

Pre-Cal CW 3.2-3.4 Simplifying and Solving Exponential and Logarithmic Functions

Given: $\log 2 = 0.3$, $\log 3 = 0.48$, $\log 5 = 0.7$

Use the given to find the numerical values for:

1. $y = \log 360$

Expand each expression using the properties of Logs:

2. $\ln \sqrt{\frac{5}{x^3 y}}$

Write each as a single log:

3. $2 \log x - \frac{1}{2} \log y + 3 \log z$

Simplify each:

4. $\log_3 243$

5. $\ln 8e^5$

6. $\log_{\frac{1}{8}} 64$

Solve each equation for x . For problems that require a calculator, leave final answer in terms of \log_{10} , \ln , or e :

7. $\log_5 27 = x$

8. $7^{2x-1} = 13$

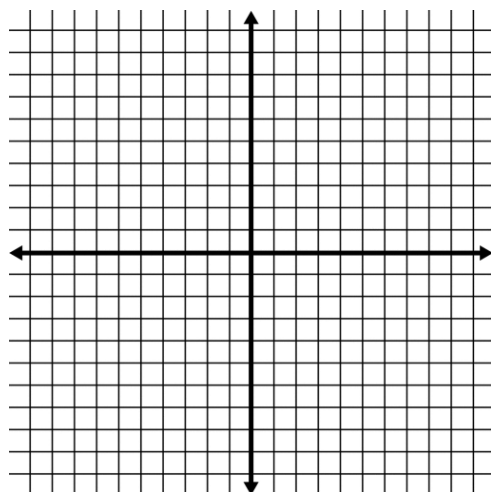
9. $2e^{5x+3} = 4$

10. $\log_4(2x-3) = 3$

11. $\log_2(x-3) + \log_2(x+3) = 4$

Graph each of the following:

12. $y = \log_3(x-1) - 3$



13. $y = -\log_5(3-x) + 2$

