

Log Worksheet #2 (Pre-Calc)

Name _____

Complete this worksheet without the use of a calculator.

Write as a single logarithm:

1. $\ln 9 + \ln 5$

2. $\ln 7 - \ln 20$

3. $\frac{1}{2}\ln 7 + 3\ln 5$

4. $\frac{1}{2}\ln 25 + \ln 2$

5. $\ln(x+5) - \ln x$

6. $\frac{1}{2}\ln 4 - \ln 2$

7. $\ln 7 + 5$

8. $8 - \ln 5$

9. $\ln 2 + \ln 5 - 3$

Solve for x .

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

11. $\log(x+3) + \log 2 = \log 20$

12. $\log_3 x - \log_3 4 = \log_3 12$

13. $\ln x + \ln(x+2) = \ln 8$

14. $2\log_3 x + \log_3 4 = 4$

15. $\ln x + \ln(x-3) = \ln 10$

16. $\ln x^2 = 10$

17. $\ln(2x+1) = 5$

18. $\ln \sqrt{x} = 3$

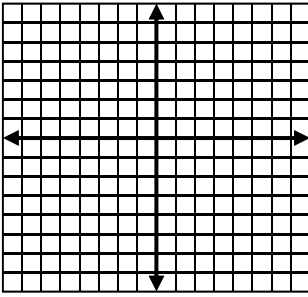
19. $\ln x + \ln 3 = 5$

20. $e^{-x} = 2$

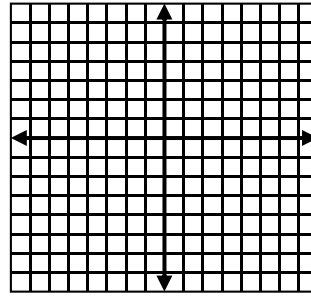
21. $e^{x+4} = 1$

Give the domain and range of each function and sketch the graph.

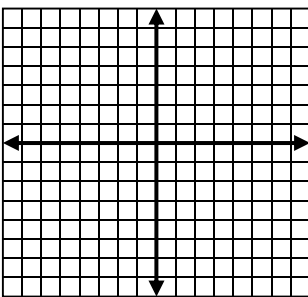
22. $f(x) = e^x$



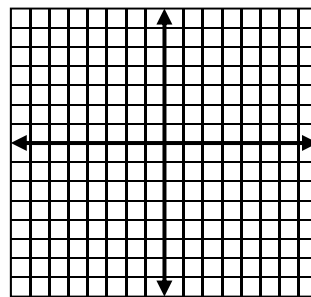
23. $f(x) = |\ln x|$



24. $f(x) = \ln(x + 2)$



25. $f(x) = \ln|x|$



Given $\log 2 = x$, $\log 3 = t$, $\log 10 = 1$, $\log 100 = 2$ find:

26. $\log 12$

27. $\log 216$

28. $\log \sqrt{50}$

29. $\log 150$

30. $\log \sqrt[3]{3}$

31. $\log 45^2$

32. $\log \frac{18}{5}$

38. $\log 300$

34. $\log .002$