

对数运算测试题

$$1. \frac{\log_3(2 \times 5)}{\frac{\log_{(2^3)^{10}}}{\log_{(2^3)}^{(1+2)}}} = \underline{\hspace{2cm}}$$

$$2. \frac{\log_2 e^3}{\frac{\lg 10}{\ln(3^{\log_3 2}(2+1)) - \ln(2+1)}} = \underline{\hspace{2cm}}$$

$$3. \frac{\log_{(2^3)} 125}{\log_{(2^3)}\left(\frac{5}{2}\right) + \log_{(2^3)} 2} = \underline{\hspace{2cm}}$$

$$4. \frac{\log_3(5^{\log_5 625}(3+3)) - \log_3(3+3)}{\frac{\log_2 5}{\log_2 3}} = \underline{\hspace{2cm}}$$

$$5. \frac{\log_{(\log_2 2 + \log_2 2)} 256}{\frac{\log_{(2 \times 2)} 4}{\log_{(2 \times 2)} 2}} = \underline{\hspace{2cm}}$$

$$6. \frac{\frac{1}{\log(e^{1+3})^5}}{\frac{\log(1+1) e}{\log(1+1)^5}} = \underline{\hspace{2cm}}$$

$$7. \log_5\left(\frac{\log_5 5}{2 \times 3} \times 3\right) - \log_5 3 + \log_5(2 \times 3 \times 2) - \log_5 2 = \underline{\hspace{2cm}}$$

$$8. \frac{\frac{1}{\log(3^{\log_3 81})^5}}{\frac{\log(2^2)^3}{\log(2^2)^5}} = \underline{\hspace{2cm}}$$

$$9. \log_4(4 \times \frac{1}{3}(2+3)) - \log_4(2+3) - \log_4 \log_3 3^{\frac{1}{3}} = \underline{\hspace{2cm}}$$

$$10. \frac{\log_5(3^{\log_3 4 \times \frac{1}{3}}) - \log_5\left(\frac{1}{3}\right)}{\log_5(1+3)} = \underline{\hspace{2cm}}$$

$$11. \frac{2^{\log_2 1}}{\log_{10000}\left(\frac{e^{\ln 10}}{3 \times 2}\right) + \log_{10000}(3 \times 2)} = \underline{\hspace{2cm}}$$

$$12. \frac{\log_2\left(\frac{\frac{9}{4}}{2 \times 10^{\lg 3}}\right)}{\log_2 3} + \log_3(2 \times 10^{\lg 3}) = \underline{\hspace{2cm}}$$

$$13. \frac{\log_3(2(\log_2\left(\frac{2}{2 \times 2}\right) + \log_2(2 \times 2)))}{\log_3 2} = \underline{\hspace{2cm}}$$

$$14. \frac{\ln 5^{\log_5(10(\lg 2 \lg 5 + \lg^2 2 + \lg 5))}}{\ln(5^{\log_5 3} + 7)} = \underline{\hspace{2cm}}$$

$$15. \ln\left(e^{\frac{12}{2}} \log_3 10^{\lg 9}\right) - \ln\left(\frac{\log_3 10^{\lg 9}}{\log_3 3}\right) = \underline{\hspace{2cm}}$$

16. $\frac{\frac{1}{\log(3(1+2)^3)^3}}{\frac{\log_3 3}{\log_3 3}} - \log_3 (1+2)^3 = \underline{\hspace{2cm}}$

17. $\frac{3^{\log_3 1}}{5} \times \frac{1}{2} \log_5 \left(\left(3^{\log_3 125} \right)^{3^{\log_3 5}} \right)^2 = \underline{\hspace{2cm}}$

18. $\frac{\frac{1}{\log_{27}(1+1)}}{\frac{\log_{(2\times 2)} 3}{\log_{(2\times 2)} (1+1)}} = \underline{\hspace{2cm}}$

19. $(1+2) \frac{\log_{(3^2)} \left(5^{\log_5 27} \right)^{\frac{1}{3}}}{\log_{(3^2)} 3} = \underline{\hspace{2cm}}$

20. $\frac{1}{\log_{(e^{\ln 125})} (5 \log_5 16) - \log_{(e^{\ln 125})} \log_5 16} = \underline{\hspace{2cm}}$

21. $\log_3 \left(\frac{e^{\ln 9}}{\log_3 9} \right) + \frac{\log_{(1+1)} \log_3 9}{\log_{(1+1)} 3} = \underline{\hspace{2cm}}$

22. $\frac{1}{\log_{\left(\log_3 \left(3^{e^3} \times \frac{1}{3} \right) - \log_3 \left(\frac{1}{3} \right) \right)} e} = \underline{\hspace{2cm}}$

23. $\frac{\lg 1000}{\frac{\ln \left(5^{\log_5 10} \times \frac{1}{2} \right) - \ln \left(\frac{1}{2} \right)}{\frac{1}{2} \ln 10^2}} = \underline{\hspace{2cm}}$

24. $\log_{(5^{\log_5 5})} \left(\frac{125}{2 \times 3} \right) + \log_{(5^{\log_5 5})} (2 \times 3) = \underline{\hspace{2cm}}$

25. $\ln \left(e^3 \frac{1}{\log_9 2} e^2 \right) - \ln e^2 - \ln \log_{(10^{\lg 2})} 9 = \underline{\hspace{2cm}}$

26. $\frac{\log_{(1+1)} \left(16 \left(\lg 2 \lg 5 + \lg^2 2 + \frac{1}{\log_5 10} \right) \right)}{\log_{(1+1)} 4} = \underline{\hspace{2cm}}$

27. $\log_{(10^{\lg 3})} ((3+6)(3+3)) - \log_{(10^{\lg 3})} (3+3) = \underline{\hspace{2cm}}$

28. $\frac{\log_7 100}{\log_{(2^{\log_2 7})} (10 \log_2 8) - \log_{(2^{\log_2 7})} \log_2 8} = \underline{\hspace{2cm}}$

29. $\lg \left(1000 \log_{(\frac{12}{4})} 9 (3+3) \right) - \lg (3+3) - \lg \log_{(\frac{12}{4})} 9 = \underline{\hspace{2cm}}$

30. $\frac{\log_{(5^{\log_5 3})} e^{\frac{1}{5} \log_2 4^5}}{\log_{(e^{\ln 3})} e} = \underline{\hspace{2cm}}$

31. $\frac{1}{5} \left(\ln \left(\frac{\left(e^3 \right)^{5^{\log_5 5}}}{e^1} \right) + \ln e^1 \right) = \underline{\hspace{2cm}}$

32. $\frac{\frac{\log_6 e^3}{\log_6 5^{\log_5 10}}}{\frac{\log_{(1+1)} e}{\log_{(1+1)} 10}} = \underline{\hspace{2cm}}$

33. $\log_{(\frac{\lg 5}{\lg 5} + 1)} (4(3+3)) - \log_{(\frac{\lg 5}{\lg 5} + 1)} (3+3) = \underline{\hspace{2cm}}$

34. $\frac{1}{5} \log_5 \left(\frac{\frac{2500}{2}}{3 \times 3^{\log_3 2}} \right)^5 + \log_5 (3 \times 3^{\log_3 2}) = \underline{\hspace{2cm}}$

35. $\log_{(\log_5 5)} \left(\frac{50}{\log_2 2 + \log_2 2} \right) + \log_{(\log_5 5)} \log_2 9 = \underline{\hspace{2cm}}$

36. $\log_{\left(\frac{40}{2}\right)} \left((850 + 150) \times \frac{1}{2} \right) - \log_{\left(\frac{40}{2}\right)} \left(\frac{1}{2} \right) = \underline{\hspace{2cm}}$

37. $\frac{\log_{(32)} 8}{\frac{4 \log_{(32)} (4+1)}{5 \log_5 2^{\frac{1}{5}}}} = \underline{\hspace{2cm}}$

38. $\frac{\log_5 \left(\frac{20}{3} \right)}{\log_5 3^{\log_3 \left(\frac{5}{\log_2 4} \right) + \log_3 \log_2 4}} = \underline{\hspace{2cm}}$

39. $\ln \left(\frac{\log_{(1+1)} (e^{\ln 2})^{e^2}}{\log_{(1+1)} \log_5 25} \right) = \underline{\hspace{2cm}}$

40. $\frac{\log_2 \left(\frac{16}{\log_3 4} \right) + \log_2 \log_3 4}{\frac{\log_{(2^2)} 4}{\log_{(2^2)} 2}} = \underline{\hspace{2cm}}$

41. $\frac{\log_{(\log_2 4)} \left(\frac{8}{\log_2 4} \right) + \log_{(\log_2 4)} \log_2 4}{\log_2 (1+1)} = \underline{\hspace{2cm}}$

42. $\lg (100 (3 + 1) \times 9) - \lg 9 - \frac{\log_{(3^2)} (3+1)}{\log_{(3^2)} 10} = \underline{\hspace{2cm}}$

43. $\frac{1}{\log_{\left(\frac{e^3}{2^{\frac{3}{2}}} \right)} e} + \ln (2 \times 2 \log_5 16) - \ln \log_5 16 + \frac{0}{3} = \underline{\hspace{2cm}}$

44. $\frac{\log_{((1+1) \log_3 9)} 4(1+0)}{\log_{((1+1) \log_3 9)} 4(1+0)} = \underline{\hspace{2cm}}$

45. $\ln (e^4 (3 + 3)) - \frac{\log_{(2^3)} (3+3)}{\log_{(2^3)} e} = \underline{\hspace{2cm}}$

46. $\log_5 \left(\frac{5(3+e^{\ln 3})}{5^3} \right) + \log_5 5^3 - \log_5 (3 + e^{\ln 3}) = \underline{\hspace{2cm}}$

47. $\log_{(1+4)} \left(25 \times \frac{1}{4} \right) - \log_5 \left(\frac{1}{4} \times \frac{1}{4} \right) - \log_5 \left(\frac{1}{4} \right) = \underline{\hspace{2cm}}$

48. $\frac{\lg (6 + \log_2 2 + \log_2 2)}{\frac{\log_{(2^3)} (2 \log_2 2)}{\log_{(2^3)} 10}} = \underline{\hspace{2cm}}$

49. $\log_{(3(\lg 2 \lg 5 + \lg^2 2 + \lg (\frac{5}{3}) + \lg 3))} 2^{\log_{(2 \log_2 2)} 27} = \underline{\hspace{2cm}}$

50. $\frac{\lg \left(\frac{1000}{\log_2 9} \right) + \lg \log_2 9 + \lg 10^1}{\frac{\lg 10}{\frac{\log_2 10}{\log_2 10}}} = \underline{\hspace{2cm}}$

51. $\log_2 \left(2^{\log_2 8} \log_{(3^{\log_3 3})} 9 \right) - \frac{1}{2} \log_2 \log_{(3^{\log_3 3})}^2 9 = \underline{\hspace{2cm}}$

52. $\log_{(e^{\ln 4})} \left(\frac{12}{2} \times \frac{1}{4} \right) - \log_{(e^{\ln 4})} \left(\frac{1}{4} \right) = \underline{\hspace{2cm}}$

53. $\log_{\left(\frac{12}{4}\right)} \left(9 \times \left(\frac{12}{4}\right)^{\frac{12}{2}}\right) - \log_3 \left(\frac{12}{4}\right)^{\frac{12}{2}} = \underline{\hspace{2cm}}$

54. $\frac{\log_{\left(\frac{6}{4}\right)} 27}{\log_{\left(\frac{6}{4}\right)} (3 \log_5 8) - \log_{\left(\frac{6}{4}\right)} \log_5 8} = \underline{\hspace{2cm}}$

55. $\frac{\lg \left(\frac{5}{\log_2 9}\right) + \frac{1}{\log \left(\frac{\lg 9}{\lg 2}\right) e^{\ln 10}} + 3 - 3}{\lg 3^{\log_3 5}} = \underline{\hspace{2cm}}$

56. $\frac{\log_{\left(3 \log_3 2\right)} \left(\frac{72+9}{3}\right) + \log_{\left(3 \log_3 2\right)} 3}{\log_2 \left(\frac{12}{2}\right)} = \underline{\hspace{2cm}}$

57. $\log_3 \left(\frac{9}{2 \times 2^{\log_2 2}}\right) + \frac{1}{3} \log_{\left(\frac{12}{3}\right)} \left(2 \times 2^{\log_2 2}\right)^3 = \underline{\hspace{2cm}}$

58. $\ln \left(e^3 \times \frac{1}{2}\right) - \frac{\log_{(2^2)} \left(\frac{1}{2}\right)}{\log_{(2^2)} e} = \underline{\hspace{2cm}}$

59. $\frac{\log_{(2^3)} \left(\frac{2 \times 8}{\log_2 8}\right) + \log_{(2^3)} \log_2 8}{\log_{(2^3)} 2} = \underline{\hspace{2cm}}$

60. $\frac{1}{\log_{(25 \times 5^1)} 5} - \frac{\log_3 \left(\frac{5^1}{\log_3 9}\right) + \log_3 \log_3 9}{\frac{1}{\log_5 3}} = \underline{\hspace{2cm}}$

61. $\frac{\log_{\left((e^{\ln 2})^3\right)} e^4}{\log_{\left((e^{\ln 2})^3\right)} e} = \underline{\hspace{2cm}}$

62. $\frac{\lg (\log_2 2 + \log_2 2)}{\frac{\ln 2}{\ln 3}} = \underline{\hspace{2cm}}$

63. $\frac{\frac{\log_7 \left(\frac{3000}{4}\right)}{\log_7 (3+4)}}{\log_7 \left(10 \times \frac{1}{3}\right) - \log_7 \left(\frac{1}{3}\right)} = \underline{\hspace{2cm}}$

64. $\frac{\log_2 \left(\log_3 \left(10^{\lg 9} \times 3^4\right) - \log_3 3^4\right)}{5 \log_2 \left(\frac{12}{3}\right)^{\frac{1}{5}}} = \underline{\hspace{2cm}}$

65. $\log_{\left(\frac{6+6}{2}\right)} \left(81 \left(\frac{6+6}{2}\right)^2\right) - \log_{\left(\frac{6+6}{2}\right)} \left(\frac{6+6}{2}\right)^2 = \underline{\hspace{2cm}}$

66. $\frac{\log_5 \left(16(\lg 2 \lg 2 + \lg 5 \lg 5 + 2 \lg 5 \lg 2) \times 5^3\right) - \log_5 5^3}{\frac{\log_3 4}{\log_3 5}} = \underline{\hspace{2cm}}$

67. $\frac{\log_{(1+1)} \left(256 \times \frac{1}{4}\right)}{\log_{(1+1)} 4} - \frac{\log_3 \left(\frac{1}{4}\right)}{\frac{\lg 4}{\lg 3}} = \underline{\hspace{2cm}}$

68. $\frac{\frac{1}{5} \log_{(2^2)} \left(10^{\lg 10000}\right)^5}{\log_{(2^2)} e^{\frac{\lg 10}{\lg e}}} = \underline{\hspace{2cm}}$

69. $\log_{\left(3^{\log_3 (2(\lg 2 \lg 5 + \lg^2 5 + \lg 2)(3+2)) - \log_3 (3+2)}\right)} 10^{\lg 8} = \underline{\hspace{2cm}}$

70. $\frac{\log_5 \left(3^{\log_3 64 \frac{1 \times 1}{2 \times 1}}\right)}{\log_5 4} - \log_4 \left(\frac{1}{2} \times 4^4\right) - \log_4 4^4 = \underline{\hspace{2cm}}$

71. $\frac{\log\left(\frac{9}{3}\right)\left(e^2 \log_5 16\right) - \log\left(\frac{9}{3}\right) \log_5 16}{\frac{\log_7 e}{\log_7 3}} = \underline{\hspace{2cm}}$

72. $\log_4 \left(256 \left(\lg 2 \lg 5 + \lg^2 5 + \lg 2 \right) (2+2)^3 \right) - \frac{1}{3} \log_4 \left((2+2)^3 \right)^3 = \underline{\hspace{2cm}}$

73. $\frac{\frac{1}{\log\left(\frac{2}{\log_3\left(\frac{8}{2\times 3}\right)+\log_3\left(2\times 3\right)}\right)}}{2}^{2+\log_2 \log_3 8\times 2} = \underline{\hspace{2cm}}$

74. $\frac{\log_{(2^3)} e^{1+1(\lg 2 \lg 2 + \lg 5 \lg 5 + 2 \lg 5 \lg 2) + \frac{0}{1}}}{\log_{(2^3)} e} = \underline{\hspace{2cm}}$

75. $\frac{\frac{1}{\log_{256}\left(\frac{9}{4}\right)}}{\frac{\log_{(2\times 2)}\left(\frac{12}{2}\right)}{\log_6 3}} = \underline{\hspace{2cm}}$

76. $\log\left(\frac{24}{\frac{3}{3+1}}\right) \left(5^{\log_5 27} \times \frac{1}{2} \right) - \log\left(\frac{24}{\frac{3}{3+1}}\right) \left(\frac{1}{2} \right) = \underline{\hspace{2cm}}$

77. $\frac{\frac{1}{\frac{1}{4} \log_{125} \left(5^{\log_5 5} \right)^4}}{\frac{1}{4} \log_{(4+1)} \left(\frac{10}{e^{\ln 3}} \right)^4} = \underline{\hspace{2cm}}$

78. $\frac{\log_{(2^3)} 8}{\log_{(2^3)} (2 \times 5)^{\lg (\log_2 4(1+3)) - \lg (1+3)}} = \underline{\hspace{2cm}}$

79. $\frac{\frac{\log\left(\left(5^{\log_5 2}\right)^2\right)^{16}}{\log_{(1+1)}^4}}{\log_{(1+1)}\left(5^{\log_5 2}\right)^2} = \underline{\hspace{2cm}}$

80. $\frac{\log_3 \left(10^{\frac{\log_5 10}{\log_5 10} \times \frac{1}{4}} \right) - \log_3 \left(\frac{1}{4} \right)}{\log_{(1+2)} 3^{\log_3 10}} = \underline{\hspace{2cm}}$

81. $\frac{1}{\log_{(100 \times 10)} \left(10 \left(\lg 2 \lg 5 + \lg^2 2 + \frac{\log(2^2)^5}{\log(2^2)^{10}} \right) \right)} = \underline{\hspace{2cm}}$

82. $\frac{1}{4} \times 5 \log \left(\left(2^{2^{\log_2 10}} \right)^{\lg (4 \times 10^1) - \lg 10^1} \right) \left(64^4 \right)^{\frac{1}{5}} = \underline{\hspace{2cm}}$

83. $\frac{10^{\lg 1}}{\log_5 25} \left(\log_{\left(\frac{6}{2}\right)} (27^2 (2+1)) - \log_{\left(\frac{6}{2}\right)} (2+1) \right) = \underline{\hspace{2cm}}$

84. $\frac{\log_{(2+1)} (10(2+1)^2) - \log_{(2+1)} (2+1)^2}{\log_{(e^{\ln 3})} 10} = \underline{\hspace{2cm}}$

85. $\frac{1}{\log_3 \left(\left(\frac{1}{\log_2 2} + \frac{1}{3} \log_2 5^5 \right) \log_2 9 \right) - \log_3 \log_2 9} = \underline{\hspace{2cm}}$
 $\log_3 \left(\frac{4}{4} \right)$

86. $\frac{\log_7 e^{\ln 1000}}{\log_{(3^{\log_3 7})} (10(1+3)) - \log_{(3^{\log_3 7})} (1+3)} = \underline{\hspace{2cm}}$

87. $\log_{(\log_5 25)} (8 \log_5^4 25) - \log_{\left(\frac{\log(2^3)^{25}}{\log(2^3)^5} \right)} \log_5^4 25 = \underline{\hspace{2cm}}$

88. $\log_{(1+1)} \left(\frac{16}{\log_3 4} \right) + \frac{\log_{(1+1)} \left(\frac{\lg 4}{\lg 3} \right)}{\log_{(1+1)} (1+1)} = \underline{\hspace{2cm}}$

89. $\frac{\lg \left(10 \times (3^{\log_3 10})^3 \right)}{\lg \left(\frac{30}{3} \right)} - \frac{\log_2 \left(3^{\log_3 10} \right)^3}{\log_2 10} = \underline{\hspace{2cm}}$

90. $\log_{\left(\frac{15}{4}\right)} \left(25 \times 5^{1(\lg 2 \lg 5 + \lg^2 5 + \lg 2)} \right) - \log_5 5^{1(\lg 2 \lg 5 + \lg^2 5 + \lg 2)} = \underline{\hspace{2cm}}$

91. $\frac{\log \left(e^{\frac{\lg 10}{\lg e}} \right)^{\left(\frac{10}{3} \right) \times 4 + \frac{1}{\log_3 e^{\frac{\lg 10}{\lg e}}} \times 4}}{4} = \underline{\hspace{2cm}}$

92. $\log_{(4(\lg 2 \lg 5 + \lg^2 5 + \lg 2))} \left(16 \left(\lg 2 \lg 5 + \lg^2 2 + \lg \left(\frac{5}{\log_3 4} \right) + \lg \log_3 4 \right) \right) = \underline{\hspace{2cm}}$

93. $\frac{\frac{1}{\ln \log_5 5^2}}{\log_2 \left(\frac{e}{\log_3 9} \right) + \log_2 \left(\log_3 \left(\frac{9}{\log_3 8} \right) + \log_3 \log_3 8 \right)} = \underline{\hspace{2cm}}$

94. $\log_{(2 \log_2 2)} \left(\frac{\frac{32}{10 \lg 2}}{(2 \log_2 2)^2} \right) + \log_{(2 \log_2 2)} (2 \log_2 2)^2 = \underline{\hspace{2cm}}$

95. $\frac{\log_3 \left(10^{\frac{\log_7 3}{\log_7 10}} \times 9 \right) - \log_3 9}{\frac{\lg ((1+2) \times 5) - \lg 5}{\frac{\log_2 3}{\log_2 10}}} = \underline{\hspace{2cm}}$

96. $\log_{\left(\frac{9(1+0)}{3(1+0)}\right)} \left(\frac{3^{\log_3 27}}{4 \log_3 9^{\frac{1}{4}}} \right) + \log_{\left(\frac{9}{3}\right)} \log_3 9 = \underline{\hspace{2cm}}$

97. $\log_{\left(\frac{8}{3}\right)} \left(e^{\ln 16} \log_3 16 \right) - \frac{\log_{(2^2)} \left(\frac{1}{\log_{16} 3} \right)}{\log_{(2^2)} 2} = \underline{\hspace{2cm}}$

98. $\frac{\log_{(2^{10 \lg 2})} \left(\frac{16}{5} \right) + \log_{(2^{10 \lg 2})} 5}{\log_{(2^{10 \lg 2})} 3^{\log_3 4}} = \underline{\hspace{2cm}}$

99. $\frac{1}{5} \left(\log_{\left(2^{\frac{1}{\log_5 2}} \right)} \left(\frac{\left(10^{\lg 5} \right)^{2+3}}{5} \right) + \log_{\left(2^{\frac{1}{\log_5 2}} \right)} 5 \right) = \underline{\hspace{2cm}}$

100. $\ln \left(e^{3(\lg 2 \lg 5 + \lg^2 5 + \lg 2)} e^3 \times 4 \right) - \ln 4 - \frac{\log_3 e^3}{\frac{\log_2 e}{\log_2 3}} = \underline{\hspace{2cm}}$ 参考答案

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