EduSahara™ Assignment

Name : Simplification

Chapter : Logarithms

Grade : ICSE Grade IX

License : Non Commercial Use

1. $log\,1 + log\,7 =$

   (i) $log\,7^2$ (ii) $log\,7$ (iii) $log\,5$ (iv) $log\,6$ (v) $log\,9$

2. $log\,21 + log\,36 =$

   (i) $log\,759$ (ii) $log\,756$ (iii) $log\,753$ (iv) $log\,756^2$ (v) $log\,755$

3. $log\,6^9 + log\,6^6 =$

   (i) $log\,6^{14}$ (ii) $log\,9^{15}$ (iii) $log\,4^{15}$ (iv) $log\,6^{16}$ (v) $log\,6^{15}$

4. $log\,86^8 + log\,86^5 =$

   (i) $log\,83^{13}$ (ii) $log\,86^{12}$ (iii) $log\,88^{13}$ (iv) $log\,86^{13}$ (v) $log\,86^{14}$

5. $log\,39 - log\,94 =$

   (i) $log\,\frac{41}{94}$ (ii) $log\left(\frac{39}{94}\right)^2$ (iii) $log\,\frac{39}{94}$ (iv) $log\,\frac{37}{94}$ (v) $log\,\frac{39}{92}$

6. $log\,50 - log\,15 =$

   (i) $log\,4$ (ii) $log\left(\frac{10}{3}\right)^2$ (iii) $log\,\frac{10}{3}$ (iv) $log\,10$ (v) $log\,\frac{8}{3}$

7. $log\,94 - log\,6 =$

   (i) $log\,\frac{49}{3}$ (ii) $log\,47$ (iii) $log\,\frac{47}{3}$ (iv) $log\,15$ (v) $log\left(\frac{47}{3}\right)^2$

8. $log_{10}180 =$

   (i) $2\,log\,2 + log\,3 + log\,5$ (ii) $2\,log\,2 + 2\,log\,3 + log\,2$ (iii) $2\,log\,2 + 2\,log\,3 + log\,8$ (iv) $2\,log\,2 + 2\,log\,3 + log\,5$

   (v) $2\,log\,2 + 3\,log\,3 + log\,5$

9. $log_{10}756 =$

(i) $2\,log\,2+3\,log\,3+log\,9$ (ii) $2\,log\,2+4\,log\,3+log\,7$ (iii) $2\,log\,2+3\,log\,3+log\,7$ (iv) $log\,2+3\,log\,3+log\,7$

(v) $2\,log\,2+3\,log\,3+log\,4$

10. $log\,1335 =$

(i) $log\,89\times log\,15$ (ii) $15\,log\,89$ (iii) $log\,89-log\,15$ (iv) $log\,89\div log\,15$ (v) $log\,89+log\,15$

11. $log_9 6 =$

(i) $log\,6\times log\,9$ (ii) $log\,6\div log\,9$ (iii) $log\,6-log\,9$ (iv) $log\,9\div log\,6$ (v) $log\,6+log\,9$

12. $log_{10}73 =$

(i) $log_{10}85+log_{73}85$ (ii) $log_{73}85\div log_{10}85$ (iii) $log_{10}85-log_{73}85$ (iv) $log_{10}85\div log_{73}85$

(v) $log_{10}85\times log_{73}85$

13. $log_{10}83 =$

(i) $log_{10}83\times log_{10}10$ (ii) $log_{10}83+log_{10}10$ (iii) $log_{10}10\div log_{10}83$ (iv) $log_{10}83-log_{10}10$

(v) $log_{10}83\div log_{10}10$

14. $log\,\frac{1}{2}+log\,\frac{7}{8} =$

(i) $log\,\frac{9}{16}$ (ii) $log\left(\frac{7}{16}\right)^2$ (iii) $log\,\frac{1}{2}$ (iv) $log\,\frac{5}{16}$ (v) $log\,\frac{7}{16}$

15. $log\,\frac{25}{63}+log\,\frac{50}{57} =$

(i) $log\left(\frac{1250}{3591}\right)^2$ (ii) $log\,\frac{1250}{3591}$ (iii) $log\,\frac{1252}{3591}$ (iv) $log\,\frac{416}{1197}$ (v) $log\,\frac{1250}{3589}$

16. $log\,7^6+log\,7^{10} =$

(i) $log\,7^{16}$ (ii) $log\,5^{16}$ (iii) $log\,7^{15}$ (iv) $log\,9^{16}$ (v) $log\,7^{17}$

17. $log\,19^4+log\,19^4 =$

(i) $log\,19^7$ (ii) $log\,19^8$ (iii) $log\,17^8$ (iv) $log\,22^8$ (v) $log\,19^9$

18. $log\,1.0000+log\,1.0000 =$

(i) $log\,1.0000$ (ii) $log\,3.0000$ (iii) $log\,2.0000$ (iv) $log\,9.0000$ (v) $log\,0.0000$

19. $log\,11.0000+log\,24.0000 =$

(i) $log\,262.0000$ (ii) $log\,264.0000$ (iii) $log\,263.0000$ (iv) $log\,266.0000$ (v) $log\,265.0000$

20. $log\,2 + log\,5 =$

(i) $log\,10^{2}$ (ii) $log\,10$ (iii) $log\,9$ (iv) $log\,12$ (v) $log\,8$

21. $log\,33 + log\,62 =$

(i) $log\,2045$ (ii) $log\,2044$ (iii) $log\,2049$ (iv) $log\,2046^{2}$ (v) $log\,2046$

22. $log\,\frac{1}{2} + log\,\frac{20}{79} =$

(i) $log\,\frac{8}{79}$ (ii) $log\left(\frac{10}{79}\right)^{2}$ (iii) $log\,\frac{12}{79}$ (iv) $log\,\frac{10}{79}$ (v) $log\,\frac{10}{77}$

23. $log\,79^{8} + log\,79^{2} =$

(i) $log\,79^{9}$ (ii) $log\,79^{10}$ (iii) $log\,79^{11}$ (iv) $log\,76^{10}$ (v) $log\,82^{10}$

24. $log\,54 + log\,9 =$

(i) $log\,489$ (ii) $log\,483$ (iii) $log\,486^{2}$ (iv) $log\,485$ (v) $log\,486$

25. $log\,\frac{5}{72} + log\,\frac{52}{54} =$

(i) $log\,\frac{67}{972}$ (ii) $log\left(\frac{65}{972}\right)^{2}$ (iii) $log\,\frac{65}{972}$ (iv) $log\,\frac{13}{194}$ (v) $log\,\frac{7}{108}$

26. $log\,74^{2} + log\,74^{2} =$

(i) $log\,76^{4}$ (ii) $log\,74^{5}$ (iii) $log\,71^{4}$ (iv) $log\,74^{3}$ (v) $log\,74^{4}$

27. $log\,4.0000 + log\,9.0000 =$

(i) $log\,38.0000$ (ii) $log\,36.0000$ (iii) $log\,37.0000$ (iv) $log\,35.0000$ (v) $log\,34.0000$

28. $log\,0.4638 + log\,0.1642 =$

(i) $log\,0.0761$ (ii) $log\,8.0761$ (iii) $log\,7.0761$ (iv) $log\,1.0761$ (v) $log\,2.0761$

29. $log\,79^{7} + log\,79^{10} =$

(i) $log\,79^{16}$ (ii) $log\,81^{17}$ (iii) $log\,79^{17}$ (iv) $log\,77^{17}$ (v) $log\,79^{18}$

30. $log\ \frac{2}{7} - log\ \frac{5}{43} =$

(i) $log\ \frac{86}{33}$ (ii) $log\ \frac{12}{5}$ (iii) $log\left(\frac{86}{35}\right)^{2}$ (iv) $log\ \frac{88}{35}$ (v) $log\ \frac{86}{35}$

31. $log\ 2^{4} - log\ 2^{8} =$

(i) $log\ 2^{-4}$ (ii) $log\ 2^{-3}$ (iii) $log\ 2^{-5}$ (iv) $log\ 4^{-4}$ (v) $log\ (-1)^{-4}$

32. $log\ 7.0000 - log\ 27.0000 =$

(i) $log\ 1.2593$ (ii) $log\ 2.2593$ (iii) $log\ 0.2593$ (iv) $log\ 8.2593$ (v) $log\ 7.2593$

33. $log\ \frac{2}{27} - log\ \frac{15}{19} =$

(i) $log\ \frac{38}{403}$ (ii) $log\left(\frac{38}{405}\right)^{2}$ (iii) $log\ \frac{4}{45}$ (iv) $log\ \frac{8}{81}$ (v) $log\ \frac{38}{405}$

34. $log\ 75^{8} - log\ 75^{5} =$

(i) $log\ 77^{3}$ (ii) $log\ 72^{3}$ (iii) $log\ 75^{2}$ (iv) $log\ 75^{4}$ (v) $log\ 75^{3}$

35. $log\ 56.9200 - log\ 53.7400 =$

(i) $log\ 9.0592$ (ii) $log\ 2.0592$ (iii) $log\ 1.0592$ (iv) $log\ 0.0592$ (v) $log\ 3.0592$

36. $log\ \frac{39}{72} - log\ \frac{7}{8} =$

(i) $log\left(\frac{13}{21}\right)^{2}$ (ii) $log\ \frac{5}{7}$ (iii) $log\ \frac{13}{19}$ (iv) $log\ \frac{13}{21}$ (v) $log\ \frac{11}{21}$

37. $log\ 50^{4} - log\ 50^{7} =$

(i) $log\ 53^{-3}$ (ii) $log\ 50^{-3}$ (iii) $log\ 50^{-2}$ (iv) $log\ 50^{-4}$ (v) $log\ 47^{-3}$

38. $log\ 74.0300 - log\ 85.8400 =$

(i) $log\ 7.8624$ (ii) $log\ 8.8624$ (iii) $log\ 0.8624$ (iv) $log\ 2.8624$ (v) $log\ 1.8624$

39. $log\ 83^{2} - log\ 83^{8} =$

(i) $log\ 80^{-6}$ (ii) $log\ 85^{-6}$ (iii) $log\ 83^{-7}$ (iv) $log\ 83^{-5}$ (v) $log\ 83^{-6}$

40. $log_8 9^4 =$

(i) $4\,log_8 9$ (ii) $4\,log_8 12$ (iii) $3\,log_8 9$ (iv) $5\,log_8 9$ (v) $log_6 7^4$

41. $log_{10} \frac{32}{81} =$

(i) $4\,log\,2 - 4\,log\,3$ (ii) $5\,log\,2 - 2\,log\,3$ (iii) $5\,log\,2 - 4\,log\,3$ (iv) $6\,log\,2 - 4\,log\,3$ (v) $5\,log\,2 - 4\,log\,6$

42. $log_{10} \frac{7}{50} =$

(i) $log\,6 - log\,2 - 2\,log\,5$ (ii) $log\,7 - log\,2 - 2\,log\,3$ (iii) $2\,log\,7 - log\,2 - 2\,log\,5$ (iv) $log\,7 - log\,2 - 2\,log\,5$

(v) $log\,7 - log\,2 - 2\,log\,7$

43. $log_{10} 112 =$

(i) $4\,log\,\text{-}1 + log\,7$ (ii) $4\,log\,2 + log\,9$ (iii) $5\,log\,2 + log\,7$ (iv) $4\,log\,2 + log\,6$ (v) $4\,log\,2 + log\,7$

44. $log_{10} 3600 =$

(i) $4\,log\,\text{-}1 + 2\,log\,3 + 2\,log\,5$ (ii) $4\,log\,2 + 2\,log\,6 + 2\,log\,5$ (iii) $4\,log\,2 + 2\,log\,3 + 2\,log\,5$

(iv) $4\,log\,2 + 3\,log\,3 + 2\,log\,5$ (v) $4\,log\,2 + log\,3 + 2\,log\,5$

45. $log\,5250 =$

(i) $log\,75 \div log\,70$ (ii) $log\,75 + log\,70$ (iii) $log\,75 - log\,70$ (iv) $70\,log\,75$ (v) $log\,75 \times log\,70$

46. $log\,\frac{36}{40} =$

(i) $40\,log\,36$ (ii) $log\,36 + log\,40$ (iii) $log\,36 \div log\,40$ (iv) $log\,36 - log\,40$ (v) $log\,36 \times log\,40$

47. $log_3 \frac{70}{81} =$

(i) $log\,\frac{70}{81} + log\,3$ (ii) $log\,\frac{70}{81} \times log\,3$ (iii) $log\,3 \div log\,\frac{70}{81}$ (iv) $log\,\frac{70}{81} \div log\,3$ (v) $log\,\frac{70}{81} - log\,3$

48. $log_3 43 =$

(i) $log\,43 \div log\,3$ (ii) $log\,43 + log\,3$ (iii) $log\,3 \div log\,43$ (iv) $log\,43 \times log\,3$ (v) $log\,43 - log\,3$

49. $log_{8.03} 71.7500 =$

(i) $log\,8.03 \div log\,71.7500$ (ii) $log\,71.7500 \div log\,8.03$ (iii) $log\,71.7500 - log\,8.03$ (iv) $log\,71.7500 \times log\,8.03$

(v) $log\,71.7500 + log\,8.03$

50. $log_{\frac{5}{9}} \frac{32}{39} =$

(i) $log\,\frac{32}{39} \times log\,\frac{5}{9}$ (ii) $log\,\frac{32}{39} + log\,\frac{5}{9}$ (iii) $log\,\frac{32}{39} - log\,\frac{5}{9}$ (iv) $log\,\frac{32}{39} \div log\,\frac{5}{9}$ (v) $log\,\frac{5}{9} \div log\,\frac{32}{39}$

51. $log_{9^3} 81^2 =$

(i) $2\,log\,81 - 3\,log\,9$ (ii) $2\,log\,81 \div 3\,log\,9$ (iii) $3\,log\,9 \div 2\,log\,81$ (iv) $2\,log\,81 + 3\,log\,9$ (v) $2\,log\,81 \times 3\,log\,9$

52. $log_{2^6} 21^3 =$

(i) $\frac{1}{2} log_2 21$ (ii) $\frac{1}{2} log_{-1} 19$ (iii) $\frac{1}{2} log_2 23$ (iv) $log_2 21$ (v) $\frac{1}{2} log_2 20$

53. $log_8 32 =$

(i) $log_8 31 \div log_{32} 31$ (ii) $log_{32} 31 \div log_8 31$ (iii) $log_8 31 - log_{32} 31$ (iv) $log_8 31 + log_{32} 31$ (v) $log_8 31 \times log_{32} 31$

54. $log_9 57 =$

(i) $log_3 57 \div log_9 3$ (ii) $log_3 57 + log_9 3$ (iii) $log_3 57 \times log_9 3$ (iv) $log_9 3 \div log_3 57$ (v) $log_3 57 - log_9 3$

55. $log_{4^{12}} 4^{50} =$

(i) 3.1667 (ii) 5.1667 (iii) 2.1667 (iv) 4.1667 (v) 6.1667

56. $log\,85.0100 + log\,87.9900 =$

(i) $log\,7479.0298$ (ii) $log\,7480.0298$ (iii) $log\,7482.0298$ (iv) $log\,7478.0298$ (v) $log\,7481.0298$

57. $log\,63.4900 + log\,76.4200 =$

(i) $log\,4851.9058$ (ii) $log\,4853.9058$ (iii) $log\,4850.9058$ (iv) $log\,4849.9058$ (v) $log\,4852.9058$

58. $log\,65^4 + log\,65^6 =$

(i) $log\,65^9$ (ii) $log\,65^{10}$ (iii) $log\,65^{11}$ (iv) $log\,68^{10}$ (v) $log\,62^{10}$

59. $log\,47.2000 + log\,73.5100 =$

(i) $log\,3469.6721$ (ii) $log\,3471.6721$ (iii) $log\,3470.6721$ (iv) $log\,3468.6721$ (v) $log\,3467.6721$

60. $log\,34 - log\,21 =$

(i) $log\,\frac{32}{21}$ (ii) $log\,\frac{34}{21}$ (iii) $log\,\frac{34}{19}$ (iv) $log\,\frac{12}{7}$ (v) $log\left(\frac{34}{21}\right)^2$

61. $log\,\frac{1}{8} - log\,\frac{5}{6} =$

(i) $log\,\frac{1}{4}$ (ii) $log\,\frac{1}{20}$ (iii) $log\left(\frac{3}{20}\right)^2$ (iv) $log\,\frac{1}{6}$ (v) $log\,\frac{3}{20}$

62. $log\,65^{6} - log\,65^{8} =$

(i) $log\,65^{-3}$ (ii) $log\,63^{-2}$ (iii) $log\,65^{-2}$ (iv) $log\,65^{-1}$ (v) $log\,68^{-2}$

63. $log\,33.3900 - log\,48.1000 =$

(i) $log\,0.6942$ (ii) $log\,7.6942$ (iii) $log\,1.6942$ (iv) $log\,8.6942$ (v) $log\,2.6942$

64. $log_{\frac{1}{5}}\,73^{4} =$

(i) $4\,log_{\frac{1}{5}}\,73$ (ii) $3\,log_{\frac{1}{5}}\,73$ (iii) $4\,log_{\frac{1}{5}}\,75$ (iv) $5\,log_{\frac{1}{5}}\,73$ (v) $log_{(\frac{-1}{5})}\,70^{4}$

65. $log_{6^{3}}\,57^{9} =$

(i) $10\,log_{6^{3}}\,57$ (ii) $log_{4^{3}}\,55^{9}$ (iii) $8\,log_{6^{3}}\,57$ (iv) $9\,log_{6^{3}}\,57$ (v) $9\,log_{6^{3}}\,59$

66. $log_{\frac{121}{20}}\,40^{9} =$

(i) $9\,log_{\frac{121}{20}}\,40$ (ii) $10\,log_{\frac{121}{20}}\,40$ (iii) $9\,log_{\frac{121}{20}}\,43$ (iv) $8\,log_{\frac{121}{20}}\,40$ (v) $log_{\frac{119}{20}}\,37^{9}$

67. $log_{10}\,\frac{6}{7} =$

(i) $log\,2 + log\,3 - log\,7$ (ii) $2\,log\,2 + log\,3 - log\,7$ (iii) $log\,2 + log\,2 - log\,7$ (iv) $log\,2 + log\,3 - log\,10$

(v) $log\,2 + log\,3 - log\,4$

Assignment Key

1) (ii)	2) (ii)	3) (v)	4) (iv)	5) (iii)	6) (iii)
7) (iii)	8) (iv)	9) (iii)	10) (v)	11) (ii)	12) (iv)
13) (i)	14) (v)	15) (ii)	16) (i)	17) (ii)	18) (i)
19) (ii)	20) (ii)	21) (v)	22) (iv)	23) (ii)	24) (v)
25) (iii)	26) (v)	27) (ii)	28) (i)	29) (iii)	30) (v)
31) (i)	32) (iii)	33) (v)	34) (v)	35) (iii)	36) (iv)
37) (ii)	38) (iii)	39) (v)	40) (i)	41) (iii)	42) (iv)
43) (v)	44) (iii)	45) (ii)	46) (iv)	47) (iv)	48) (i)
49) (ii)	50) (iv)	51) (ii)	52) (i)	53) (i)	54) (iii)
55) (iv)	56) (ii)	57) (i)	58) (ii)	59) (i)	60) (ii)
61) (v)	62) (iii)	63) (i)	64) (i)	65) (iv)	66) (i)
67) (i)					

Copyright © Small Systems Computing Pvt. Ltd.