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Date _____
Algebra II

Evaluating Logarithms

Evaluate each of the following logarithms:

1. $\log_4 4$

$4^x=4$

1

2. $\log_{15} 1$

$15^x=1$

0

3. $\log_2 16$

$2^x=16$

4

4. $\log_3 27$

$3^x=27$

3

5. $\log_6 36$

$6^x=36$

2

6. $\log_4 64$

$4^x=64$

3

7. $\log_2 8$

$2^x=8$

3

8. $\log_5 125$

$5^x=125$

3

9. $\log_{10} 100000$

$10^x=100000$

5

10. $\log_7 \frac{1}{49}$

$7^x=\frac{1}{49}$

-2

11. $\log_2 \frac{1}{8}$

$2^x=\frac{1}{8}$

-3

12. $\log_{10} 0.1$

$10^x=\frac{1}{10}$

-1

13. $\log_6 216$

$6^x=216$

3

14. $\log_{11} \frac{1}{121}$

$11^x=\frac{1}{121}$

-2

15. $\ln e$

$e^x=e$

1

16. $\log_{\frac{1}{2}} \frac{1}{64}$

$\frac{1}{2}^x=\frac{1}{64}$

6

17. $\log_9 27$

$9^x=27$

$\frac{3}{2}$

18. $\log_4 32$

$4^x=32$

$\frac{5}{2}$