

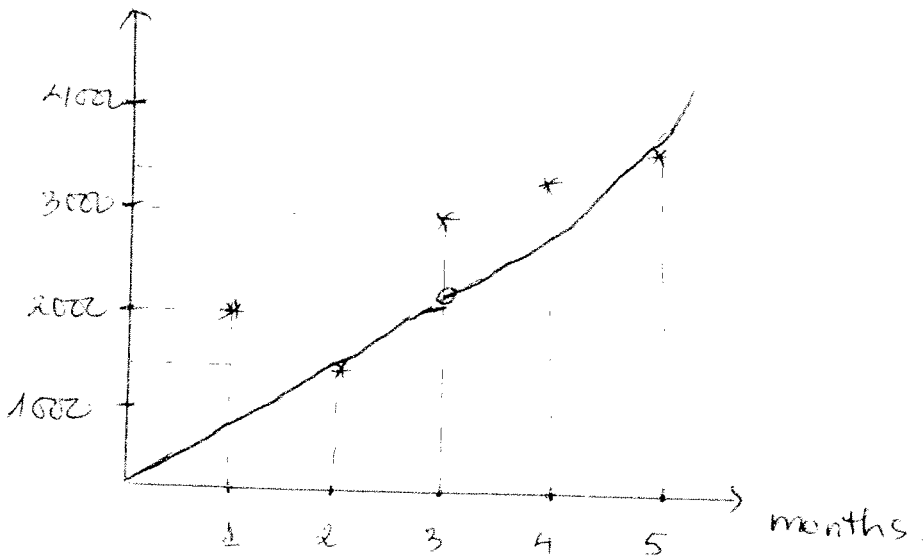
Counting Buses.

HW #2

(1) Dung LE

(2) Christiana. CRISCOM.

	\$	months.
$Y_1 = 14128.2 \dots * 1.21^{x} / (x \leq 3)$	2000	1
	1500	2
$Y_2 = 1428.2 \dots * 1.21^{x} / (x > 3)$	3000	3
	3300	4
$Y_3 = 1428.2 \dots * 1.21^{x} / (x \leq \infty)$	3500	5
$Y_4 = 1428.2 \dots * 1.21^{x} / (x > \infty)$		



$$\lim_{x \rightarrow 3^+} f(x) = 2631.42 \dots$$

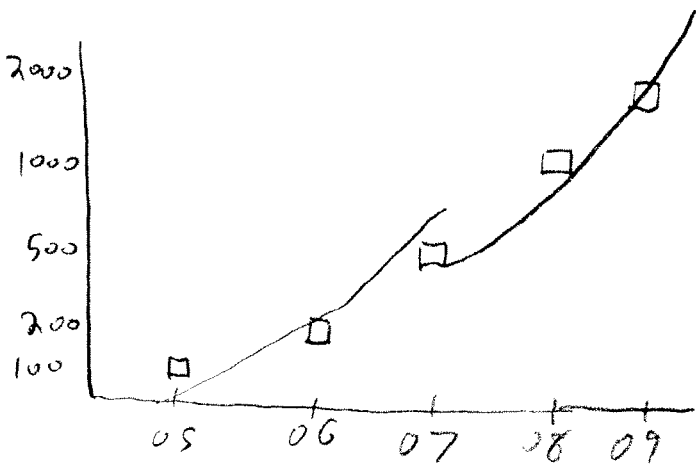
$$\lim_{x \rightarrow 3^-} f(x) = 2531.42 \dots$$

$$\lim_{x \rightarrow \infty^+} f(x) = \infty$$

$$\lim_{x \rightarrow \infty^-} f(x) = \infty$$

* units : \$ and months.

UGK



x	y
2005	100
2006	200
2007	500
2008	1000
2009	2000

$$y_1 = 460x + -922460 / (x \leq 2007)$$

$$y_2 = 142.85 \dots x^2 + -572968.57 \dots x + 574512825.71 / (x \geq 2007)$$

$$\lim_{x \rightarrow 2007^+} f(x) = 474.28$$

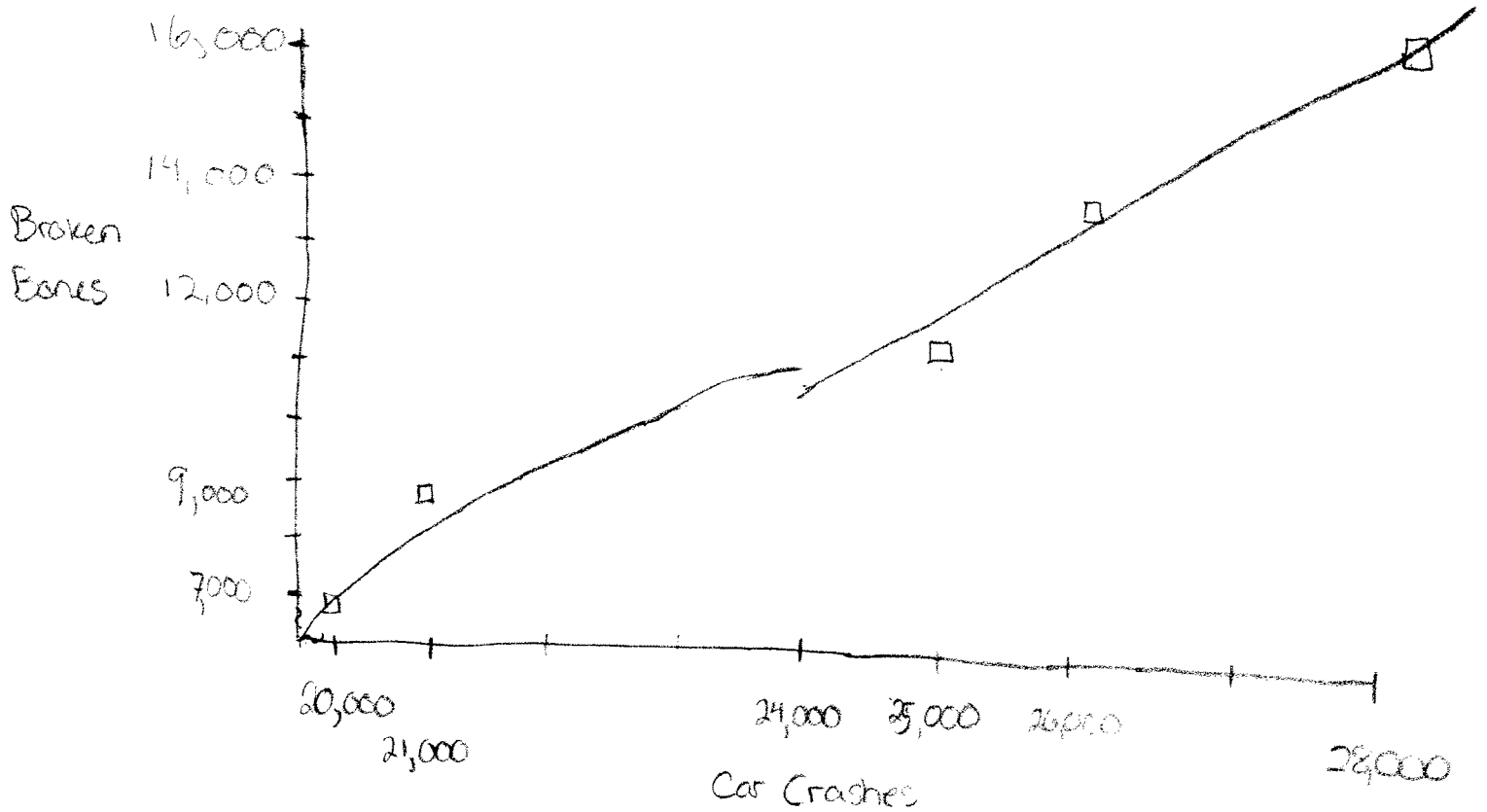
$$\lim_{x \rightarrow \infty} g(x) = \infty$$

$$\lim_{x \rightarrow 2007^-} f(x) = 760$$

$$\lim_{x \rightarrow -\infty} g(x) = -\infty$$

Double Helix

Finding the limit



$$\lim_{x \rightarrow \infty^+} = \infty$$

$$\lim_{x \rightarrow 24,000^+} f(x) = y_1 = 11,468 \dots$$

$$\lim_{x \rightarrow \infty^-} = -\infty$$

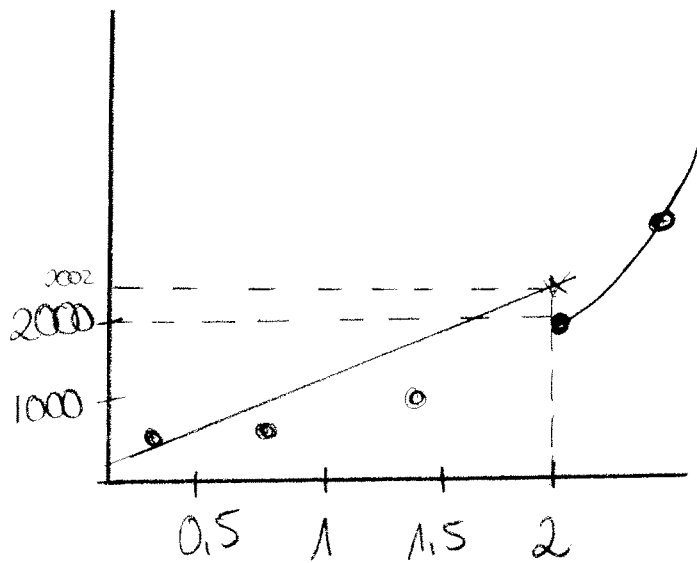
$$\lim_{x \rightarrow 24,000^-} f(x) = y_2 = 11,756 \dots$$

Finding limits in calc:

- ① $y_1 = \text{your } f(x) / (x \geq \text{your } x\text{-int})$
- ② $y_2 = \text{your } f(x) / (x \leq \text{your } x\text{-int})$
- ③ TRACE 2nd calc #6. \Rightarrow scroll and toggle

Deutsche Produktion

year	ticket price in Euro
1995	1.50
1997	1.80
2000	2.00
2003	2.10
2010	2.30



left

$$\lim_{x \rightarrow 2^-} p(x) = 2002$$

$$\lim_{x \rightarrow \infty^-} p(x) = -\infty$$

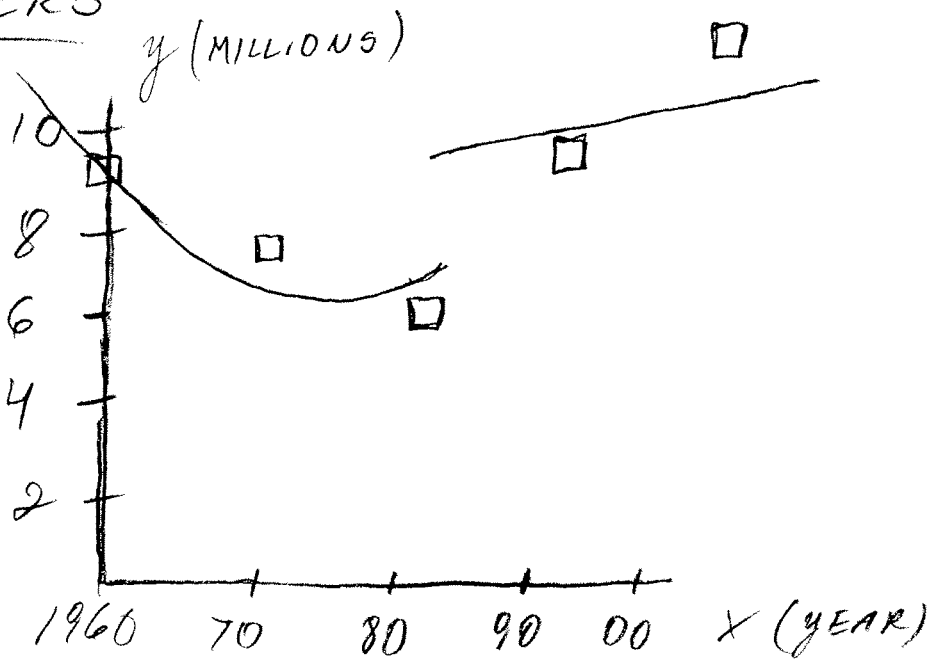
right

$$\lim_{x \rightarrow 2^+} p(x) = 2000$$

$$\lim_{x \rightarrow \infty^+} p(x) = +\infty$$

INVESTMENT BANKERS

- STEVEN BRUNS
- MAIKO ARANA
- LUIS TINOCO



QUADRATIC FUNCTION:

• |STAT|, 1: EDIT

• |Y=|, PLOT

• |STAT|, |CALC|, 5: QUADREG

|Y=|, |VAR|, 5: STATISTICS, EQ, 1: REG EQ

$$y_1 = .009...x^2 + -.299...x + 9.271... / (x \leq 1980)$$

$$\lim_{x \rightarrow 1980^-} f(x) = 6.949... \quad \lim_{x \rightarrow -\infty} f(x) = \infty$$

EXPONENTIAL FUNCTION:

• |STAT|, 1: EDIT

• |Y=|, PLOT

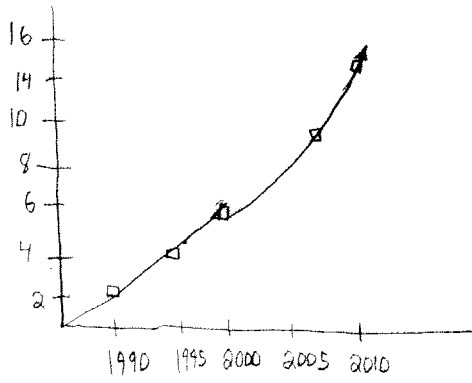
• |STAT|, |CALC|, 0: EXPREG

• |Y=|, |VAR|, 5: STATISTICS, EQ, 1: REG EQ

$$y_2 = 7.475... \cdot 1.006...^x / (x \geq 1980)$$

$$\lim_{x \rightarrow 1980^+} f(x) = 8.583... \quad \lim_{x \rightarrow \infty} f(x) = \infty$$

I.T.



$$\lim_{x \rightarrow 2000^+} f(x) = 82 \dots$$

$$\lim_{x \rightarrow 2000^-} f(x) = 1040 \dots$$

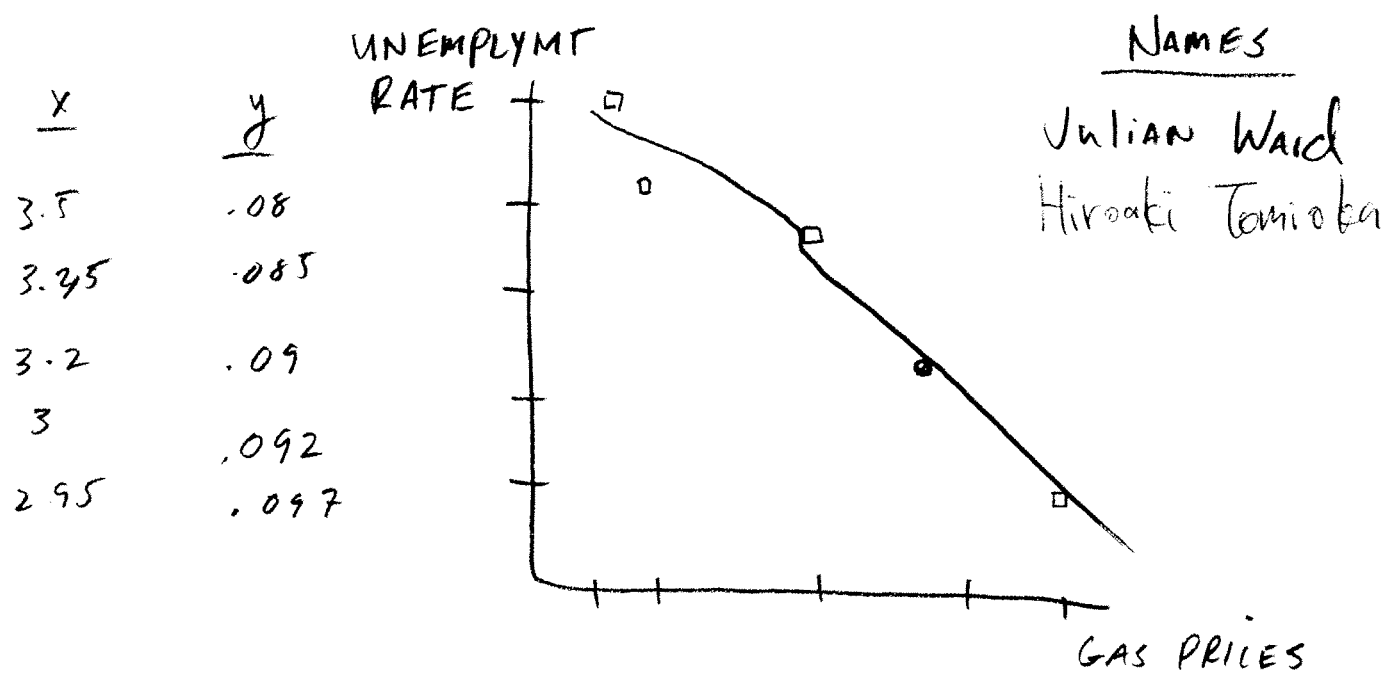
$$\lim_{x \rightarrow \infty} f(x) = \infty$$

$$\lim_{x \rightarrow -\infty} f(x) = -\infty$$

MINI FINUMER

$$y_1 = -0.01111943653529x^2 + \dots + .06 \dots / x \leq 3.2)$$

$$y_2 = -0.02744 \dots x + .1766 \dots / x \geq 3.2)$$



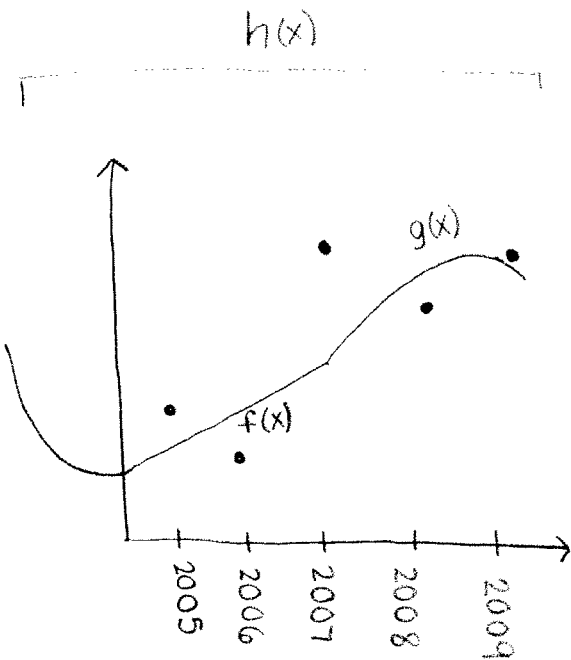
$$\lim_{x \rightarrow 3.2^+} f(x) = 0.089 \dots$$

$$\lim_{x \rightarrow 3.2^-} f(x) = 0.089 \dots \quad x = 3.2$$

$$\lim_{x \rightarrow \infty} f(x) = -6$$

$$\lim_{x \rightarrow -\infty} f(x) = \infty$$

PURPLE PARROTS



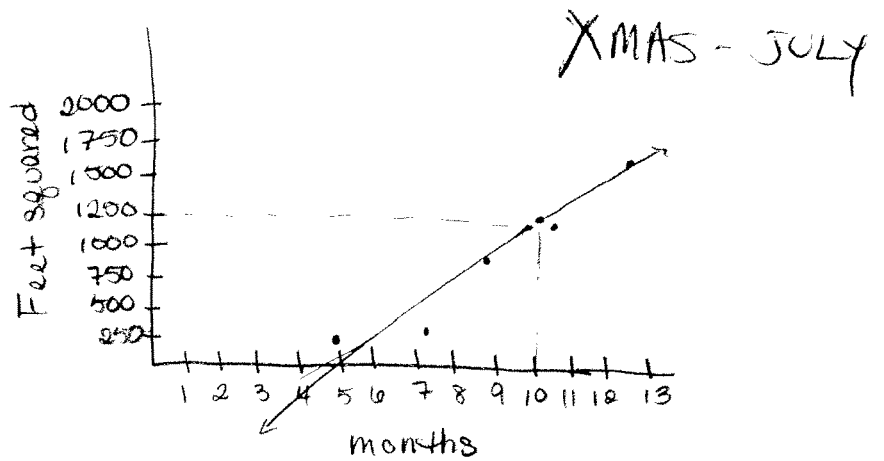
$$\lim_{x \rightarrow 2007} h(x) = 0.827\dots$$

$$\lim_{x \rightarrow \infty} g(x) = -\infty$$

$$\lim_{x \rightarrow -\infty} f(x) = \infty$$



In	Out
250ft ²	5 months
490ft ²	7.3 months
1000ft ²	9 months
1360ft ²	11 months
1629ft ²	12.7 months



$$\lim_{x \rightarrow 1200^+} f(x) = 10.440686\dots$$

$$\lim_{x \rightarrow +\infty} = +\infty$$

$$\lim_{x \rightarrow 1200^-} f(x) = 10.40605\dots$$

$$\lim_{x \rightarrow -\infty} = -\infty$$

stat → edit → L₁ L₂ → stat → calc → 4 → V₁ → VARS → 5 → EQ → 1 →
 stat → calc → 5 → Y₂ → VARS → 5 → EQ → 1 → zoom → 9 → V₁ →
 add / (x ≤ 1200) → Y₂ → add / (x ≥ 1200)

lim x → ∞

lim x → 0

Biochemists:

Abraham Sherman

Lim f(x) = -∞

x → ∞

Lim f(x) = 350 51

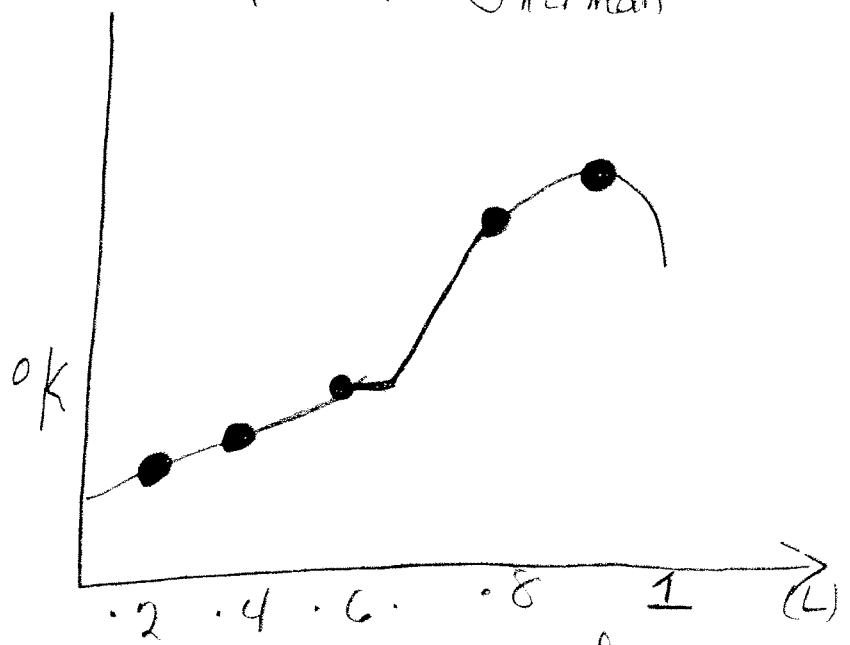
x → 0.6⁺

Lim f(x) = 350 51

x = 0.6⁻

Lim f(x) = -∞

x → -∞



Input Solute ln(L)	output °K (temp)
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0.2	316
0.4	329
0.6	357
0.8	372
1	382