

Geometry

Name \_\_\_\_\_

WS Logarithm Introduction

Period \_\_\_\_\_

1. What power do you raise four to, in order to get 16?  $(\log_4 16 = ?)$
2. What power do you raise ten to, in order to get 1000?  $(\log_{10} 1,000 = ?)$
3. What power do you raise 2 to, in order to get 64?  $(\log_2 64 = ?)$
4.  $\log_5 25 = ?$
5.  $\log_3 81 = ?$
6.  $\log_2 256 = ?$
7.  $\log_4 256 = ?$
8. What was the name of the actor that played the character that Lenny Kravitz played in "The Hunger Games"?
9. Evaluate  $4^{\odot}$ . If  $\odot$  is the exponent you give four to get 107.  $(4^{\log_4 107})$
10. There is a number you can put on 5 as an exponent so that 5 to that power is 100.  
Evaluate 5 to that exponent.  
 $5^{\log_5 100}$
11.  $10^{\log_{10} 10,000}$
12. What exponent do you raise 4 to in order to get  $4^3$ ?  $\log_4 4^3$
13. What exponent do you raise 8 to in order to get  $8^7$ ?  $\log_8 8^7$
14.  $\log_{12} 12^{51}$
15. If  $5^x = 5$ , then x is \_\_\_\_\_.  $\log_5 5$
16. Ten to some power is 612.  $\log 612$  type that in your Calculator.
17. Raise 10 to the power of <you answer to #16>. What do you get?