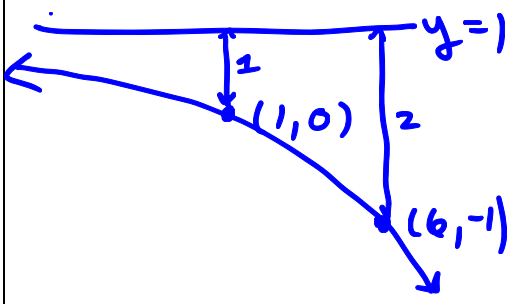
Exponential Cover Page; What I know and can do

Question	First Day	Last Day
What is a geometric sequence?		$(a_0 \cdot r^k)_{k=0}^{\infty}$ $a_{k+1} = r \cdot a_k$ ← previous term ordered list
What is a series?		a sum of a sequence $\sum a_k$
Is the following equal or not? $\sum_{k=1}^{n}(a_k + 1) = 1 + \sum_{k=1}^{n} a_k$ (*reasoning*)		$\sum(a_k+1) = a_1+1 + a_2+1 + \dots + a_n+1$ $= n + (a_1 + \dots + a_n)$ $\neq 1 + \sum a_k$
What is Euler's number?		$e = 2.71828\ldots \notin \mathbb{Q}$ e^x is inverse of $\ln x$ ~~*~~ slope + value + area all same
Sketch $f(x) = -2^{\frac{x-1}{5}} + 1$ $= -1 \cdot 2^{\frac{x-1}{5}} + 1$ (*communicating*)		

Question	First Day	Last Day
What is a logarithm?		$\log_b x = ? \Rightarrow b^? = x$ Inverse of an exponential
Solve for x $2e^{-0.1(x+1)} + 3 = 4$ (*solving*)		$x = -10\ln\left(\frac{4-3}{2}\right) - 1$ $= 10\ln 2 - 1$ $\approx 5.93\ldots$
What are the log laws analogous to?		☆ The exponent laws just swap inside & outside operations $\log(n \cdot m) = \log n + \log m$ $e^{(n \cdot m)} = (e^n)^m$
Solve for x $\log x - 2\ln x = 1$ (*reasoning*)		$\log x - \frac{\log x^2}{\log e} = 1$ $\log x - \log x^{\frac{2}{\log e}} = 1$ $\log x^{1-\frac{2}{\log e}} = 1$ $x = 10^{\frac{1}{1-\frac{2}{\log e}}}$