

Functions

(Geography)

146
d12

Domain

Range

Zeros

Asymptotes

END Behaviors \swarrow Degree
 \searrow Lead Coeff.

Faces

Graph

Data

Equations

Transformation

Inverse

Logs ← To solve for an Exponent.

$$y = B^x$$

$$x = \log_{\frac{B}{|}}(y)$$

$$10^x = 3$$

$$x = \log_{10}(3)$$

$$(f \circ f^{-1})(x) = x$$

$$10^{\log x} = x$$

$$\log 10^x = x$$

$$e^{\ln x} = x$$

$$\ln e^x = x$$

$$\frac{d}{dx} 6e^{(s_x+3)}$$

$$6e^{s_x+3} \cdot \frac{d}{dx}(s_x+3)$$

$$6 \cdot e^{s_x+3} \cdot 5$$

$$30e^{s_x+3}$$

Change of Base

Ex $Y = \log_2 X$

(P4)

$$Y_1 = \log(x) / \log(2)$$

Ex $Y = \frac{1}{3} \log_7 (x+5) - 3$

$$Y_1 = (1/3) \log(x+5) / \log(7) - 3$$

GROUP NAME: <u>Money Bags</u> Date: <u>3/6/14</u>	Student Names (First and Last) Speaker/Presenter: <u>Melissa Scarpatti</u> Writer/Prep: <u>Angelica Ippolito</u> Leader/Collaborator: _____
Independant Variable (x-axis): <u>Price of Snicker Bars</u>	Dependant Variable (y-axis): <u>Amount Sold</u>

Conclusion (in words):
 If we sell Snicker bars at \$5, only 1 person will buy.
 If we sell them for \$0.50, 20 people (out of 20) will buy.

Supporting Work:

STAT | Edit

L1	L2
5	1
4	3
3	5
2	8
1	15
0.5	20

STAT | 2 calc | 9 LnReg

If we price a Snicker Bar @ \$5, .9 people will buy.

V calculate | enter

Y= | VAR5 | 5 | 2 | 1 | RegEq

If we price @ \$3.5, 18 people will buy.

enter

GRAPH

$$y = 14.380809488312$$

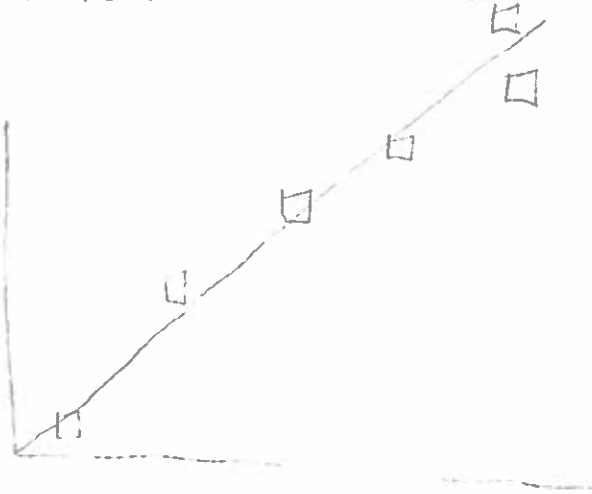
$$a = -8.373798640744 \ln(x)$$

ZOOM | 9 | zoomstat



OSMAN R. Khan
 Jey Steins
 Eliu Amponse
 Clifford Basquin

$$Y_1 = 1.433 \cdot 1.1815^{X_1} = 1.1214 \cdot 1.177 \cdot 1.59143739115 \log(x) / \log(e)$$



the sale
 of Nike
 speakers

X	Y
1975	8.125

- 1/2 inch diameter
 each
 1/2 inch diameter

Year	Rate	Value
2007	2	20,000
2008	2	20,000
2009	3	30,000
2010	4	40,000
2011	5	50,000
2012	6	60,000
2013	7	70,000
2014	8	80,000

Total = 3,500,000 (approx)
 (P)



2012 = 205 Number = 2012

2012 = 6.75

This Group, Best Group

Billy Rafferty

3/6/14

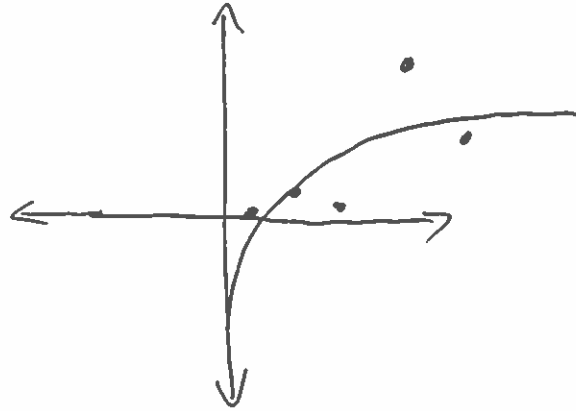
Data: Price of Bitcoins (Months)

Li-Yang Lin

Khrystyur

Pavlyuchenko

X	Y
1	\$4.9
4	\$308.51
7	\$332.44
10	\$3151.90
13	\$2116.90



$$y = a + b \ln x$$

$$y = -425.362 + 980.704 \ln x$$

$$y = -425.362 + 980.704 \log(x) / \log(e)$$

In 2 years the price of Bitcoins
will \$3,115.90

group 3

Christian Guerra

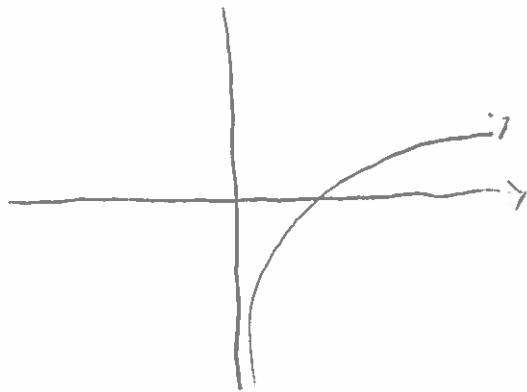
Ben Infosino

Kevin

Clare Dink

$$y = -2396.44 + 606.66 \ln(x)$$

$$y = \frac{-2396.44 + 606.66 \log(x)}{\log(e)}$$



zero: (52.3, 0)

• if you're 80 inches tall
you'll weigh 261 lbs

• if you weigh 230 lbs
you'll be 76 inches tall

P_{2d}
 P_{1d} \rightarrow Group
Lion

• a red line

Step 1 Calculate regression

step 5 view table

STAT \rightarrow 9:
LnKey

Traveling 65 mph, you will
get 21,453 miles per hour

$$y = a + b \ln x$$

Step 2 - insert regression into $y =$

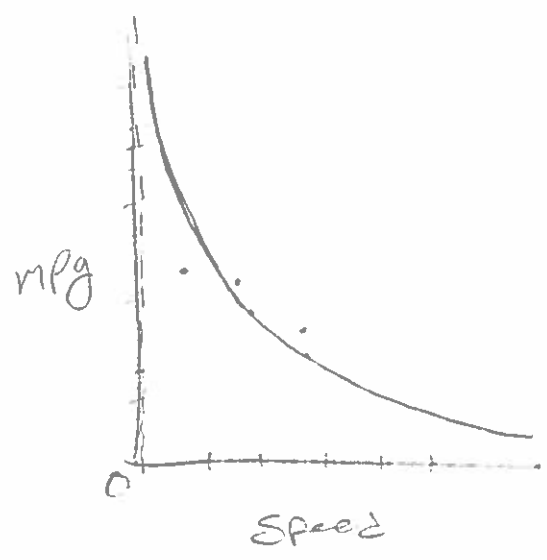
$y =$ \square VARS \square 5: \rightarrow \rightarrow \square Error

Step 3 change $\ln(x)$

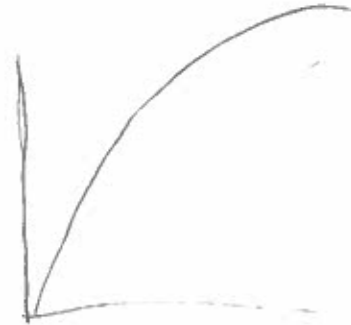
$\ln(x)$ changes to:

$$\text{Log}(x) / (\text{Log}(e))$$

Step 4 graph



x	y
24	24
35	48
47	72
67	96
78	120



$$y = ax + b \ln x$$

$$a = -228.754663$$

$$b = 78.54673117$$

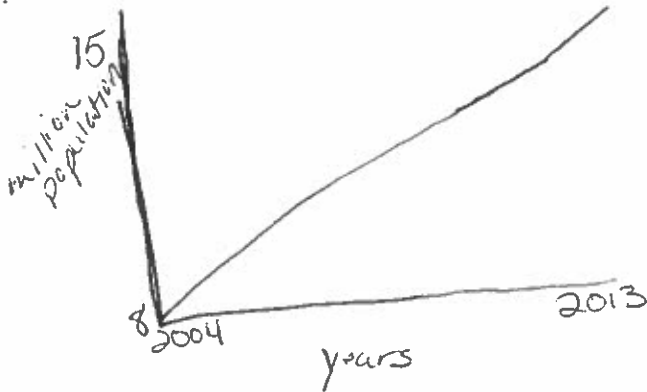
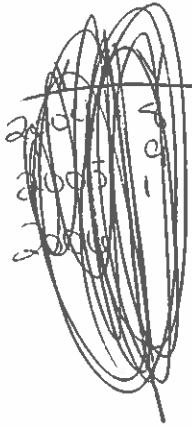
$$y_1 = -228.75466295687 + 78.5467311734 \cdot 73 \log(x_1 / \log(e))$$

Student Group - Precalculus Invaders

Names - Dorian Thomas

Zolbao Brajanjov

$$y = \log x / \log e$$



y	y
2004	8
2007	9
2009	13
2012	14
2013	15
2014	15.67

Population of New York ^{expen.} growth from 2004 to 2013 increasing.
Prediction for ^{population} ~~growth~~ in 2014 is 15.67 million.