

e and Natural Log
Lesson 29
4.18.16
Section 11.4,11.6

$$e = \sum_{n=0}^{\infty} \frac{1}{n!} = 1 + \frac{1}{1} + \frac{1}{1 \cdot 2} + \frac{1}{1 \cdot 2 \cdot 3} + \dots$$

This is a special value that occurs over and over in nature!

$$\log_e x = \ln x$$

Evaluate $\ln 300$
Use the calculator

$$X=5.703$$

We Try:

Evaluate $3\ln 150-20$

You try:
Evaluate $\ln 2-3$

I do: Solve for x
 $3 = 2e^x$

Isolate e	
Take ln to both sides	
Use a calculator to evaluate the logs	
Simplify	

We do:
 $10 - 3e^x = 5$

Isolate e	
Take ln to both sides	
Use a calculator to evaluate the logs	
Simplify	

You do:

$$-3e^x + 2 = -5$$

Isolate e	
Take ln to both sides	
Use a calculator to evaluate the logs	
Simplify	

Expand $\ln \frac{x^4 y}{3z}$

Exit Slip

1) Evaluate $\ln 250$

2) Solve for x
 $-2e^x + 3 = -8$

3) Expand $\ln \frac{2z^4 y}{3z^2}$