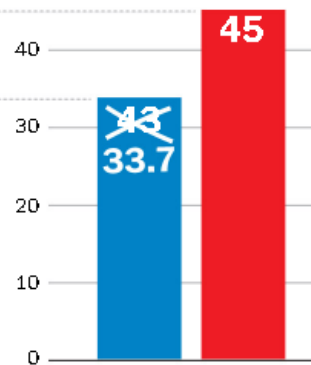


Happy Thursday, November 10th

Do Now: In a notebook write down one mathematical fact you saw/heard during the election.

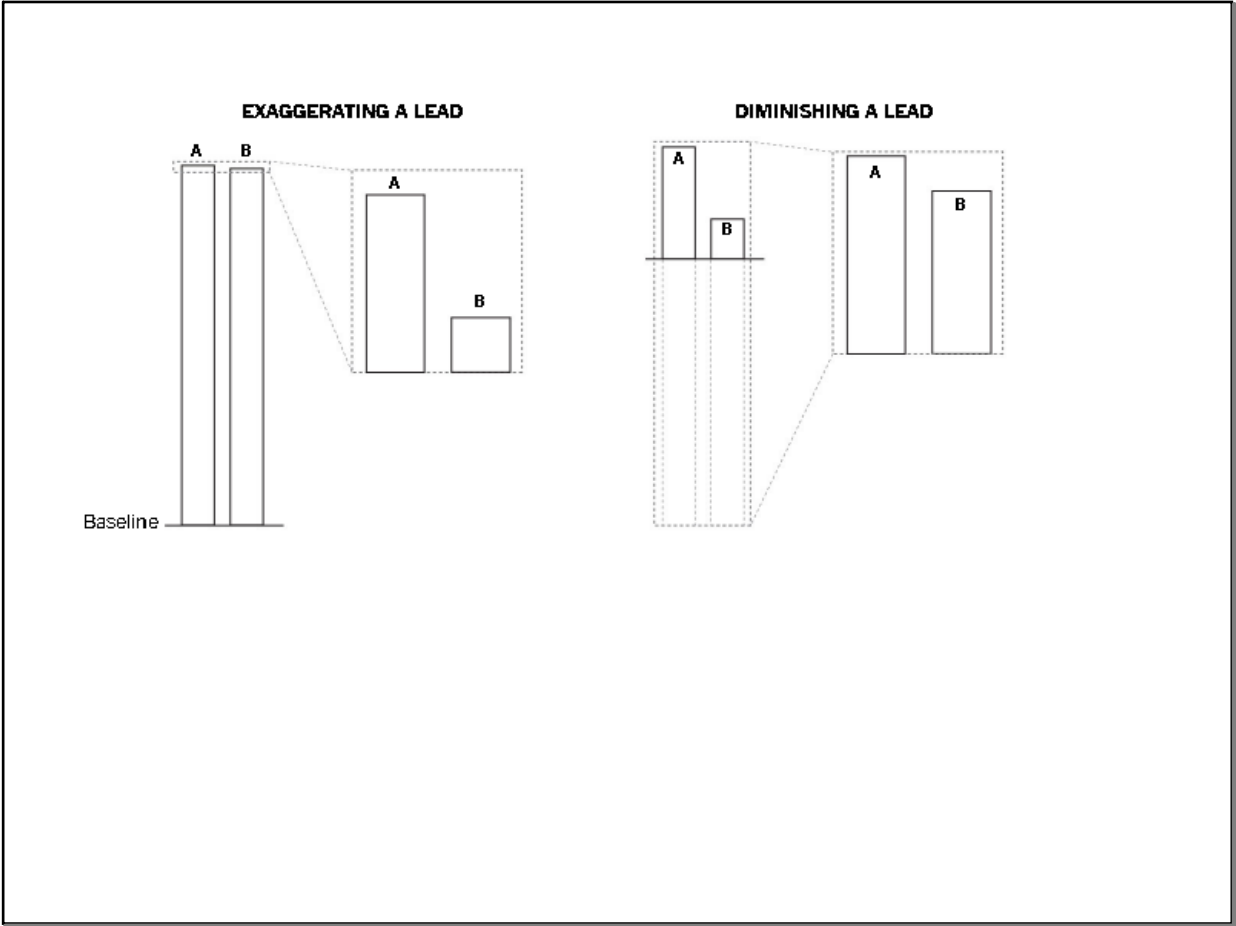
Please refrain from biased statements.

Nov 9-9:36 AM

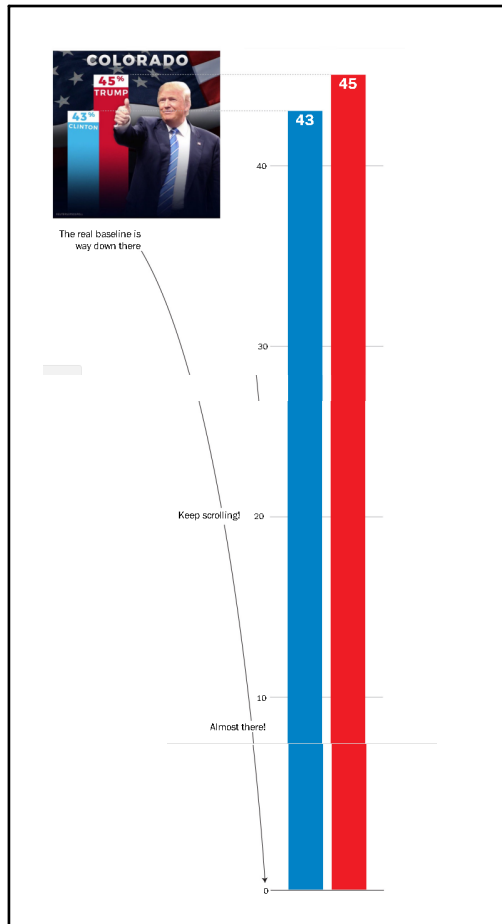


Graphics from here 

Nov 9-11:47 AM



Nov 9-11:50 AM



Nov 9-11:53 AM

- Logically study and analyze data presented by the media
- Be an informed consumer and citizen
- When arguing, argue respectfully and remember CER: Claim, Evidence, Reasoning.

Nov 9-8:46 PM

Now, what do you need to know for the quiz that you don't already know?

Don't worry about logistic equations. There was one on the review, don't worry about it.

Do worry about:

(get notes out and write because I'm being very kind and telling you exactly what to study).

Nov 9-8:51 PM

Non-calculator portion:

Graphing Exponentials. Make a table. Exponentials have horizontal asymptotes.

Graphing Logarithms. EITHER:

Make a table by changing it into exponential form and choosing y values.

Or think towards transformations.

Nov 9-8:52 PM

$$f(0) = \underline{3}$$

$$f(2) = 10$$

\downarrow \downarrow
 x y

$$Y = 3 \cdot \left(\sqrt{\frac{10}{3}}\right)^x$$

$$y = a \cdot b^x$$

$$y = 3 \cdot b^x \quad a \rightarrow y\text{-int}$$

$$10 = 3 \cdot b^2$$

$$\frac{10}{3} = b^2 \quad b = \sqrt{\frac{10}{3}}$$

Nov 10-12:25 PM

$f(0) = 4$
 $f(3) = 6$
 $y = 4 \cdot \left(\sqrt[3]{\frac{3}{2}}\right)^x$

$y = 4b^x$
 $6 = 4 \cdot b^3$
 $\sqrt[3]{\frac{6}{4}} = b$
 $\sqrt[3]{\frac{3}{2}} = b$

Nov 10-2:24 PM

Example: $y = 3 \log(x-2) + 1$

Think about:

$y = \log(x)$ $10^y = x$
 VA: $x = 0$
 x-int: $(1, 0)$
 Increase or Decrease?

$y - 1 = 3 \log(x - 2)$
 $\frac{y-1}{3} = \log(x-2)$
 $10^{\frac{y-1}{3}} + 2 = x$

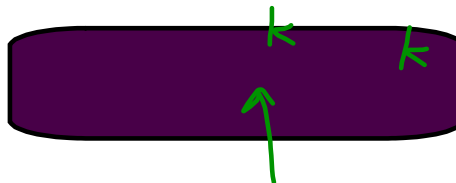
x	y
12	4
3	1

Right 2 (3,0)
 y-Stretch 3 (3,0)
 up 1 (3,1)

Nov 9-8:54 PM

Also, you **HAVE TO KNOW** how to condense and expand logs.

$$\log_b a - \log_b c = \log_b \frac{a}{c}$$



Nov 9-8:59 PM

Calculator Portion

You must have one that is charged!!!!

Nov 9-9:14 PM

Solving:

You have a packet with 42 problems to solve logarithms. There are also many videos on Khan academy. Use the strategies we have learned in class to solve.

Nov 9-9:15 PM

Equations

You will not need to know Newton's Law of Cooling.

You will need to know interest:

Continuously

$$A = Pe^{rt}$$

decimal
rate %
time
initial value
number ~ 2.71

Not continuously

$$A = P \left(1 + \frac{r}{n} \right)^{nt}$$

times per compound yr.

Nov 9-9:15 PM

Regression

Practice a few times. See me if you're still having trouble with this.

Nov 9-9:18 PM

Johnny Depp was working on a problem and solved it like this: $\log_2 x^2 - 3\log_2 2 = 10$

1. $\frac{\log_2 x^2}{\log_2 8} = 10$ $x=32768$

2. $\log_2 x^2 = 30$

3. $2^{30} = x^2$

Please find his error and explain how he should've done the problem.

Nov 9-9:19 PM

Miley Cyrus was working on the same problem and solved it like this: $\log_2 x^2 - 3 \log_2 2 = 10$

- $2^{10} = \frac{x^2}{8}$
1. $\log_2 \frac{x^2}{8} = 10$ $x = 1,099,511,628,000$
 2. $\log_2 x^2 = 80$ $\sqrt{\frac{x^2}{8}} = 2.8$
 3. $2^{80} = x^2$

Please find her error and explain how she should've done the problem.

Nov 9-9:19 PM

Anthony Rizzo was working on a problem and solved it like this:

$$.035 \quad \frac{3.5}{100} = .035$$

A bank is compounding interest continuously at a rate of 3.5%. If Schwarber puts \$50,000 in the bank to begin with, how much money will he have after 4 years?

$$A = 50,000e^{3.5*4} \quad A = 60,130,214,210$$

Schwarber will be rich with \$ 60,130,214,210 after 4 years!

Please find his error and explain how he should've done the problem.

Nov 9-9:19 PM

Shostakovich was working on a problem and solved it like this:

A bank is compounding interest quarterly at a rate of 3.5%. If Bach puts \$6 in the bank to begin with, how much money will he have after 8 years?

$$A = 6 \left(1 + \frac{.035}{4} \right)^{4 \cdot 8}$$

$$A = (6.0525)^{4 \cdot 8}$$

$$A = 10,517,524,680,000,000,000,000,000$$

5 (8)²
40²

Bach will be rich with \$ 10,517,524,680,000,000,000,000,000 after 8 years!

Please find his error and explain how he should've done the problem.

Nov 9-9:19 PM

$$10 = 3^x (4)^x$$

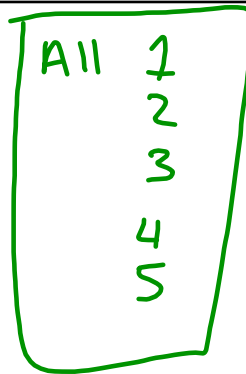
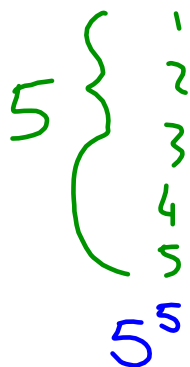
$$\frac{10}{3} = 4^x$$

$$\log_4 \frac{10}{3} = x$$

$$10 \neq 12^x$$

Nov 9-9:28 PM

5
120
20



- 11115
1151
11511
15111
51111

12345 5^C5
12354
12453

Nov 10-2:52 PM