Quiz 2:

1.) Write as a single simplified logarithm:

$$ln(1)ln(3/5) + 2ln(3) - ln(e)ln(4) = \underline{\quad ln(9/4) \quad}$$

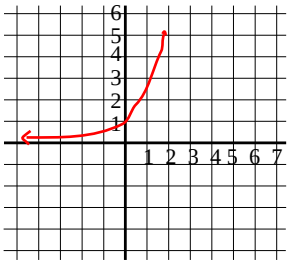
$ln(1)ln(3/5) + 2ln(3) - ln(e)ln(4)$

$= (0)ln(3/5) + ln(3^2) - (1)ln(4)$

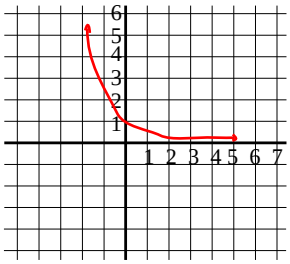
$= ln(9) - ln(4) = ln(9/4)$

2.) Graph the following

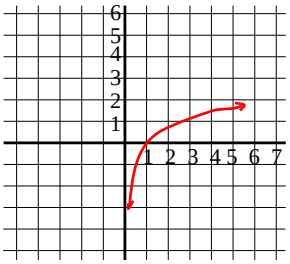
1a) $y = e^x$



(b) $y = e^{-x}$



(c) $y = ln(x)$



3.) Give an example of an initial value problem with multiple solutions.

$$y' = y^{1/3},\ y(0) = 0$$

4.) Define: A function f is linear if $f(ax + by) = af(x) + bf(y)$ where a, b are scalars (or real numbers or complex numbers for this class).