EduSahara™ Assignment

Name : Simplification

Chapter : Logarithms

Grade : ICSE Grade IX

1. $log\,10 + log\,4 =$

   (i) $log\,42$ (ii) $log\,40$ (iii) $log\,40^2$ (iv) $log\,37$ (v) $log\,39$

2. $log\,65 + log\,38 =$

   (i) $log\,2470$ (ii) $log\,2470^2$ (iii) $log\,2468$ (iv) $log\,2472$ (v) $log\,2469$

3. $log\,7^5 + log\,7^3 =$

   (i) $log\,7^9$ (ii) $log\,7^7$ (iii) $log\,7^8$ (iv) $log\,9^8$ (v) $log\,5^8$

4. $log\,62^4 + log\,62^3 =$

   (i) $log\,62^6$ (ii) $log\,62^7$ (iii) $log\,62^8$ (iv) $log\,64^7$ (v) $log\,59^7$

5. $log\,79 - log\,73 =$

   (i) $log\,\frac{79}{71}$ (ii) $log\,\frac{79}{73}$ (iii) $log\,\frac{77}{73}$ (iv) $log\left(\frac{79}{73}\right)^2$ (v) $log\,\frac{81}{73}$

6. $log\,68 - log\,61 =$

   (i) $log\,\frac{68}{61}$ (ii) $log\left(\frac{68}{61}\right)^2$ (iii) $log\,\frac{70}{61}$ (iv) $log\,\frac{68}{59}$ (v) $log\,\frac{66}{61}$

7. $log\,58 - log\,31 =$

   (i) $log\,\frac{60}{31}$ (ii) $log\left(\frac{58}{31}\right)^2$ (iii) $log\,\frac{58}{31}$ (iv) $log\,2$ (v) $log\,\frac{56}{31}$

8. $log_{10}120 =$

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

   (v) $3\,log\,2 + log\,3 + log\,7$

9. $log_{10}504 =$

(i) $3\,log\,5 + 2\,log\,3 + log\,7$ (ii) $2\,log\,2 + 2\,log\,3 + log\,7$ (iii) $3\,log\,2 + 2\,log\,3 + log\,7$ (iv) $3\,log\,2 + 2\,log\,3 + log\,4$

(v) $4\,log\,2 + 2\,log\,3 + log\,7$

10. $log\,1700 =$

(i) $log\,34 \div log\,50$ (ii) $log\,34 \times log\,50$ (iii) $log\,34 + log\,50$ (iv) $log\,34 - log\,50$ (v) $50\,log\,34$

11. $log_3 85 =$

(i) $log\,85 \times log\,3$ (ii) $log\,85 - log\,3$ (iii) $log\,3 \div log\,85$ (iv) $log\,85 + log\,3$ (v) $log\,85 \div log\,3$

12. $log_3 10 =$

(i) $log_3 10 + log_{10} 10$ (ii) $log_3 10 \div log_{10} 10$ (iii) $log_{10} 10 \div log_3 10$ (iv) $log_3 10 \times log_{10} 10$ (v) $log_3 10 - log_{10} 10$

13. $log_7 63 =$

(i) $log_7 10 \div log_{10} 63$ (ii) $log_{10} 63 - log_7 10$ (iii) $log_{10} 63 \div log_7 10$ (iv) $log_{10} 63 \times log_7 10$ (v) $log_{10} 63 + log_7 10$

14. $log\,\frac{1}{2} + log\,\frac{1}{10} =$

(i) $log\,\frac{3}{20}$ (ii) $log\,\frac{1}{18}$ (iii) $log\left(\frac{1}{20}\right)^2$ (iv) $log\,\frac{1}{20}$ (v) $log\,(\frac{-1}{20})$

15. $log\,\frac{32}{87} + log\,\frac{9}{13} =$

(i) $log\,\frac{98}{377}$ (ii) $log\,\frac{32}{125}$ (iii) $log\,\frac{94}{377}$ (iv) $log\left(\frac{96}{377}\right)^2$ (v) $log\,\frac{96}{377}$

16. $log\,9^7 + log\,9^2 =$

(i) $log\,9^9$ (ii) $log\,9^8$ (iii) $log\,6^9$ (iv) $log\,9^{10}$ (v) $log\,11^9$

17. $log\,27^8 + log\,27^{10} =$

(i) $log\,27^{17}$ (ii) $log\,24^{18}$ (iii) $log\,27^{18}$ (iv) $log\,27^{19}$ (v) $log\,29^{18}$

18. $log\,5.0000 + log\,3.0000 =$

(i) $log\,17.0000$ (ii) $log\,14.0000$ (iii) $log\,15.0000$ (iv) $log\,13.0000$ (v) $log\,16.0000$

19. $log\,54.0000 + log\,64.0000 =$

(i) $log\,3455.0000$ (ii) $log\,3454.0000$ (iii) $log\,3456.0000$ (iv) $log\,3458.0000$ (v) $log\,3457.0000$

20. $log\,10 + log\,2 =$

(i) $log\,22$ (ii) $log\,20$ (iii) $log\,17$ (iv) $log\,20^{2}$ (v) $log\,19$

21. $log\,78 + log\,26 =$

(i) $log\,2026$ (ii) $log\,2028^{2}$ (iii) $log\,2027$ (iv) $log\,2028$ (v) $log\,2031$

22. $log\,\frac{17}{24} + log\,\frac{4}{7} =$

(i) $log\,\frac{17}{42}$ (ii) $log\left(\frac{17}{42}\right)^{2}$ (iii) $log\,\frac{19}{42}$ (iv) $log\,\frac{17}{40}$ (v) $log\,\frac{5}{14}$

23. $log\,16^{7} + log\,16^{3} =$

(i) $log\,16^{10}$ (ii) $log\,16^{11}$ (iii) $log\,18^{10}$ (iv) $log\,13^{10}$ (v) $log\,16^{9}$

24. $log\,7 + log\,15 =$

(i) $log\,104$ (ii) $log\,105^{2}$ (iii) $log\,105$ (iv) $log\,108$ (v) $log\,103$

25. $log\,\frac{3}{16} + log\,\frac{18}{61} =$

(i) $log\,\frac{1}{18}$ (ii) $log\left(\frac{27}{488}\right)^{2}$ (iii) $log\,\frac{29}{488}$ (iv) $log\,\frac{25}{488}$ (v) $log\,\frac{27}{488}$

26. $log\,20^{4} + log\,20^{4} =$

(i) $log\,23^{8}$ (ii) $log\,18^{8}$ (iii) $log\,20^{7}$ (iv) $log\,20^{8}$ (v) $log\,20^{9}$

27. $log\,17.0000 + log\,99.0000 =$

(i) $log\,1682.0000$ (ii) $log\,1683.0000$ (iii) $log\,1685.0000$ (iv) $log\,1684.0000$ (v) $log\,1681.0000$

28. $log\,0.3171 + log\,0.7692 =$

(i) $log\,8.2439$ (ii) $log\,1.2439$ (iii) $log\,0.2439$ (iv) $log\,7.2439$ (v) $log\,2.2439$

29. $log\,45^{8} + log\,45^{3} =$

(i) $log\,45^{12}$ (ii) $log\,45^{10}$ (iii) $log\,43^{11}$ (iv) $log\,45^{11}$ (v) $log\,47^{11}$

30. $log\ \frac{19}{52} - log\ \frac{9}{55} =$

(i) $log\left(\frac{1045}{468}\right)^{2}$ (ii) $log\ \frac{1045}{466}$ (iii) $log\ \frac{1045}{468}$ (iv) $log\ \frac{1043}{468}$ (v) $log\ \frac{349}{156}$

31. $log\ 7^{10} - log\ 7^{7} =$

(i) $log\ 7^{3}$ (ii) $log\ 7^{4}$ (iii) $log\ 7^{2}$ (iv) $log\ 9^{3}$ (v) $log\ 5^{3}$

32. $log\ 99.0000 - log\ 71.0000 =$

(i) $log\ 0.3944$ (ii) $log\ 9.3944$ (iii) $log\ 3.3944$ (iv) $log\ 1.3944$ (v) $log\ 2.3944$

33. $log\ \frac{9}{17} - log\ \frac{1}{14} =$

(i) $log\left(\frac{126}{17}\right)^{2}$ (ii) $log\ \frac{124}{17}$ (iii) $log\ \frac{128}{17}$ (iv) $log\ \frac{42}{5}$ (v) $log\ \frac{126}{17}$

34. $log\ 61^{5} - log\ 61^{7} =$

(i) $log\ 64^{-2}$ (ii) $log\ 61^{-1}$ (iii) $log\ 61^{-2}$ (iv) $log\ 61^{-3}$ (v) $log\ 58^{-2}$

35. $log\ 17.1300 - log\ 47.1100 =$

(i) $log\ 1.3636$ (ii) $log\ 7.3636$ (iii) $log\ 0.3636$ (iv) $log\ 2.3636$ (v) $log\ 8.3636$

36. $log\ \frac{25}{46} - log\ \frac{41}{54} =$

(i) $log\ \frac{677}{943}$ (ii) $log\ \frac{673}{943}$ (iii) $log\ \frac{675}{943}$ (iv) $log\ \frac{675}{941}$ (v) $log\left(\frac{675}{943}\right)^{2}$

37. $log\ 58^{6} - log\ 58^{2} =$

(i) $log\ 58^{4}$ (ii) $log\ 60^{4}$ (iii) $log\ 56^{4}$ (iv) $log\ 58^{3}$ (v) $log\ 58^{5}$

38. $log\ 66.8800 - log\ 99.7500 =$

(i) $log\ 1.6705$ (ii) $log\ 7.6705$ (iii) $log\ 2.6705$ (iv) $log\ 0.6705$ (v) $log\ 8.6705$

39. $log\ 78^{5} - log\ 78^{2} =$

(i) $log\ 80^{3}$ (ii) $log\ 76^{3}$ (iii) $log\ 78^{2}$ (iv) $log\ 78^{3}$ (v) $log\ 78^{4}$

40. $log_7 42^8 =$

(i) $8\,log_7 42$ (ii) $log_5 39^8$ (iii) $7\,log_7 42$ (iv) $8\,log_7 45$ (v) $9\,log_7 42$

41. $log_{10} \frac{10}{7} =$

(i) $log\,2 + log\,5 - log\,7$ (ii) $log\,2 + log\,5 - log\,9$ (iii) $log\,2 + log\,4 - log\,7$ (iv) $2\,log\,2 + log\,5 - log\,7$

(v) $log\,2 + log\,5 - log\,4$

42. $log_{10} \frac{25}{9} =$

(i) $2\,log\,\frac{7}{3}$ (ii) $2\,log\,1$ (iii) $2\,log\,\frac{5}{3}$ (iv) $3\,log\,\frac{5}{3}$ (v) $log\,\frac{5}{3}$

43. $log_{10} 140 =$

(i) $log\,2 + log\,5 + log\,7$ (ii) $-1\,log\,2 + log\,5 + log\,7$ (iii) $3\,log\,2 + log\,5 + log\,7$ (iv) $2\,log\,2 + log\,5 + log\,7$

(v) $2\,log\,2 + log\,5 + log\,9$

44. $log_{10} 252 =$

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

(v) $2\,log\,2 + 2\,log\,0 + log\,7$

45. $log\,325 =$

(i) $log\,5 - log\,65$ (ii) $log\,5 \times log\,65$ (iii) $65\,log\,5$ (iv) $log\,5 \div log\,65$ (v) $log\,5 + log\,65$

46. $log\,\frac{95}{38} =$

(i) $log\,95 \div log\,38$ (ii) $log\,95 - log\,38$ (iii) $log\,95 + log\,38$ (iv) $38\,log\,95$ (v) $log\,95 \times log\,38$

47. $log_7 \frac{10}{81} =$

(i) $log\,\frac{10}{81} \times log\,7$ (ii) $log\,7 \div log\,\frac{10}{81}$ (iii) $log\,\frac{10}{81} - log\,7$ (iv) $log\,\frac{10}{81} \div log\,7$ (v) $log\,\frac{10}{81} + log\,7$

48. $log_5 29 =$

(i) $log\,29 - log\,5$ (ii) $log\,29 \div log\,5$ (iii) $log\,29 \times log\,5$ (iv) $log\,5 \div log\,29$ (v) $log\,29 + log\,5$

49. $log_{7.05} 36.9800 =$

(i) $log\,36.9800 + log\,7.05$ (ii) $log\,36.9800 - log\,7.05$ (iii) $log\,36.9800 \times log\,7.05$ (iv) $log\,36.9800 \div log\,7.05$

(v) $log\,7.05 \div log\,36.9800$

50. $log_{\frac{1}{2}} \frac{7}{8} =$

(i) $log\,\frac{7}{8} + log\,\frac{1}{2}$ (ii) $log\,\frac{7}{8} \div log\,\frac{1}{2}$ (iii) $log\,\frac{7}{8} \times log\,\frac{1}{2}$ (iv) $log\,\frac{1}{2} \div log\,\frac{7}{8}$ (v) $log\,\frac{7}{8} - log\,\frac{1}{2}$

51. $log_{9^6} 75^9 =$

(i) $9\,log\,75 \div 6\,log\,9$ (ii) $9\,log\,75 \times 6\,log\,9$ (iii) $6\,log\,9 \div 9\,log\,75$ (iv) $9\,log\,75 + 6\,log\,9$ (v) $9\,log\,75 - 6\,log\,9$

52. $log_{9^5} 10^3 =$

(i) $\frac{6}{5} log_9 10$ (ii) $\frac{3}{5} log_9 10$ (iii) $\frac{3}{5} log_9 12$ (iv) $\frac{3}{5} log_7 8$ (v) $\frac{3}{5} log_9 9$

53. $log_7 93 =$

(i) $log_7 42 \div log_{93} 42$ (ii) $log_7 42 + log_{93} 42$ (iii) $log_{93} 42 \div log_7 42$ (iv) $log_7 42 \times log_{93} 42$ (v) $log_7 42 - log_{93} 42$

54. $log_5 46 =$

(i) $log_6 46 \times log_5 6$ (ii) $log_6 46 - log_5 6$ (iii) $log_6 46 \div log_5 6$ (iv) $log_5 6 \div log_6 46$ (v) $log_6 46 + log_5 6$

55. $log_{41^{18}} 41^{36} =$

(i) 1 (ii) 2 (iii) 4 (iv) 3 (v) 0

56. $log\,73.4300 + log\,3.1300 =$

(i) $log\,229.8359$ (ii) $log\,228.8359$ (iii) $log\,227.8359$ (iv) $log\,231.8359$ (v) $log\,230.8359$

57. $log\,49.4600 + log\,32.4700 =$

(i) $log\,1607.9662$ (ii) $log\,1606.9662$ (iii) $log\,1603.9662$ (iv) $log\,1604.9662$ (v) $log\,1605.9662$

58. $log\,19^{10} + log\,19^3 =$

(i) $log\,19^{14}$ (ii) $log\,19^{13}$ (iii) $log\,21^{13}$ (iv) $log\,16^{13}$ (v) $log\,19^{12}$

59. $log\,89.8800 + log\,68.2100 =$

(i) $log\,6130.7148$ (ii) $log\,6129.7148$ (iii) $log\,6128.7148$ (iv) $log\,6131.7148$ (v) $log\,6132.7148$

60. $log\,70 - log\,31 =$

(i) $log\,\frac{70}{29}$ (ii) $log\,\frac{72}{31}$ (iii) $log\,\frac{68}{31}$ (iv) $log\left(\frac{70}{31}\right)^2$ (v) $log\,\frac{70}{31}$

61. $log\,\frac{22}{29} - log\,\frac{43}{52} =$

(i) $log\,\frac{1144}{1245}$ (ii) $log\left(\frac{1144}{1247}\right)^2$ (iii) $log\,\frac{1144}{1247}$ (iv) $log\,\frac{1142}{1247}$ (v) $log\,\frac{1146}{1247}$

62. $log\,10^{5} - log\,10^{6} =$

(i) $log\,10^{-1}$ (ii) $log\,8^{-1}$ (iii) $log\,11^{-1}$ (iv) $log\,10^{-2}$ (v) $log\,13^{-1}$

63. $log\,14.5200 - log\,68.6100 =$

(i) $log\,7.2116$ (ii) $log\,2.2116$ (iii) $log\,0.2116$ (iv) $log\,8.2116$ (v) $log\,1.2116$

64. $log_{\frac{9}{10}}\,64^{10} =$

(i) $log_{\frac{7}{10}}\,62^{10}$ (ii) $10\,log_{\frac{9}{10}}\,67$ (iii) $9\,log_{\frac{9}{10}}\,64$ (iv) $11\,log_{\frac{9}{10}}\,64$ (v) $10\,log_{\frac{9}{10}}\,64$

65. $log_{3^{2}}\,55^{7} =$

(i) $7\,log_{3^{2}}\,58$ (ii) $8\,log_{3^{2}}\,55$ (iii) $6\,log_{3^{2}}\,55$ (iv) $log_{1}\,53^{7}$ (v) $7\,log_{3^{2}}\,55$

66. $log_{\frac{803}{100}}\,64^{7} =$

(i) $7\,log_{\frac{803}{100}}\,64$ (ii) $6\,log_{\frac{803}{100}}\,64$ (iii) $log_{\frac{801}{100}}\,61^{7}$ (iv) $7\,log_{\frac{803}{100}}\,67$ (v) $8\,log_{\frac{803}{100}}\,64$

67. $log_{10}\,\frac{9}{14} =$

(i) $log\,3 - log\,2 - log\,7$ (ii) $2\,log\,3 - -1\,log\,2 - log\,7$ (iii) $2\,log\,3 - log\,4 - log\,7$ (iv) $3\,log\,3 - log\,2 - log\,7$

(v) $2\,log\,3 - log\,2 - log\,7$

Assignment Key

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