

Properties of Logarithms II

Apply properties of logarithms to simplify.

1. $\log_4(4) - \log_5(5)$

8. $\ln(1) - \log(1)$

2. $\log_2(2) + \log_2(2^4)$

9. $\log(100000)$

3. $\ln(e) - \log(10)$

10. $\ln(e^x) + x$

4. $\log_8(8^x) - \log_a(a)$

11. $(\log_4(64))^5$

5. $8^{\log_8(5)} - \ln(e^2)$

12. $\log(100) + 4e^{\ln(2)}$

6. $\ln(e^6) - 3\log_9(81)$

7. $\log(1) + 10$

13. $\log(0) + 2$

$$14. 10^{\log(7y)} - \log_5(25)$$

$$18. \ln(e^{4x-3}) + \log(10^{x-9})$$

$$15. \frac{\ln(e^3) + \log(10000)}{\log_7(49)}$$

$$19. \log_4(16^x) - \log_6(36^x)$$

$$16. (\ln(e^x) - 1)(\log_{11}(11^x) + 1)$$

$$20. \frac{10(\log(10^{x^7}))}{5(\log_4(16^{x^2}))}$$

$$17. \frac{\log_2(64)}{\log_2(128)}$$