

2/9/15
~~10/30/15~~

Section 1: Write in Exponential Form

1. $\log_3 x = 9$
2. $\log_2 8 = x$
3. $\log_3 27 = x$
4. $\log_4 x = 3$

Section 2: Write the following in Logarithm form:

5. $y = 3^4$
6. $27 = 3^x$
7. $m = 4^2$
8. $32 = x^5$

Section 3: Solve the following for x

9. $64^x = 4096$
10. $9^{2x} = 27$

Section 4: Hint for #11 -14 we need to re-write in exponential form then solve:

11. $4 \log x = 4$
12. $\log x = 2$
13. $\log_3 x = 4$
14. **** BONUS **** $\log_m 81 = 4$

15. **EARTHQUAKES** An earthquake rated at 3.5 on the Richter scale is felt by many people, and an earthquake rated at 4.5 may cause local damage. The Richter scale magnitude reading m is given by $m = \log_{10} x$, where x represents the amplitude of the seismic wave causing ground motion. How many times greater is the amplitude of an earthquake that measures 4.5 on the Richter scale than one that measures 3.5?