Thursday, November 3, 2016

3.2 Logistic & Half-Life Modeling

HW Check

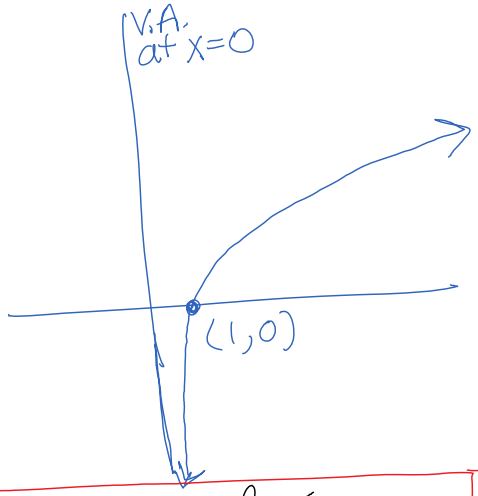
3.3 - Logs Review

(39) $B = 100e^{.693t}$

$200 = 100e^{.693t}$

3.3 Logarithms

$y = \log_b x$



[inverse of $y = a \cdot b^x$]

Exponential Form	Log Form
$y = b^x$ ← exponent	$\log_b y = x$ ← exponent
argument ↑, base ↑	base ↑, argument ↑

Common Logs: Base = 10

(calculator)

① $\log \frac{1}{10} = -1$

② $\log 50 \approx 1.7$

Natural Logs: Base = e

③ $\ln 1 = 0$ ($e^x = 1$)

④ $\ln 10 \approx 2.3$

$x = 0$

Tricky Ones

⑤ $4^{\log_4 5} = \boxed{5} =$ $\log_4 x = \log_4 5$

$x = 5$

⑥ $b^{\log_b x} = \boxed{x}$