

Math 80
Chapter 8 Review

1) Convert to Logarithmic form: $2^m = 18$

2) Without a calculator find the value of: $\text{Log}_8 1 + \text{Log}_2 8$

3) Solve the equation: $3^{(6-3x)} = \frac{1}{27}$

4) Solve: $\text{Log}_5 x = -2$

5) Solve: $\text{Log}(3x) = \text{Log}4 + \text{Log}(x-1)$

6) Solve the equation, give the answer to 4 decimal places: $2^{x+7} = 7$

7) Solve: $e^{2x} = 7$

8) Express as a single logarithm: $2\text{Log}_a m + \text{Log}_a n - 5\text{Log}_a p$

9) Expand the Log expression: $\text{Log}_k \frac{x+2}{y^3}$

10) Use a calculator to find the value of each: a) $5\text{Ln}8$ b) $-3e^4$ c) $\frac{\text{Log}8}{\text{Log}13} - 5$

11) Solve the equation: $\text{Log}_6(x^2) - \text{Log}_6(6x+7) = 0$

12) Graph the exponential function: $y = 2^x - 3$

13) Find the inverse $f^{-1}(x)$ given $f(x) = \frac{2x-5}{3}$

14) Given $f(x) = 3x - 6$ and $g(x) = x^2 + 3$ find $(f \circ g)(x)$ and $(g \circ f)(x)$

Answers Ch.8 Review

1) $\log_2 18 = m$

2) $0 + 3 = 3$

3) $x = 3$

4) $x = 1/25$

5) $x = 4$

6) $x = -4.1926$

7) $x = \frac{\ln 7}{2}$

8) $\log_a \frac{m^2 n}{p^5}$

9) $\log_k(x+2) - 3\log_k y$

10) a) 10.4 b) -163.8 c) -4.2

11) $x = 7, x = -1$

12) plot the points for the graph

X	Y
0	-2
1	-1
2	1
3	5
-1	-2.5
-2	-2.75
-3	-2.875

13) $f^{-1}(x) = \frac{3x+5}{2}$

14) $f \circ g(x) = 3x^2 + 3$ and $g \circ f(x) = 9x^2 - 36x + 39$