

SOLVING LOG EQUATIONS

Solve each equation. Round to four decimal places, if necessary.

1. $\ln(x + 1) = 4$

5. $\log_2(5x - 6) = \log_2(3x + 2)$

2. $\log_3(2x + 5) = 4$

6. $1 + \log_4(x - 1) = 1$

3. $\log(-4x - 7) = \log(-3x)$

7. $10 \log_2(x + 7) = 30$

4. $3^{2x} = 3^{x+4}$

8. $6^{-3x} = 6^{2x-25}$

9. $\ln(x + 3) = \ln(4x - 7)$

12. $5^{x-2} = 21$

10. $\log(x) + \log(4) = \log(28)$

13. $\log(5) + \log(x) = 2$

11. $\log(x) - \log(4) = 1$

14. $\log_3(-2x + 1) = 3$

$$15. \ln(21) = \ln(x) + \ln(3)$$

$$18. 4 = \log_5(x + 2)$$

$$16. 4^{x+2} = 13$$

$$19. \log_7(x + 3) - \log_7(3) = 1$$

$$17. \log(x) - \log(2) = 3$$

$$20. \log_5(5x^2) - \log_5(9) = 1$$

21. $\log_6(x^2 + 5) - \log_6(9) = 1$

22. $\ln(x) - \ln(1 - 5x) = 1$