

Name _____

Math 120/121 – Exponential and Logarithmic Equations

Solve the following equations:

1. $8^t = -6$

6. $12 = \log(4t)$

2. $17 = 3^x$

7. $-1 = \log(x+3)$

3. $4 = 15 - e^{x-8}$

8. $\log(x+3) = \frac{1}{2}$

4. $29 + 10^{t+12} = 74$

9. $1 = \log_4 2 + \log_4(3+x)$

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

10. $\log(t+3) + \log(t) = 1$

$$11. \log_2(t+1) + \log_2(t-1) = 5$$

$$15. \log_3(4t) = 1 - \log_3(3t)$$

$$12. -2 = \log(2) - \log(3+x)$$

$$16. \log_2(-x) = 3 - \log_2(2-x)$$

$$13. \ln(4t) - \ln(3t) = 2$$

$$17. e^{2x} - e^x - 6 = 0$$

$$14. \log_2(t+1) - \log_2(t-1) = 3$$

$$18. e^x + 29 = 12e^{\frac{x}{2}}$$