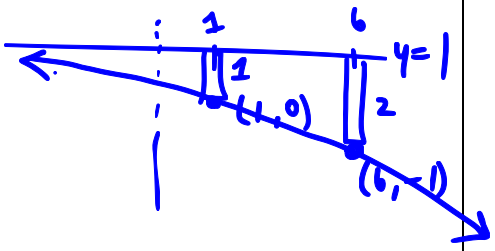
Exponential Cover Page; What I know and can do

Question	First Day	Last Day
What is a geometric sequence?		a list of #s where $a_{k+1} = r \cdot a_k$
What is a series?		the total of a sequence summed up $\sum a_k$
Is the following equal or not? $\sum_{k=1}^{n}(a_k+1) = 1 + \sum_{k=1}^{n} a_k$ (*reasoning*)		$\sum_{k=1}^{n}(a_k+1) = (a_1+1) + (a_2+1) + \dots + (a_n+1)$ $= \sum a_k + 1 + 1 + \dots + 1$ $\neq \sum a_k + 1$
What is Euler's number?		$e = 2.71828$ the natural base of exponential functions. ✱ slope + area + value are all the same
Sketch $f(x) = -2^{\frac{x-1}{5}} + 1$ (*communicating*)		

Question	First Day	Last Day
What is a logarithm?		The inverse of an exponential ie $\log x = ?$ asks $10^{?} = x$
Solve for x $2e^{-0.1(x+1)} + 3 = 4$ (*solving*)		$x = -10\ln\left(\frac{4-3}{2}\right) - 1$ $x = 10\ln 2 - 1$ $= 5.93\ldots$
What are the log laws analogous to?		exponential laws just switch inside to outside operations ★
Solve for x $\log x - 2\ln x = 1$ $c = \frac{1}{\log e}$ (*reasoning*)	$\frac{1}{\ln 10} = k$ $\log x - \frac{\log x^2}{\log e} = 1$ $\log x - \log x^{2c} = 1$ $\log x^{1-2c} = 1$ $x^{1-2c} = 10$ $x = 10^{\frac{1}{1-2c}} =$	$\log x - \ln x^2 = 1$ $\frac{\ln x}{\ln 10} - \ln x^2 = 1$ $\ln x^k - \ln x^2 = 1$ $\ln x^{k-2} = 1$ $x^{k-2} = e$ $x = e^{\frac{1}{k-2}} = 0.528$