

Logarithms Practice

Evaluate each expression.

1. $n^{\log_n 3}$

2. $14^{\log_{14} 6}$

Use $\log_{10} 5 = 0.6990$ and $\log_{10} 7 = 0.8451$ to evaluate each expression.

3. $\log_{10} 35$

4. $\log_{10} \frac{7}{5}$

5. $\log_{10} 25$

6. $\log_{10} 490$

7. $\log_{10} \left(1 \frac{3}{7}\right)$

8. $\log_{10} 0.05$

Solve each equation.

9. $\log_6 x + \log_6 9 = \log_6 54$

10. $\log_8 48 - \log_8 w = \log_8 4$

11. $\log_7 n = \frac{2}{3} \log_7 8$

12. $\log_3 y = \frac{1}{4} \log_3 16 + \frac{1}{3} \log_3 64$

$$13. \log_9(3u+14) - \log_9 5 = \log_9 2u$$

$$14. \log_7 x + \log_7 x - \log_7 3 = \log_7 12$$

$$15. 4\log_2 x + \log_2 5 = \log_2 405$$

$$16. \log_6(2x-5) + 1 = \log_6(7x+10)$$

$$17. \log_{16}(9x+5) - \log_{16}(x^2-1) = \frac{1}{2}$$

$$18. \log_8(n-3) + \log_8(n+4) = 1$$

$$19. \log_6(3m+7) - \log_6(m+4) = 2\log_6 6 - 3\log_6 3$$

$$20. \log_2(2x+8) - \log_2(2x^2+21x+61) = -3$$