

Rewrite the exponential equation in logarithmic form.

1. $5^3 = 125$ _____

2. $6^{-2} = \frac{1}{36}$ _____

3. $e^x = 4$ _____

Rewrite the logarithmic equation in exponential form.

4. $\log_2 8 = x$ _____

5. $\log_5 625 = 4$ _____

6. $\ln 18 = x$ _____

Evaluate:

7. $\log_3 9 =$ _____ 8. $\log_{0.5} 4 =$ _____

9. $\log_9 9 =$ _____ 10. $\log_5 125 =$ _____

11. $\log_7 1/7 =$ _____ 12. $\log_4 1/2 =$ _____

Expand the expression using the properties of logs.

13. $\log_6 (6t)$

14. $\text{Log}(u^4 v^2)$

15. $\log_m \left(\frac{ab}{yw} \right)$

Condense the expression using the properties of logs.

16. $2 \log_5 2 + \log_5 6$

17. $\log_4 5 + \log_4 6 - \log_4 10$