

HOMEWORK: SOLVING LOG EQUATIONS PART 2

NAME: _____ DAY 6 DUE: _____

Solve each of the following equations. Check for extraneous solutions. Use your calculator to check your final answers.

1. $6^{3x-1} = 10^{x+7}$

2. $4^{4-x} = 9^{2x+1}$

3. $10^{x+5} = 5^{3x-4}$

4. $4^{x+3} = 8^{6-x}$

5. $2^{2x} + 4(2^x) - 12 = 0$

6. $16^{x-5} = \left(\frac{1}{2}\right)^{2x-1}$

7. $4^x = 11$

8. $2^x = 5$

Solve each of the following equations. Check for extraneous solutions. Use your calculator to check your final answers.

1. $\log_5(x^2 + x + 5) = 2$

2. $\log_3(x^2 + 1) = 2$

3. $2\log_3(x + 4) - \log_3(9) = 2$

4. $\log_{1/3}(x^2 + x) - \log_{1/3}(x^2 - x) = -1$

5. $\log_3(x - 1) - \log_3(x + 6) = \log_3(x - 2) - \log_3(x + 3)$

6. $\log_{16}(x) + \log_4(x) + \log_2(x) = 7$

7. $\log_2 x + \log_2(x + 4) - \log_2(x - 2) = 4$

8. $\ln(5x - 1) = 3$