



Practice

6.5 Applications of Common Logarithms

Solve each equation. Round your answers to the nearest hundredth.

1. $5^x = 16$

2. $6^x = 5.5$

3. $2^x = 100$

4. $8^x = 12$

5. $3^x = 22$

6. $9^x = 0.35$

7. $5.5^x = 6$

8. $7^x = 0.8$

9. $3^{-x} = 0.2$

10. $12^x = 18$

11. $4.22^{2x} = 61$

12. $8.2^{x+1} = 55$

13. $\left(\frac{1}{2}\right)^{-x} = 17$

14. $14^x = 33.8$

15. $72^{2x} = 35$

Evaluate each logarithmic expression to the nearest hundredth.

16. $\log_7 30.6$

17. $\log_3 11$

18. $\log_2 13$

19. $\log_5 0.4$

20. $\log_4 83$

21. $\log_9 2.4$

22. $\log_6 8$

23. $\log_2 8.5$

24. $\log_4 6.1$

25. $\log_3 0.6$

26. $\log_8 0.32$

27. $\log_5 10$

28. $3 - \log_{\frac{1}{2}} 20$

29. $\log_{\frac{1}{4}} 9 + 5$

30. $1 - \log_7 25$
