对数运算测试题

1. $\frac{\log_3\left(\frac{27}{\log_3 8}\right)}{\log_3 3}+\log_3\left(\frac{\log_3 8}{4}\right)+\log_3 4=$ _____

2. $\log_{(7+3)}\left(100(7+3)^2\right)-\log_{(7+3)}(7+3)^2=$ _____

3. $\frac{\log_{\left(2^{\log_2 10}\right)} 125}{\frac{\log_2 e^{\ln 5}}{\log_2(2\times5)}}=$ _____

4. $\log_{\left(2^{\log_2(4(2+3))-\log_2(2+3)}\right)}(2\times2)=$ _____

5. $\frac{\log_{((1+2)^2)} 10}{\log_{((1+2)^2)}\log_5 5^{10}}=$ _____

6. $\frac{1}{\log_{\left(\frac{e^4}{3\times3}\right)} e}+\frac{1}{\log_{(3\times3)} e}=$ _____

7. $\frac{\frac{\lg 1000}{\lg\left(\frac{6}{3}\times2\right)}}{\log_{\left(\frac{6}{3}\times2\right)} e^{\ln 10}}=$ _____

8. $\log\left(e^{\frac{\log_{(1+1)} 5}{\log_{(1+1)} e}}\right)(14+11)=$ _____

9. $\log_{\left(2^{\log_2 4}+1\right)}(5\log_2 9)-\log_{\left(2^{\log_2 4}+1\right)}\log_2 9=$ _____

10. $\log_3((5+4)(3+2+3-3))-\log_{\left(3^{\log_3 3}\right)}(3+2)=$ _____

11. $\frac{1}{2}\frac{\lg 5^2}{\frac{\log_{(2\times2)} e^{\ln 5}}{\log_{(2\times2)} 10}}=$ _____

12. $\frac{\log_{(2^3)} 2}{\log_{(2^3)}\left(\frac{2}{5}\right)+\log_{(2^3)} 5}=$ _____

13. $\frac{\frac{\log_3 10}{\log_3\left(\frac{1\times5+1\times5}{5}\right)}}{\log_{(1+1)}(8+2)}=$ _____

14. $\frac{\log_2 2}{\frac{1}{\log_{(1+4)}\left(\frac{75}{4}(\lg 2\lg 5+\lg^2 2+\lg 5)\right)}}=$ _____

15. $\lg\left(\frac{236+764}{10^3}\right)+\frac{\log_{(3^2)} 10^3}{\log_{(3^2)} 10}=$ _____

16. $\frac{1}{\log_{(3\times9)}\left(\frac{3}{3\times3}\right)+\log_{(3\times9)}(3\times3)}=$ _____

17. $\frac{\log_3\left(64\frac{1}{4}\right)}{\log_3 4} - \log_4\left(\frac{1}{4}\times 4^3\right) - \log_4 4^3 =$ _____

18. $\log_{(2+3)}\left(\frac{25}{(2+3)^1}\right) + \log_{(2+3)}(2+3)^1 =$ _____

19. $\frac{\log_2(3\times 3)}{\log_{\left(2(\lg 2\lg 5+\lg^2 2+\lg 5)\right)} 3^{\log_3 3}} =$ _____

20. $\log_5\left(5\left(\lg 2\lg 2+\lg 5\lg 5+2\lg 5\lg 2\right)\frac{1}{4}\right) - \log_5\left(\frac{1}{4}\right) =$ _____

21. $\frac{\frac{\log_3 e^{\ln 16}}{\log_3 3}}{\frac{\log_{(2^2)} 2}{\log_{(2^2)} 3}} =$ _____

22. $\frac{\log_5(9\times 4)}{\log_5 3} - \log_3\left(\frac{4}{3\times 3}\right) + \log_3(3\times 3) =$ _____

23. $\frac{\log_5\left(5^{\log_5 4}\times 5^3\right) - \log_{\left(\frac{15}{2}\right)} 5^3}{\frac{\ln 2}{\ln 5}} =$ _____

24. $\frac{\frac{\lg 10^{\lg 10}}{\lg\left(2^2(3+2)\right)-\lg(3+2)}}{\frac{1}{\lg 2^2}} =$ _____

25. $\log_2\left(\frac{2^{\frac{\log_2 5^{\log_5 2}}{\log_2 2}}}{3\times 2}\right) + \log_2(3\times 2) =$ _____

26. $\frac{1}{\log_{\left(\frac{3000\times 1}{4\times 1}\times 2\right)}\left(\frac{40}{3}\right)} - \log_{\left(\frac{40}{3}\right)} 2 =$ _____

27. $\log_{\left(2^{\log_2 2}\right)}(4(1+1)) - \log_{\left(2^{\log_2 2}\right)}(1+1) =$ _____

28. $\log_{\left(3\left(\lg 2\lg 5+\lg^2 2+\lg 5\right)\right)}(9+1)^{\log_{\left(10^{\lg 10}\right)} 9} =$ _____

29. $\frac{\frac{1}{3}\lg\left(e^4\right)^3}{\frac{\lg 10}{5}\frac{\lg e^5}{\lg 3^{\log_3 10}}} =$ _____

30. $5\log_{\left(\frac{15}{4}\right)}\left((12+13)\frac{1}{2}\right)^{\frac{1}{5}} - \log_5\left(\frac{1}{2}\right) =$ _____

31. $\frac{1}{\log_{\left(1+\frac{8}{3}\right)}\left(5\frac{1}{3}\right)-\log_{\left(1+\frac{8}{3}\right)}\left(\frac{1}{3}\right)} =$ _____

32. $\frac{\frac{\log_{(1+1)} 3^{\log_3 3}}{\log_{(1+1)}(1+1)}}{\log_{(1+1)} 3} =$ _____

33. $\frac{\lg\left(\frac{64}{2}\right)+\lg 2}{\frac{\frac{1}{4}\lg 4^4}{\frac{1}{\log_{\left(2^{\log_2 10}\right)} 10}}} =$ _____

34. $\frac{1}{3}\log_{(\log_2 4)}(8\times 2^1)^3 - \frac{1}{\log_{(2^1)}\log_2 4} =$ _____

35. $\log_{\left(3^{\log_3 5}\right)}\left(125(3+2)^1\right) - \log_{(2+3)}(3+2)^1 =$ _____

36. $\frac{\lg\left(\frac{32\times2}{3\times3}\right)+\lg(3\times3)}{\frac{2\log_2 4^{\frac{1}{2}}}{\log_2 10}} =$ _____

37. $\log_{\left(e^{\ln 5}\right)}\left(\frac{1}{5}\log_5\left(\left(\frac{20}{2}\right)^{493+132}\right)^5\right) =$ _____

38. $\frac{\log_{\left(10^{\lg 5}\right)}(3\times8)-\log_{\left(10^{\lg 5}\right)}8}{\frac{1}{4}\log_5 3^4} =$ _____

39. $\frac{\log_7\left(\frac{4}{\log_2 8}\right)+\log_7\log_2 8}{\log_7\left(\frac{4}{7^3}\right)+\log_7 7^3} =$ _____

40. $\log_{\left(\frac{8}{2}+6\right)}\left(\frac{40000}{2}\frac{1}{4}\right)-\log_{\left(\frac{8}{2}+6\right)}\left(\frac{1}{4}\right) =$ _____

41. $\frac{1}{3+2}2\log_{\left(9+e^{\ln 1}\right)}\left(\left(e^{\ln 1000}\right)^5\right)^{\frac{1}{2}} =$ _____

42. $\frac{\log_2(3(2+\log_2 4))}{\frac{\lg 3}{\lg 2}}-\log_{(2+1)}(2+\log_2 4) =$ _____

43. $2\log_2\left(2\left(1+1+3\right)\right)^{\frac{1}{2}}-\log_2\left(\frac{1+1+3}{2^3}\right)+\log_2 2^3 =$ _____

44. $\frac{\frac{1}{\log_{10000}2}\times1^2}{\frac{\log_{\left(2^2\right)}10}{\log_{\left(2^2\right)}2}\times1^2} =$ _____

45. $\frac{\log_{(2\times2\times1)}3}{\log_{(2\times2)}(3\times8)-\log_{(2\times2)}8} =$ _____

46. $\frac{\log_{(2\times2)}(2\times6)-\log_{(2\times2)}6}{\log_{(2\times2)}\log_3 9} =$ _____

47. $\frac{\lg\left(10\times10^4\right)-\frac{1}{\log_{\left(10^4\right)}10}}{\lg(10\log_5 9)-\lg\log_5 9} =$ _____

48. $\log_5\left(\frac{5\times5}{\log_3 8}\right)+\log_5\left(\frac{\log_3 8}{3\times2}\right)+\log_5(3\times2) =$ _____

49. $\frac{5\log_5\left(\frac{500}{3}\right)^{\frac{1}{5}}}{\frac{1}{\log\left(5^{\log\left(5^{\log_5 5}\right)^5}\right)^5}} =$ _____

50. $\frac{\frac{1}{\log_{\left(e^4\right)}(2+3)}\log_2 2}{\log_{\left(3^{\log_3 5}\right)}e\log_2 2} =$ _____

51. $\frac{\log_3(81(1+3+3-3))}{\log_3(1+2+0\times2)}-\log_{(1+2)}(1+3) =$ _____

52. $\frac{\ln(2\times2)-\ln 2}{\frac{\log_{\left(3^2\right)}(2\log_2 2)}{\log_{\left(3^2\right)}e}} =$ _____

53. $2\frac{\log_{(2\times2)}\left(e^{\ln 3}\right)^{\frac{1}{2}}}{\log_{(2\times2)}\left(\frac{12}{3}\right)} =$ _____

54. $\ln\left(\frac{\mathrm{e}^{\mathrm{e}^{\ln 2}}}{\frac{2\times 3}{\mathrm{e}^1}}\right)+\ln \mathrm{e}^1+\ln(2\times 3)=$ _____

55. $\frac{\log_{(1+1)}\left(\log_5\left(\frac{5^{16}}{\log_2 8}\right)+\log_5\log_2 8\right)}{\log_{(1+1)}4}=$ _____

56. $\frac{\log_2\left(10000\times 2^1\right)-\log_2 2^1}{\log_2\left(5^{\log_5 10}\log_3 8\right)-\log_2\log_3 8}=$ _____

57. $\frac{\log_3\left(\frac{4}{\frac{9}{4}\times 2}\right)}{\log_3\left(\frac{4}{4}\right)+\log_3 4}+\log_4\left(\frac{9}{4}\times 2\right)=$ _____

58. $\frac{\frac{1}{\log_{\left(\mathrm{e}^4\right)}10}}{\frac{\lg(2\times 2)}{\log_2 \mathrm{e}}}=$ _____

59. $\frac{1}{\frac{\log_{(1+1)}\mathrm{e}}{\log_{(1+1)}\mathrm{e}^{4(\lg 2\lg 2+\lg 5\lg 5+2\lg 5\lg 2)}}}=$ _____

60. $\log_5\left(6255\left(\lg 2\lg 5+\lg^2 5+\lg 2\right)\right)-\log_5\left(\frac{5}{2\times 2}\right)+\log_5(2\times 2)=$ _____

61. $\frac{\frac{\log_{(2\times 2)}((95+161)\times 5)}{\log_{(2\times 2)}4}\times 4-\log_4 5\times 4}{4}=$ _____

62. $\log_4\left(\frac{16}{\log_2(8\log_3 9)-\log_2\log_3 9}\right)+\log_4\log_{(\log_3 9)}2^{\log_2 8}=$ _____

63. $\frac{\frac{\log_2 \mathrm{e}^{2\log_2 2}}{\log_2 3}}{\frac{\frac{1}{\ln 5}}{\log_5\left(\frac{3}{\log_3 4}\right)+\log_5\log_3 4}}=$ _____

64. $\frac{\ln\left(\frac{16}{4}\right)}{\frac{\log_{\left(2^2\right)}(1+\log_2 5+\log_5 2)}{\log_{\left(2^2\right)}\mathrm{e}}}=$ _____

65. $\frac{\log_{\left(3^{\log_3 5}\right)}4}{\log_5\left(\frac{2(\lg 2\lg 2+\lg 5\lg 5+2\lg 5\lg 2)}{5}\right)+\log_5 5}=$ _____

66. $\log_3\left(\frac{2^{\log_2 3}\frac{\log_7 16}{\log_7 2}}{3^1}\right)+\log_3 3^1-\log_3\left(\frac{\lg 16}{\lg 2}\right)=$ _____

67. $\frac{\ln\left(5^{\log_5 1000}\log_2 4\right)-\ln\log_2 4}{\ln\left(\frac{2\times 15}{4}(3+2)\right)-\ln(3+2)}=$ _____

68. $\log_{\left(5^{\log_5 4}\right)}\left(\frac{64\times 9}{\log_3 8}\right)+\log_{\left(5^{\log_5 4}\right)}\log_3 8-\frac{1}{\log_9 4}=$ _____

69. $\log_5\left(5^{\log_5 25}\left(\mathrm{e}^{\ln 5}\right)^3\right)-\frac{1}{\log_{\left(\left(\mathrm{e}^{\ln 5}\right)^3\right)}5}=$ _____

70. $\ln\left(\frac{\mathrm{e}^4}{\frac{5(\lg 2\lg 2+\lg 5\lg 5+2\lg 5\lg 2)}{2\times 3}}\right)+\ln(2\times 3)+\ln 5=$ _____

71. $\frac{\log_5\left(\mathrm{e}^4\log_5(2\times 8)\right)}{\log_5 \mathrm{e}}-\ln\left(\frac{\lg(2\times 8)}{\lg 5}\right)=$ _____

72. $\frac{\log_{\left(\frac{12}{2}\right)}\left(\frac{64}{\log_3 8}\right)+\log_{\left(\frac{12}{2}\right)}\log_3 8}{\log_3(2+\log_3 9)} = \_\_\_\_\_$

73. $\log_3\left(\frac{3^{\frac{2^{\log_2 1}}{3}\frac{3}{3}}}{\log_2 4}\right)+\log_3\log_2 4-\log_3\left(\frac{2^{\log_2 1}}{3}\right) = \_\_\_\_\_$

74. $\log_{\left(\frac{8}{3}\right)}\left(\frac{4}{5}\right)+\log_{\left(\frac{8}{3}\right)}\left(5\log_5 9\right)-\log_{\left(\frac{8}{3}\right)}\log_5 9 = \_\_\_\_\_$

75. $\frac{\frac{\log_7 e^{\frac{12}{3}}}{\frac{\log_7 3}{\log_3 3}}}{\frac{\log_{(3^2)} e}{\log_{(3^2)} 3}} = \_\_\_\_\_$

76. $\log_2(8\times 5\log_2 9)-\log_2\log_2 9-\log_{(\log_2 4)}\left(\frac{5}{4}\right)+\log_{(\log_2 4)} 4 = \_\_\_\_\_$

77. $\frac{\lg\left((1+1+2-2)^{\frac{1}{5}}\right)^5}{\frac{\log_{(3^2)} 3^{\log_3 2}}{\log_{(3^2)} 10}} = \_\_\_\_\_$

78. $\log_4\left(\frac{4}{2\log_2 2(2+1)}\right)+\frac{\lg(2\log_2 2(2+1))(2-1)}{\lg 4(2-1)} = \_\_\_\_\_$

79. $\frac{\frac{\ln 8}{\ln 3^{\log_3 10}}}{\frac{\log_{(3^2)}\log_3\log_2 2^9}{\log_{(3^2)} e^{\ln 10}}} = \_\_\_\_\_$

80. $\log_2\left(\frac{\frac{8}{3}}{3(1+2)}\times 2^2\right)-\log_2 2^2+\log_{\left(\frac{8}{2}\right)}(3(1+2)) = \_\_\_\_\_$

81. $\frac{\frac{\log_5(27(1+2))-\log_5(1+2)}{\log_5\left(\frac{8}{2}\right)}}{\frac{1}{2^{\log_2 3}}\log_2 3^3} = \_\_\_\_\_$

82. $\frac{1}{5}\frac{\frac{1}{\log\left(\left(e^{3^{\log_3 3}}\right)^5\right)^3}}{\log_3(e\log_3 8)-\log_3\log_3 8} = \_\_\_\_\_$

83. $\frac{1}{\log_{\left(\frac{3}{5^{\log_5 6}}\right)}(3(\lg 2\lg 2+\lg 5\lg 5+2\lg 5\lg 2))}+\log_{\left(10^{\lg 3}\right)} 6 = \_\_\_\_\_$

84. $\ln\left(\frac{e^4(3+1)}{\log_3 4}\right)+\ln\log_3 4-\frac{\log_7\left(\frac{3\times 3+1\times 3}{3}\right)}{\log_7 e} = \_\_\_\_\_$

85. $\frac{\log_2(\log_2 2+\log_2 2)}{\frac{1}{\log_{\left(\frac{2}{3\times 2}\right)}(1+1)}+\log_{(1+1)}(3\times 2)} = \_\_\_\_\_$

86. $\frac{\log_3\left(\frac{3}{\left(\frac{12}{4}\right)^2}\right)}{\log_3\left(\frac{12}{4}\right)}+\log_{\left(\frac{12}{4}\right)}\left(\frac{12}{4}\right)^2 = \_\_\_\_\_$

87. $\frac{\log_{(2^2)}\left(93\left(\lg 2\lg 5+\lg^2 5+\lg 2\right)\times 6\right)-\log_{(2^2)} 6}{\log_{(2^2)} 3} = \_\_\_\_\_$

88. $\frac{\frac{1}{5}\log_6 4^5}{\frac{1}{3}\log_6\left((1+1)^{\frac{\log_{(2^3)} 4}{\log_{(2^3)} 2}}\right)^3} = \_\_\_\_\_$

89. $\frac{\frac{\log_{(1+1)}(\mathrm{e}\times 4)}{\log_{(1+1)}2}}{\frac{\log_3 \mathrm{e}}{\log_3 2}} - \frac{\log_7 4}{\log_7 \mathrm{e}} = \_\_\_\_\_$

90. $\frac{\frac{1}{4}\log_3\left(\mathrm{e}^2(2+3)\right)^4}{\log_3\left(\frac{\mathrm{e}}{\log_2 9}\right)+\log_3\log_2 9} - \ln(2+3) = \_\_\_\_\_$

91. $\log\left(10^{\frac{\log_6 3}{\log_6 5^{\log_5 10}}}\right)\left(\frac{3}{6}\right) + \log\left(10^{\frac{\log_6 3}{\log_6 5^{\log_5 10}}}\right)6 = \_\_\_\_\_$

92. $4\log_{\left(10^{\lg 2}\right)}\left(\frac{8}{2\times 2}\right)^{\frac{1}{4}} + \frac{\frac{1}{\log_{(2\times 2)}5}}{\frac{\log_3 10^{\lg 2}}{\log_3 5}} = \_\_\_\_\_$

93. $\log_3\left(\frac{2+1}{23(\lg 2\lg 2+\lg 5\lg 5+2\lg 5\lg 2)}\right)+\log_3\left(23\left(\lg 2\lg 2+\lg 5\lg 5+2\lg 5\lg 2\right)\right) = \_\_\_\_\_$

94. $\log_3\left(\frac{10^{\log_{(2\times 5)}(9\log_2 4)-\log_{(2\times 5)}\log_2 4}}{3\times 3}\right)+\log_3(3\times 3) = \_\_\_\_\_$

95. $\frac{\log_2 125}{\frac{\log_5 5}{5\log_{(5(\lg 2\lg 2+\lg 5\lg 5+2\lg 5\lg 2))}\left(\frac{1}{4}\log_5 254\right)^{\frac{1}{5}}}} = \_\_\_\_\_$

96. $\frac{\log_2\left(\frac{5\times 25}{5^{2\log_2 2}}\right)}{\log_2(2+3)} + \log_5\left(\frac{5^{2\log_2 2}}{\log_2 4}\right) + \log_5\log_2 4 = \_\_\_\_\_$

97. $\frac{\log_5(25(2+3))-\log_5(2+3)}{\log_5\left(\frac{5\log_3 3}{5^3\log_3 3}\right)+\frac{\log_5 5^3}{\log_5 5}} = \_\_\_\_\_$

98. $\frac{\log_{(2\times 2\times 1)}27}{\log_{(2\times 2)}\left(\frac{3\left(\lg 2\lg 5+\lg^2 2+\lg 5\right)}{6}\right)+\log_{(2\times 2)}6} = \_\_\_\_\_$

99. $\log_4\left(256\log_5(2\times 4)\right) - \frac{\frac{\log_2(\log_5(2\times 4\log_5 8)-\log_5\log_5 8)}{\log_2 5}}{\log_5 4} = \_\_\_\_\_$

100. $\frac{\frac{\log_3(11+16)}{\log_2\left(\frac{10}{4}\right)}}{\frac{\frac{\log_2 3}{\log_3\log_3 3}}{\frac{1}{3}\log_{\left(2^{\log_2 3}\right)}5^3}} = \_\_\_\_\_$ 参考答案

3; 2; 3; 1; 1; 4; 3; 2; 1; 2

1; 1; 1; 2; 3; 3; 3; 2; 2; 1

4; 2; 2; 1; 1; 3; 2; 2; 4; 2

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4; 3; 1; 1; 4; 3; 1; 1; 3; 2

3; 3; 1; 4; 1; 1; 3; 1; 1; 2

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