

Solve each equation for x. You may use a calculator on #4-21, but you must show all work before using a calculator. Round your answer to the nearest thousandth.

1. $\log_2(\log_2(\log_2 16)) = x$

1

2. $\log(\log_2(\log_3 9)) = x$

0

3. $\log_4(\log_2(\log_2 16)) = x$

 $\frac{1}{2}$

4. $3^x = 12$

2.262

5. $4^x = 7$

1.404

6. $21^x = 7$

0.639

7. $e^{2x} = 4$

0.693

8. $e^{\frac{1}{2}x} = 6$

3.584

9. $e^x = 2$

0.693

10. $\ln x = 7$

1096.633

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

5.652

12. $\ln x = -5$

.007

13. $3e^{5x} + 2 = 7$

.102

14. $3e^{3x-2} + 4 = 12$

.994

15. $2e^{\frac{x}{3}} - 2 = 4$

3.296

16. $2^x = 7^{x-2}$

3.107

17. $3^x = 4^{x-1}$

4.819

18. $5^{x-1} = 7^{x+2}$

-16.350

19. $6\ln(4x) - 1 = 14$

3.046

20. $2\ln(x-2) + 3 = 10$

35.115

21. $\frac{\ln x}{4} + 2 = 3$

163.794