

Name: _____

Date: _____ Class: _____

Base "e" Assignment

Directions: Write each equation in logarithmic form.		
1. $e^3 = x$	2. $e^x = 36$	3. $e^{x-9} = 74$
Directions: Write each equation in exponential form.		
4. $\ln 53 = x$	5. $\ln x = 18$	6. $\ln 87 = x + 4$
Directions: Condense each expression as a single logarithm.		
7. $\ln 4 + \ln 3x$	8. $\frac{1}{2} \cdot \ln 256 - 3 \cdot \ln 2$	9. $7 \cdot \ln a - 4 \cdot \ln b$
Directions: Expand each logarithmic expression.		
10. $\ln(2m^8)$	11. $\ln\left(\frac{m^5}{n^2}\right)^3$	12. $\ln\sqrt{r^8s^5}$
Directions: Solve each equation. Be sure to check for extraneous solutions.		
13. $\ln(9x - 7) = \ln(5x + 33)$	14. $\ln(2x^2 - 15) = \ln(x^2 + 34)$	

15. $\ln 60 - \ln 4 = \ln(x^2 + 2x)$

16. $\ln 8 + \ln(n - 9) = 5 \cdot \ln 2$

17. $\ln(4w + 9) = 5$

18. $\ln k - \ln 14 = 2$

19. $e^x = 21$

20. $-2e^c + 14 = -6$

21. $e^{y-1} - 27 = 54$

22. $4e^{3k} + 1 = 85$

23. $e^{5-2p} + 2 = 4$

24. $3e^{4m-7} - 8 = 106$