Equazioni logaritmiche

1. $\log_{\frac{1}{3}} x = -3$

2. $\log_4 x = 2$

3. $\log_{\frac{1}{4}} x = \frac{3}{2}$

4. $\log x = 0{,}01$

5. $\log_{\frac{2}{3}} x = 1$

6. $\log_{\frac{2}{5}} x = -\frac{3}{4}$

7. $\log_{\frac{3}{8}} x = -2$

8. $\log_{\frac{8}{27}} x = -\frac{1}{3}$

9. $\log_{\sqrt{2}} x = -2$

10. $\log_{25} x = \frac{1}{2}$

11. $\log_{\frac{3}{4}} x = -\frac{3}{4}$

12. $\log_{\sqrt[4]{3}} x = 4$

13. $\log_{\frac{1}{2}} x = -\frac{2}{3}$

14. $\log_{\frac{4}{3}} x = 1$

15. $\log_{100} x = -\frac{1}{2}$

16. $\log_{0,8} x = -1$

17. $\log (\log x) = 2$

18. $\log_2 (\ln (x - 1)) = 1$

19. $\ln x = \frac{1}{2}$

20. $\ln (x + 1) = -2$

21. $\ln (3x - 4) = 0$

22. $\ln x = 2\ln 3x$

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

24. $\ln (x + 1) = 1 + \ln 2x$

25. $2 \log_a (x + 4) = \log_a (2 - x)$

26. $\log_a \sqrt{x - 3} = \frac{1}{2} \log_a (3x - 4)$

27. $2 \log_a \sqrt{3x} = \log_a (x^2 - 4)$

28. $\dfrac{\log_a (10 - x)}{\log_a (4 - x)} = 2$

29. $\log_a |3x - 1| = \log_a |x|$

30. $3 \log_2 (x + 2) - 3 \log_2 (2x - 1) + \log_2 4 - \log_3 9 = 0$

31. $\log_a (x - 5) + \log_a (x - 7) + \log_a 3 = 0$

32. $2 \log_a x + \log_a (x^2 + 1) = \log_a (3 - x^2)$

33. $2 \log_a (x - 1) + \log_a (x - 2) = \log_a (x^2 - 3x + 2)$

34. $\ln (x + 2) - \ln x = 2 \ln \frac{1}{2}$

35. $\log_2 (x + 2x^2) - \log_{\frac{1}{2}} \frac{1}{4} = 1$

36. $\log_5 (x - 2) + \log_5 (x^2 - 25) - \log_5 (x - 5) = 1$

37. $\frac{1}{2} \ln x = \ln 3 + \ln (6 - \sqrt{x + 16})$

38. $4 \left(\log_{\frac{1}{2}} x \right)^2 - 5 \log_{\frac{1}{2}} x + 1 = 0$

39. $(\log_3 x)^2 + \log_3 x - 12 = 0$

40. $\log_a^3 x - \log_a^2 x = 0$

41. $\ln^2 x - \ln x - 2 = 0$

42. $\ln^3 x - 4 \ln x = 0$

43. $\ln^2 x + \ln x - 6 = 0$

44. $\ln^2 x - \ln x^2 + 1 = 0$

45. $(\ln x)(\ln x^2) + \ln x^3 - 9 = 0$

46. $(\ln x)^3 - 4 (\ln x)^2 - 29 \ln x - 24 = 0$

47. $\dfrac{1 + \log x}{\log x - 1} - \dfrac{\log x + 3}{2 - 2 \log x} = \dfrac{11}{2}$

48. $\dfrac{4}{\log_9 x} - \left(2 - \dfrac{3}{\log_9 x} \right) - 2 \left(1 - \dfrac{1}{\log_9 x} \right) = 14$

49. $\dfrac{\log_a x + 3}{\log_a x - 3} - \dfrac{\log_a x - 3}{\log_a x + 3} = \dfrac{5 \log_a x}{\log_a^2 x - 9}$

50. $\left| \log_2 x + 3 \right| = 5$

51. $\sqrt{1 + \log_{\sqrt{2}} x} = 3$

52. $\log_{\frac{1}{3}} \log_{\frac{1}{3}} (5x + 9) = 0$

53. $(x^2 - 1) \, 2^{\log_2 (x - 2)} = \log_2 2^{x+1}$

54. $\ln^2 x + \ln x = 0$

55. $\ln^3 x + 2 \ln^2 x - 3 \ln x = 0$

56. $\left| 2 \ln x + 1 \right| = 4$

57. $\ln x = \log x$

58. $\ln \dfrac{x^2 - 1}{x} = \ln 2$

59. $\ln (e^x + e) = 2$

60. $\ln^2 x + 2 \left| \ln x \right| - 15 = 0$

61. $\sqrt{\ln x} = 1 - \ln x$