10. $y = -.05\ldots x^4 + 7.52\ldots x^3 + -45.99\ldots x^2 + 367.51\ldots x - 1045.55\ldots$

Y= VARS 5 > > 1.

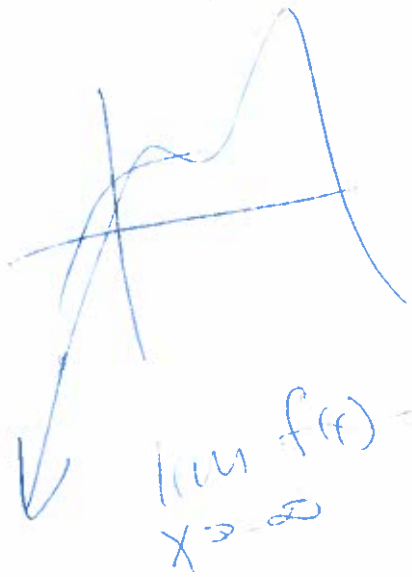
Plot 1 ON Zoom 9.

Window
Xmax: 20

MAX around 15.4

CALC 4:
Left: 12
Right: 16
Guess: 16

X = 15.51635
Y = 34.539



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

Composite Functions

$(f \circ g)(x)$

Transcendental Function

e^x (a^x) $\ln x$, $\sin x$

Height | weight

x	r(x)
Height in Inches	weight in lbs.

(M)

165cm → 1kg

$x/2.54$

$$y = \frac{a + b}{2.2}$$

$$y' = \frac{a}{2.2} b^{x/2.54} \cdot \frac{d}{dx}\left(\frac{x}{2.54}\right) \ln b$$

$dy/dx \approx 19.47$ lb/in

at 165cm. the

growth rate is

1.77 kg/cm.

$$a * b \wedge (x/1000) \cdot 2$$

$$y = 2a * b \wedge (x/1000)$$

$$y' = 2a$$

$$\frac{d}{dx} b^x = b^x \ln b$$

$$\frac{d}{dx} b^{(x/1000)} = b^{(x/1000)} \ln b$$

$$\frac{d}{dx}\sin(5x) = \cos(5x)\cdot\frac{d}{dx}5x$$

$$5\cos(5x)$$

$$\frac{d}{dx}\left(x^2+5x\right)^{100}$$

$$100\left(x^2+5x\right)^{99}\cdot\frac{d}{dx}\left(x^2+5x\right)$$

$$100\left(x^2+5x\right)^{99}\cdot(2x+5)$$

$$\frac{d}{dx}u^{100}$$

$$\frac{d}{dx}10^{100}=0$$

$$= 100u^{99}\cdot\frac{du}{dx}$$

$$y = a\sin(bx+c)+d$$

$$\frac{d}{dx}\ln(x) = \frac{1}{x}$$

$$\frac{d}{dx}\ln(x^2) = \frac{1}{x^2}\cdot\frac{d}{dx}x^2$$

$$= \frac{1}{x^2}\cdot 2x$$

$$\frac{d}{dx}\ln(7x^2-5x) = \frac{1}{7x^2-5x}\cdot\frac{d}{dx}7x^2-5$$

$7x-5$

$$\frac{7x-5}{7x^2-5x}$$

$$\frac{d}{dx} e^{2x} = e^{2x} \cdot \frac{d}{dx} 2x = 2e^{2x}$$

$$\frac{d}{dx} e^{x/10} = e^{x/10} \cdot \frac{d}{dx} x/10 = \frac{e^{x/10}}{10}$$

$$\frac{d}{dx} b^{x} = b^{x} \ln b$$

$$\frac{d}{dx} b^{2x} = b^{2x} \ln b \frac{d}{dx} 2x$$

$$= b^{2x} \ln b \cdot 2$$

$$\frac{d}{dx} 131 \ldots * (1.001\ldots)^{x/1000} \cdot 2$$

$$131 * (1.001)^{x/10} \cdot 2 \cdot \frac{\ln(1.001)}{1000}$$

GROUP NAME: Balls of Rust

Date: Feb. 20, 2014

Student Names (First and Last)

Speaker/Presenter: Greg M

Writer/Prep: Keith Meserole

Leader/Collaborator: Harrison

Independant Variable (x-axis): years

Dependant Variable (y-axis): lbs. of rust

Conclusion (in words): On the 31st year the golden gate bridge accuired 2958.7 lbs. of rust

Supporting Work:

X	Y
7	16.624
8	20.63
14	75.351
15	93.51
19	221.78
21	341.55
31	2958.7

$$f(x) = \frac{3.667538653(1.240981815)^{x}}{12}$$

$$\frac{3.667538653}{12}(1.240981815)^{\frac{x}{10}} \cdot \frac{d}{dx}\left(\frac{x}{12}\right)$$

$$\ln(1.240981815)$$

GROUP NAME: Squiggles 9 Us

Date: 2/20/2014

Student Names (First and Last)

Speaker/Presenter: Kevin I

Writer/Prep: Michelle A

Leader/Collaborator: Kevin V

Trainee Anik Patel

Independant Variable (x-axis): minutes of party

Dependant Variable (y-axis): Gallons of booze drunk

Conclusion (in words):

People drank a lot of alcohol at Anik's Party. In a very short amount of time

Supporting Work:

3.785 1

Liters -> gallons

Hours -> 60 minutes

Hours X	Liters Y
1	30
2	65
3	80
4	100

$a = -3.958$

$b = 43.75$

$c = -173.54$

$e = 145$

GROUP NAME: 14Shoes	Student Names (First and Last)
Date: 02/20	Speaker/Presenter: Dominique C.
Independant Variable (x-axis): _____	Writer/Prep: Val Sinclair
Dependant Variable (y-axis): _____	Leader/Collaborator: [illegible]

Conclusion (in words):

Supporting Work:

$$\frac{d}{dx} = 131 \cdot (1.001)^{\frac{x}{1000}}$$

$$131 \cdot (1.001)^{\frac{x}{1000}} \cdot 2 \cdot \frac{\ln(1.001)}{1000}$$