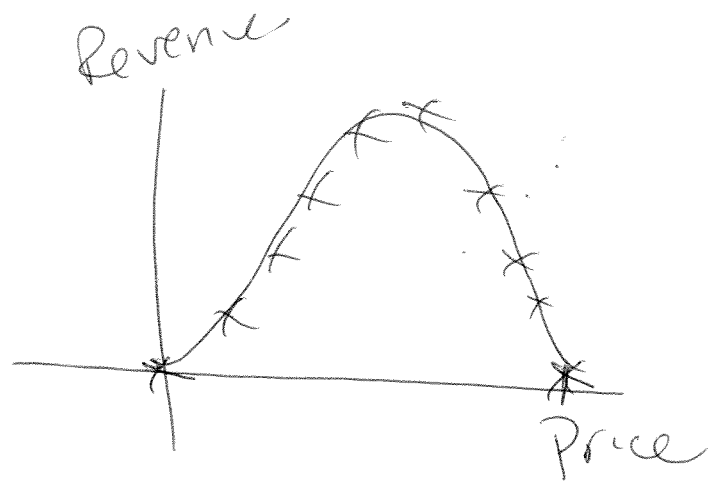
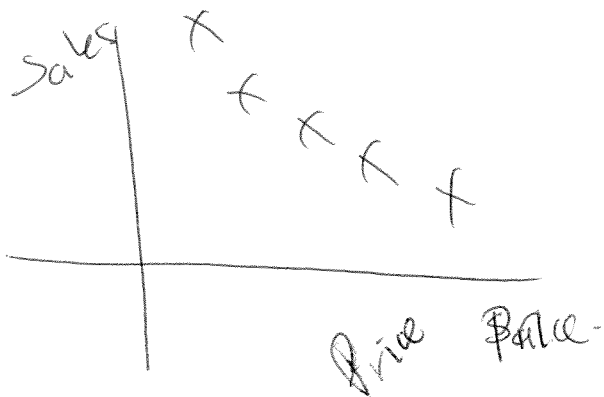


DATA

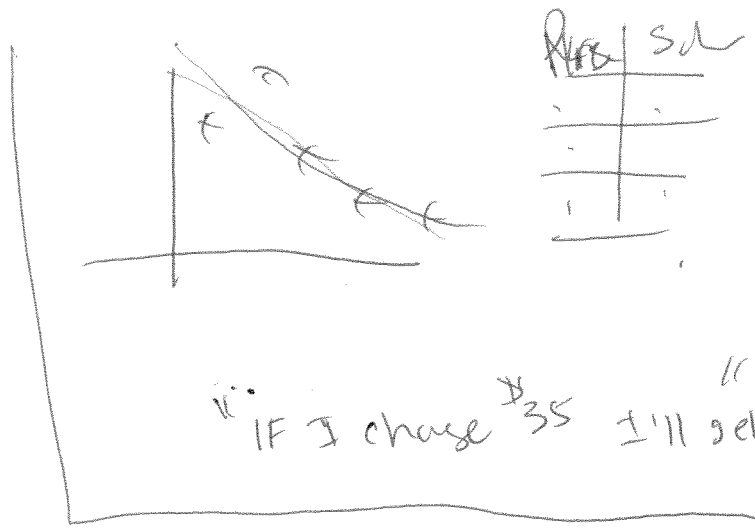
Science



Business



Price	Sales	Revenue
\$50	20	\$1000
\$75	18	\$1350
\$100	10	\$1000
\$125	6	\$750
\$25	23	\$575



IF I charge \$35 I'll sell $\frac{24}{1}$

Enter Data

STAT 1: EDIT

L1	L2
50	20
75	18
100	10
125	6
25	23

Plot Data

STAT PLOT = 2nd | Y=

STAT PLOT 1: ~~ENTER~~ (center)

Zoom 9: Zoomstat

Evaluate

Plug in a value.
 Sale (price)
 c (A 20) = 22.46

Find Regression

STAT () CALC 0: Exp Reg
 4: Linear
 5: Quadratic
 Center ->

$$Y = 37.99... \cdot (.9865...)^x$$

Graph Regression

Y= VARS 5: stat () ()
 1: RegEq

Graph

Solve

Sale (price) = 20
 $Y_2 = 20$
 Price \$47.45

146-40

Price	Sale
\$50	10 12
\$65	11
\$75	8
\$80	3
\$100	1

Linear

$$y = -.244\dots x + 25.09\dots$$

Quadratic

$$y = -4.9\dots x^2 - .17\dots x + 22.45$$

Pre calculus = Study of Functions

Function = JOB

INPUT (Domain)

OUTPUT (Range)

3 Ways to Represent a Function

1. Data

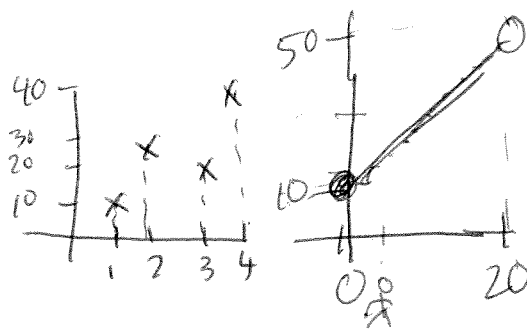
L1	L2
\$ 50	5
\$ 100	3
\$ 150	1

IN
Price = \$ 50
OUT ↓
Sales = 5

Domain
{ 50, 100, 150 }

Range
{ 5, 3, 1 }

2. Plot / Graph



Domain
{ 1, 2, 3, 4 }

Range
{ 10, 20, 30, 40 }

Domain
[0, 20)

Range
[10, 50)

3. Equations

$$f(x) = x + 1$$

Domain: \mathbb{R}
or
 $(-\infty, \infty)$

Range: (Graph on
calculator &
look)

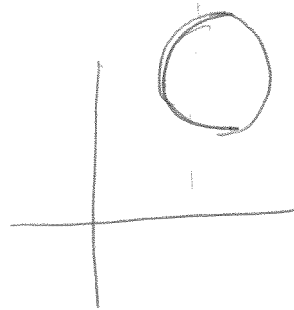
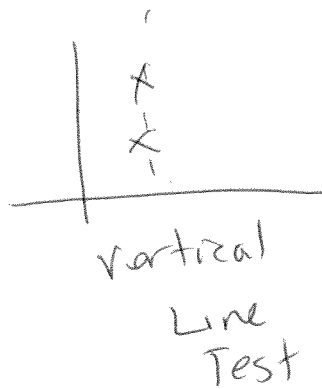
Domains

1. No Divide
by zero

2. No sq. roots
of Neg. Numbers

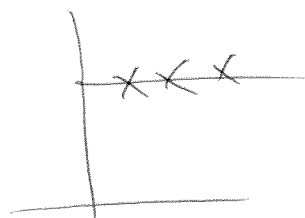
Not A Function

Dirty Dish	1	2	Clean Dish
Dirty Dish	1	3	Broken Dish



IS A Function

Bowl	2	1	Broken Dish
Plate	3	1	Broken Dish



Domain $(-\infty, \infty)$
Range $[10, \infty)$

Vertical Line Test
For Functions

Domain

ex $f(x) = \frac{1}{x^2 - 4}$

Domain: $x^2 - 4 \neq 0$
 $x \neq 2, -2$

ex $g(x) = \sqrt{x + 5}$

Domain $x + 5 \geq 0$
 $x \geq -5$

$g(-4) = \sqrt{-4 + 5}$
 $= \sqrt{1} = 1$

Evaluate

vs. Solve

$Y_1 =$ Regression Function

$$Y_1(1986) = 5.00$$

Methods

1. Trace (✓) 1986

2. Calc = 2nd Trace

Calc 1: Value $X = 1986$

3. Table = 2nd Graph

* Tbl set 2nd Window

Start = 1986

OR

Auto \rightarrow Ask

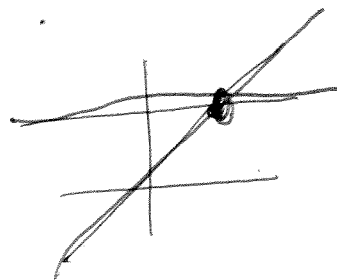
Intersection Method

$$\underbrace{3x + 2}_{Y_1} = \underbrace{7}_{Y_2}$$

Y=

$$Y_1 = 3x + 2$$

$$Y_2 = 7$$



Zoom 6: Stat

Calc 5: Intersect (center)

1st cur :

2nd cur :

cross :

(center)

(center)

(center)

$$X = 1.66\dots = 1\frac{2}{3} = \frac{5}{3}$$

Solver Method

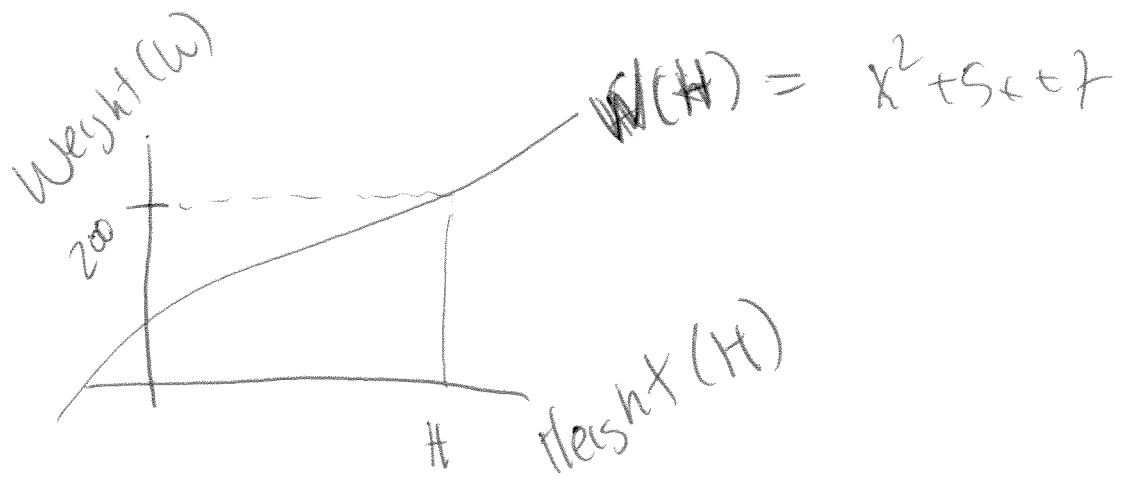
Math B: Solver

$$0 = \underbrace{3x + 2} = \underbrace{7}$$

(center)

Alpha (center)

$$X = 1.66\dots$$



$$\underbrace{x^2 + 5x + 7}_{\text{}} = \underbrace{200}_{\text{}}$$

$Y_1 = \text{regression}$

$Y_2 > 200$