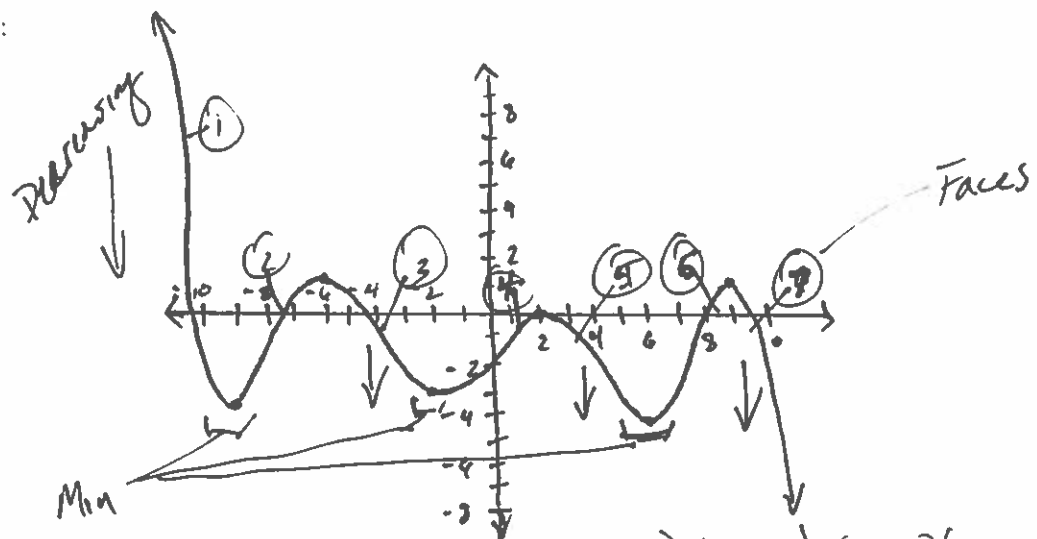


<p>GROUP NAME: <u>MATH Jedi</u></p> <p>Date: <u>5-8-14</u></p>	<p>Student Names (First and Last)</p> <p>Speaker/Presenter: <u>Ricky Wilson</u></p>
<p>Independent Variable (x-axis): _____</p> <p>Dependant Variable (y-axis): _____</p>	<p>Writer/Prep: <u>Ricky</u></p> <p>Leader/Collaborator: <u>Ricky</u></p>

Conclusion (in words):

|

Supporting Work:



- a) Decreasing over intervals $(-\infty, -9)$ $(-6, -2)$ $(2, 6)$ $(9, \infty)$
- b) Local Min @ $-9, -2, 6$
- c) Leading sign of coefficient = Negative Disco Left
- d) Possible degrees of f $7, 9$

7 faces shown which is at least 7
 Because it's odd 9 could be a possibility
 AS well

GROUP NAME: Benjamin Infosino

Student Names (First and Last)

Date: _____

Speaker/Presenter: _____

Independent Variable (x-axis): _____

Writer/Prep: _____

Dependant Variable (y-axis): _____

Leader/Collaborator: _____

Conclusion (in words):

Mid-Term review problems

2

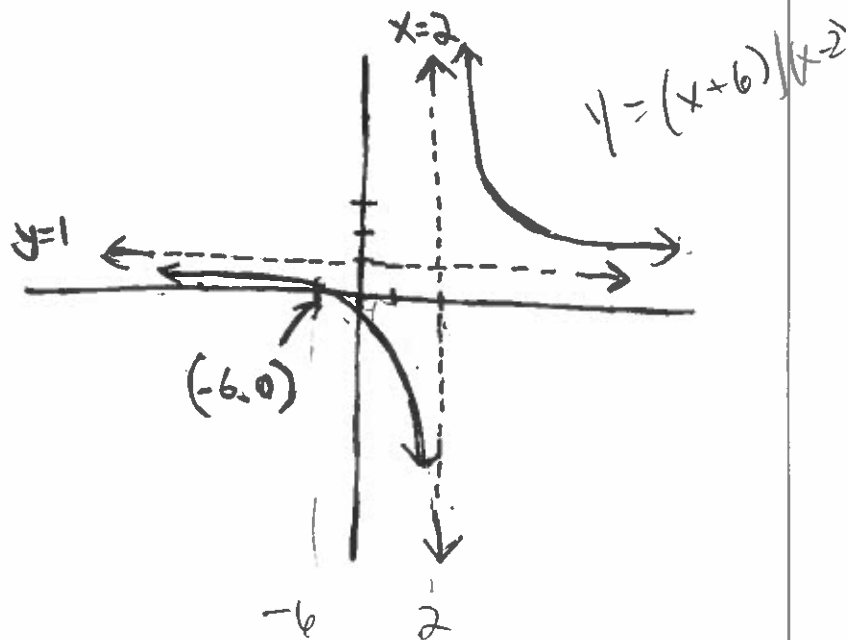
Supporting Work:

Solve: $\frac{x+6}{x-2} \leq 0$

interval notation:

~~$x \leq -6$~~
 ~~$x > 2$~~

$[-6, 2)$



$y = \frac{x+6}{x-2}$ $\frac{DN=1}{DD=1}$

HA $\Rightarrow y = \frac{LN}{LD} = \frac{1}{1}$

$y = 1$

GROUP NAME: Clifford Basquin

Date: _____

Student Names (First and Last)

Speaker/Presenter: _____

Independent Variable (x-axis): _____

Writer/Prep: _____

Dependant Variable (y-axis): _____

Leader/Collaborator: _____

Conclusion (in words):

3

Supporting Work:

Vertical as $x=1$ $x=5$ ✓
 Horizontal $y=0$ ✓
 through $(3, -1)$

$$-1 = \frac{a}{(x-1)(x-5)}$$

~~$$-1 = \frac{a}{x^2 - 6x + 5}$$~~

$$-1 = \frac{a}{(3-1)(3-5)}$$

$$-1 = \frac{a}{(2)(-2)}$$

$$-1 = \frac{a}{-4}$$

$$|a = 4|$$

$$f(x) = \frac{a}{(x-1)(x-5)}$$

$$y = \frac{a(x+b)}{(x-1)(x-5)}$$

$$-1 = \frac{a}{(x-1)(x-5)}$$

$$f(x) = \frac{4}{(x-1)(x-5)}$$

DN = 0.

DD = 2.

HIA: $y=0$ ✓

VA: 1, 5

$$-1 = f(3) = \frac{4}{(3-1)(3-5)} = \frac{4}{2(-2)} = \frac{4}{-4} = -1$$

GROUP NAME:

Student Names (First and Last)

Date: _____

Speaker/Presenter: Elija Ampunza

Independent Variable (x-axis): _____

Writer/Prep: _____

Dependant Variable (y-axis): _____

Leader/Collaborator: _____

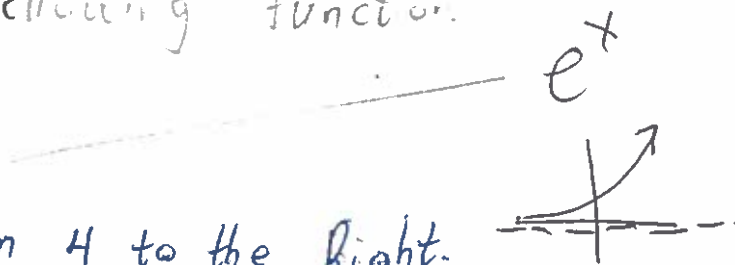
Conclusion (in words):

4

Supporting Work:

Graph the following function.

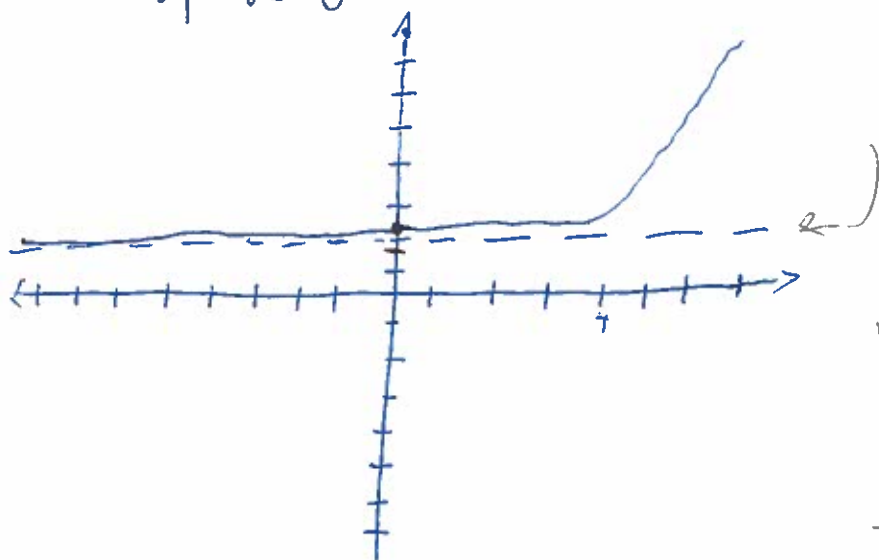
$$g(x) = \frac{1}{2}e^{x-4} + 3$$



1. Move the Parent function 4 to the Right.

2. Shrink 1/2

3. Move up to 3



HA: $y = 3$

$y_{INT} (x=0)$

$$\frac{1}{2}e^{0-4} + 3$$

$$y_{INT} (0, \frac{1}{2}e^{-4} + 3)$$

GROUP NAME:

Yvette
Aguilar

Student Names (First and Last)

Date: _____

Speaker/Presenter: _____

Independent Variable (x-axis): _____

Writer/Prep: _____

Dependant Variable (y-axis): _____

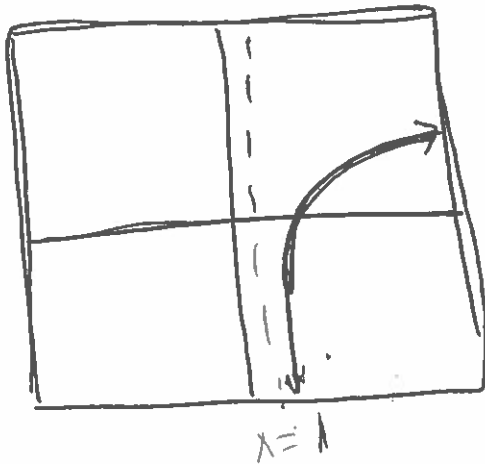
Leader/Collaborator: _____

Conclusion (in words):

5

Supporting Work:

graph the function $g(x) = \log_3(x-1)$
give its domain and range using interval notation



Range:
~~Domain~~: $(-\infty, \infty)$

Domain:
Range: $(1, \infty)$

GROUP NAME:

Student Names (First and Last)

Date: 5/8/14Speaker/Presenter: Alicia Contino

Independent Variable (x-axis): _____

Writer/Prep: _____

Dependent Variable (y-axis): _____

Leader/Collaborator: _____

Conclusion (in words):



Supporting Work: Find a polynomial $f(x)$ of degree 3 with real coefficients and the following zeros.

$-1, 3-i$

$3+i$

$$(x+1)[(x-(3-i))][x-(3+i)] = f(x)$$

$$(x+1)((x-3)^2 - i^2) = f(x)$$

$$(x+1)(x-3)(x-3+1) = f(x)$$

$$(x+1)[(x^2-3x-3x+9)+1] = f(x)$$

$$(x+1)(x^2-6x+10) = f(x)$$

$$x^3-6x^2+10x+x^2-6x+10 = f(x)$$

$$x^3-5x^2+4x+10 = f(x)$$

GROUP NAME:	Student Names (First and Last)
Date: <u>5/8/14</u>	Speaker/Presenter: <u>Zolboo B.</u>
Independent Variable (x-axis): _____	Writer/Prep: _____
Dependant Variable (y-axis): _____	Leader/Collaborator: _____

Conclusion (in words):

Midterm # 7

Supporting Work:

[Stat] → [Edit] → plug in variables for L_1 & L_2

[Stat] → [Calc] 0: Exp Reg = $y = a * b^x$

$y =$ [VARS] : 5 () () Reg Eq

① Exponential Function: $y = .644... * 1.495...^x$

② what are the sales in year 25 projected to be?

$$y = 6.44 * 1.495^{25}$$

ANSWER: 215,000 → 15 billion

③ when will sales reach 4 million?

$$4 = 6.44 * 1.495^x$$

$$y_1 = 6.44... * 1.495^x$$

$$\frac{y}{a} = 4$$

[2nd] [CALC] 5: Intersect

ANSWER: 4.53 ≈ about 4 1/2 years

GROUP NAME:

Date: 5/8/14 Billy Raftery

Student Names (First and Last)

Speaker/Presenter: _____

Independent Variable (x-axis): _____

Writer/Prep: _____

Dependant Variable (y-axis): _____

Leader/Collaborator: _____

Conclusion (in words):

8

Supporting Work:

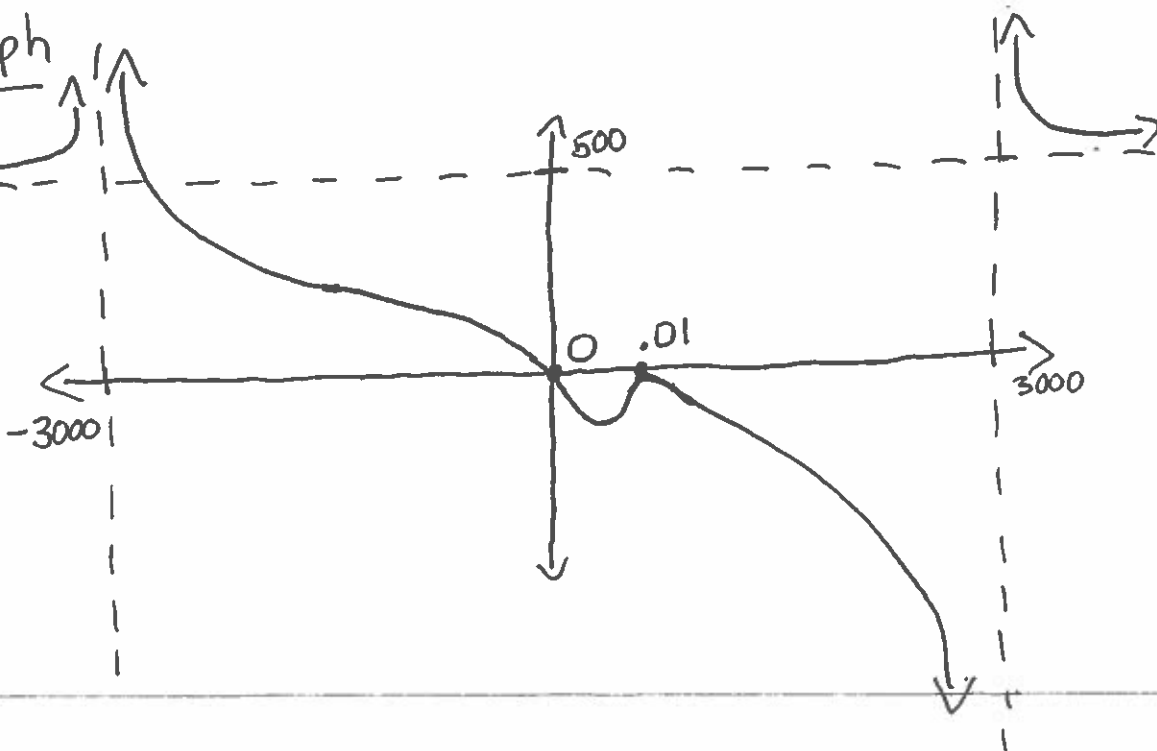
$$S = \frac{500x(x-.01)^2}{(x-3000)(x+3000)^2}$$

Asymptotes

Horizontal: 500

Vertical: -3000, 3000

Graph



GROUP NAME:

Date: 5-8-14

Student Names (First and Last)

Speaker/Presenter: _____

Independent Variable (x-axis): _____

Writer/Prep: Craig Sarros

Dependant Variable (y-axis): _____

Leader/Collaborator: Zach Labbanicz

Conclusion (in words):

9

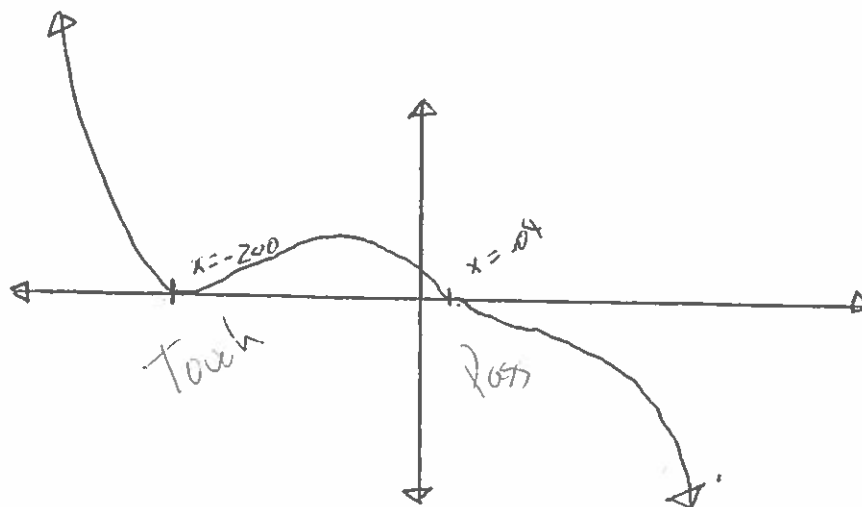
Supporting Work: Given $F(x) = -2(x^2 + 9)(x - .04)^3(x + 200)^6$

Where does the graph just touch and not cross the x-axis? -200
 because: $(x + 200)^6 \leftarrow$ even touches

Where does the graph cross thru the x-axis? .04
 because: $(x - .04)^3 \leftarrow$ odd crosses

What is the degree? 11
 because we add exponents $2 + 3 + 6 = 11$

How many imaginary roots? $11 - 9 = 2$ imaginary roots
 because of $(x^2 + 9)$



GROUP NAME:	Student Names (First and Last)
Date: _____	Speaker/Presenter: _____
Independent Variable (x-axis): _____	Writer/Prep: _____
Dependant Variable (y-axis): _____	Leader/Collaborator: _____

Conclusion (in words):

10

Supporting Work:

$$\log_4(x) + \log_4(1-x) = 2\log_4(5) \leftarrow$$

Property = 2

$$\log_4((x)(x-1)) = 2\log_4 5$$

Property = 7

$$\log((x)(x-1)) = \log_4(5^2)$$

$$\frac{\log_4((x)(x-1))}{\log_4 e} = \frac{\log_4(5^2)}{\log_4 e} \text{ Property = 4}$$

$$\ln((x)(x-1)) = \ln(5^2) \text{ property = 5..}$$

$(x)(x-1) = 25$ which answer makes sense? Why

$$x = -4.52... , 5.52$$

Answer: ~~max~~ = 4.52

$$\log(-5.52)$$

because $\log(x + 4.52)$

<p>GROUP NAME:</p> <p>Date: <u>05-8-4</u></p>	<p>Student Names (First and Last)</p> <p>Speaker/Presenter: _____</p>
<p>Independent Variable (x-axis): _____</p> <p>Dependant Variable (y-axis): _____</p>	<p>Writer/Prep: <u>LOVE KENNETH</u></p> <p>Leader/Collaborator: _____</p>

Conclusion (in words):



Supporting Work:

$$\text{Ex: } \log_4(-x) + \log_4(1-x) = 2\log_4(5)$$

Property: 2 Sum property

$$\log_4(x(x-1)) = 2\log_4(5)$$

Property 3

$$\log_4(x(x-1)) = \log_4(5^2)$$

$$\log_4(x(x-1)) = \log_4(5^2)$$

$$\log_4 e$$

$$\log_4 e$$

Property: 4

$$\ln(x(x-1)) = \ln(5^2)$$

Property: ~~algebra~~ algebra

$x(x-1) = 25$ which answer makes sense why?

$$x = (-4.52) \dots, 5.52$$

because the x is negative

$$\text{So } -x = -(-4.52)$$

$$= 4.52$$

Answer -4.52

GROUP NAME:	Student Names (First and Last)
Date: _____	Speaker/Presenter: _____
Independent Variable (x-axis): _____	Writer/Prep: <u>Marta Truszkowski</u>
Dependant Variable (y-axis): _____	Leader/Collaborator: _____

Conclusion (in words):

||

Supporting Work:

Determine the value of the 6 trig functions of the value $(\frac{5\pi}{7})$

$$\sin: .7818\dots$$

$$\cos: -.6234\dots$$

$$\tan: -1.253\dots$$

$$\frac{1}{\sin(\frac{5\pi}{7})} = \overset{\text{csc}(\frac{5\pi}{7})}{\cancel{\sin(\frac{5\pi}{7})}} = 1.279\dots$$

$$\frac{1}{\cos(\frac{5\pi}{7})} = \overset{\text{sec}(\frac{5\pi}{7})}{\cancel{\cos(\frac{5\pi}{7})}} = -1.6038\dots$$

$$\frac{1}{\tan(\frac{5\pi}{7})} = \overset{\text{cot}(\frac{5\pi}{7})}{\cancel{\tan(\frac{5\pi}{7})}} = -.7974\dots$$

GROUP NAME:	Student Names (First and Last)
Date: _____	Speaker/Presenter: _____
Independent Variable (x-axis): _____	Writer/Prep: <u>Kevin Leonard</u>
Dependant Variable (y-axis): _____	Leader/Collaborator: _____

Conclusion (in words):

12

Supporting Work:

12 A certain radiation amount is shown to have a half-life of 5000 years. Assuming exponential $P = Qe^{Rt}$ decay, what is the decay rate?

Math $P = 50$
 0: solve $Q = 100$
 $r = ?$
 $t = 5000$

$-0.0001386 = R$
 rate: $-1.386 \dots$

How long will it take 1000 radiation amount to drop to 250?

$P = 250$
 $Q = 1000$
 $R = -1.386 \dots$
 $t = ?$

time = 10,000

How OLD is an object that has dropped to 15% of its original 100% of radiation amount?

$15\% \times 1000$
 $P = 150$
 $Q = 1000$
 $R = -1.386 \dots$

$t = ?$
 time = ~~23,804.83~~
 $= 13604.8 \dots$