Key

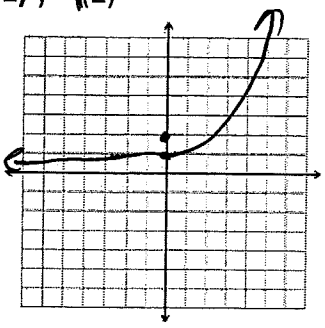
Exponential and Logarithms Intro Review

Graph the following.

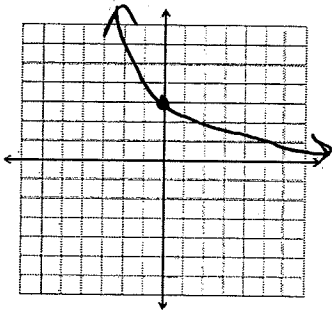
1

$y = -1.5(2)^x - 3$

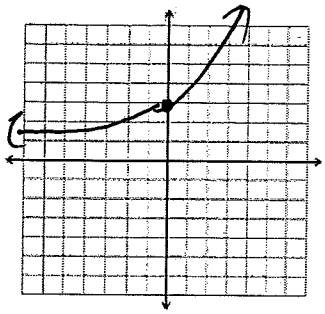
1) $y = (2)^x$



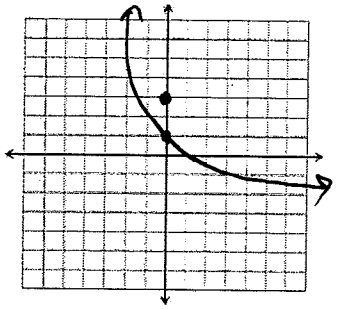
2) $y = 3(1/4)^x$



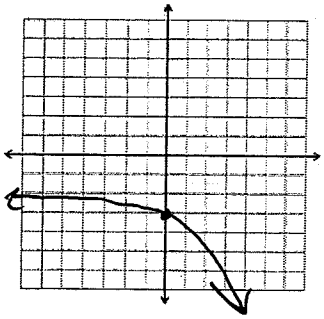
3) $y = 2(2)^x + 1$



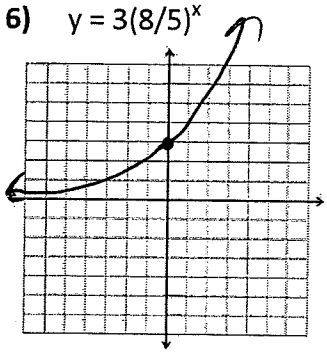
4) $y = 3(0.5)^x - 2$



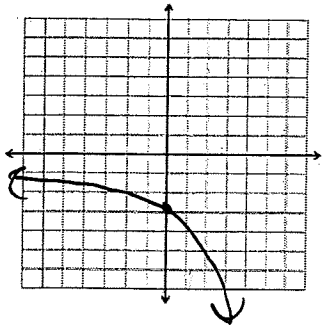
5) $y = -1(3)^x - 2$



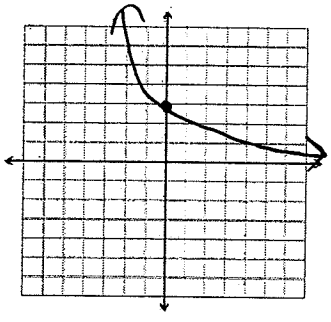
6) $y = 3(8/5)^x$



7) $y = -1.5(3.5)^x - 1$



8) $y = 3(4/5)^x$



Evaluate the following by using a calculator. (4)

16) e^2 17) e^{-3} 18) $e^{1.8}$

7.389 0.0498 6.05

Continuously compounded interest is found with $A = P \cdot e^{rt}$. Find the following. (5)

19) An account is compounded continuously with an interest rate of 2.2%. The principal amount is \$5000. How much is in the account after 7 years?

$A = P \cdot e^{rt} = 5000 \cdot e^{0.022 \cdot 7} = \$5832.45$

20) A man places \$200 into an account that is compounded continuously at a rate of 10% and forgets about it. 30 years later a broker reminds him of the account. How much is in the account?

$A = 200e^{0.1 \cdot 30} = \$4017.10$

21) Rewrite the following exponentials as logarithms. (6)

a) $125 = 5^3$ b) $121 = 11^2$ c) $10^4 = 10000$ d) $\left(\frac{1}{3}\right)^3 = \frac{1}{27}$

$\log_5(125) = 3$ $\log_{11}(121) = 2$ $\log_{10}(10000) = 4$ $3 = \log_{1/3}\left(\frac{1}{27}\right)$

22) Evaluate the following logarithms. MATH → ↑ → ↑

a) $\log_2 2$ b) $\log_8 64$ c) $\log_2 16$ d) $\log_5(-125)$

$= 1$ $= 2$ $= 4$ No Solution