

EduSahara™ Learning Center Assignment**Grade : Class X, SSC****Chapter : Real Numbers****Name : Logarithms**

1. $\log_4 16 =$

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

2. $\log_{125} 25 =$

- (i) 7.6667 (ii) 1.6667 (iii) 8.6667 (iv) 0.6667 (v) 2.6667
-

3. $\log_8 16 =$

- (i) 9.3333 (ii) 2.3333 (iii) 3.3333 (iv) 0.3333 (v) 1.3333
-

4. $\log_{10000} 1000 =$

- (i) 0.75 (ii) 1.75 (iii) 7.75 (iv) 8.75 (v) 2.75
-

5. $\log_{64} 512 =$

- (i) 3.5 (ii) 2.5 (iii) 9.5 (iv) 0.5 (v) 1.5
-

6. $\log_{64} 256 =$

- (i) 1.3333 (ii) 0.3333 (iii) 3.3333 (iv) 9.3333 (v) 2.3333
-

7. $\log_{64} 512 =$

- (i) 2.5 (ii) 9.5 (iii) 1.5 (iv) 0.5 (v) 3.5
-

8. $\log_{1000} 10000 =$

- (i) 3.3333 (ii) 1.3333 (iii) 9.3333 (iv) 0.3333 (v) 2.3333
-

9. $\log_{16} 32 =$

- (i) 1.25 (ii) 2.25 (iii) 9.25 (iv) 0.25 (v) 3.25
-

10. $\log_{10000} 100 =$

- (i) 7.5 (ii) 0.5 (iii) 8.5 (iv) 1.5 (v) 2.5
-

11. $\log_{49} 343 =$

- (i) 2.5 (ii) 9.5 (iii) 1.5 (iv) 3.5 (v) 0.5
-

12. $\log_{256} 1024 =$

- (i) 2.25 (ii) 1.25 (iii) 3.25 (iv) 0.25 (v) 9.25
-

13. The base of $\log_{10} 97$ is

- (i) 9 (ii) 13 (iii) 97 (iv) 10 (v) 8
-

14. The base of $\log_7 \frac{8}{9}$ is

- (i) 6 (ii)
- $\frac{8}{9}$
- (iii) 9 (iv) 4 (v) 7
-

15. The base of $\log_{4.00} 66.0000$ is

- (i) 66 (ii) 3 (iii) 4 (iv) 7 (v) 2
-

16. The base of $\log_4 63^3$ is

- (i) 1 (ii)
- 63^3
- (iii) 7 (iv) 3 (v) 4
-

17. The base of $\log_{\frac{1}{7}} 67$ is

- (i)
- $\frac{1}{7}$
- (ii) 67 (iii)
- $\frac{3}{7}$
- (iv)
- $(-\frac{1}{7})$
- (v)
- $\frac{1}{5}$
-

18. The base of $\log_{\frac{3}{5}} \frac{2}{21}$ is

- (i) 1 (ii)
- $\frac{3}{5}$
- (iii)
- $\frac{1}{5}$
- (iv)
- $\frac{2}{21}$
-

19. The base of $\log_{20} 7$ is

$$\frac{1}{2}$$

(i) $\frac{3}{2}$ (ii) $\frac{1}{2}$ (iii) 20^7 (iv) 1 (v) $(-\frac{1}{2})$

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

(i) $\log 2^2$ (ii) $\log 5^2$ (iii) $\log 5$

(iv) $\log 5^3$ (v) $\log 8^2$

21. $\log 54 + \log 51 =$

(i) $\log 2754$ (ii) $\log 2754^2$ (iii) $\log 2752$

(iv) $\log 2753$ (v) $\log 2756$

22. $\log \frac{7}{9} + \log \frac{3}{4} =$

(i) $\log \frac{7}{12}$ (ii) $\log \frac{5}{12}$ (iii) $\log \frac{7}{10}$

(iv) $\log \frac{3}{4}$ (v) $\log \left(\frac{7}{12}\right)^2$

23. $\log \frac{3}{5} + \log \frac{13}{21} =$

(i) $\log \frac{13}{33}$ (ii) $\log \frac{13}{35}$ (iii) $\log \frac{11}{35}$

(iv) $\log \left(\frac{13}{35}\right)^2$ (v) $\log \frac{3}{7}$

24. $\log 10^4 + \log 10^3 =$

(i) $\log 12^7$ (ii) $\log 10^7$ (iii) $\log 10^8$

(iv) $\log 7^7$ (v) $\log 10^6$

25. $\log 14^6 + \log 14^2 =$

(i) $\log 14^9$ (ii) $\log 14^7$ (iii) $\log 12^8$

(iv) $\log 17^8$ (v) $\log 14^8$

26. $\log 8.0000 + \log 9.0000 =$

(i) $\log 72.0000$ (ii) $\log 70.0000$ (iii) $\log 73.0000$

(iv) $\log 71.0000$ (v) $\log 74.0000$

27. $\log 2.0000 + \log 82.0000 =$

(i) $\log 162.0000$ (ii) $\log 165.0000$ (iii) $\log 166.0000$

(iv) $\log 163.0000$ (v) $\log 164.0000$

28. $\log 6 + \log 3 =$

(i) $\log 18$ (ii) $\log 21$ (iii) $\log 18^2$

(iv) $\log 16$ (v) $\log 17$

29. $\log 100 + \log 61 =$

(i) $\log 6102$ (ii) $\log 6097$ (iii) $\log 6100$

(iv) $\log 6099$ (v) $\log 6100^2$

30. $\log \frac{6}{11} + \log \frac{5}{27} =$

(i) $\log \frac{8}{99}$ (ii) $\log \frac{10}{97}$ (iii) $\log \frac{10}{99}$

(iv) $\log \left(\frac{10}{99}\right)^2$ (v) $\log \frac{4}{33}$

31. $\log 86^2 + \log 86^{10} =$

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

(iv) $\log 86^{11}$ (v) $\log 86^{12}$

32. $\log 22.0800 + \log 17.6200 =$

(i) $\log 389.0496$ (ii) $\log 388.0496$ (iii) $\log 390.0496$

(iv) $\log 387.0496$ (v) $\log 391.0496$

33. $\log 73 + \log 31 =$

(i) $\log 2266$ (ii) $\log 2263^2$ (iii) $\log 2262$

(iv) $\log 2263$ (v) $\log 2261$

34. $\log \frac{15}{56} + \log \frac{3}{15} =$

(i) $\log \frac{1}{18}$ (ii) $\log \frac{3}{56}$ (iii) $\log \frac{1}{56}$

(iv) $\log \frac{5}{56}$ (v) $\log \left(\frac{3}{56} \right)^2$

35. $\log 18^3 + \log 18^6 =$

(i) $\log 18^{10}$ (ii) $\log 18^8$ (iii) $\log 15^9$

(iv) $\log 21^9$ (v) $\log 18^9$

36. $\log 92.5100 + \log 100.4300 =$

(i) $\log 9290.7793$ (ii) $\log 9291.7793$ (iii) $\log 9289.7793$

(iv) $\log 9288.7793$ (v) $\log 9292.7793$

37. $\log 98.0000 + \log 71.0000 =$

(i) $\log 6959.0000$ (ii) $\log 6956.0000$ (iii) $\log 6957.0000$

(iv) $\log 6958.0000$ (v) $\log 6960.0000$

38. $\log 0.6379 + \log 0.3750 =$

(i) $\log 7.2392$ (ii) $\log 2.2392$ (iii) $\log 1.2392$

(iv) $\log 8.2392$ (v) $\log 0.2392$

39. $\log 17^3 + \log 17^5 =$

(i) $\log 15^8$ (ii) $\log 17^9$ (iii) $\log 17^7$

(iv) $\log 17^8$ (v) $\log 19^8$

40. $\log 29.9400 + \log 58.6100 =$

(i) $\log 1754.7834$ (ii) $\log 1752.7834$ (iii) $\log 1756.7834$

(iv) $\log 1755.7834$ (v) $\log 1753.7834$

41. $\log 92 - \log 15 =$

(i) $\log \frac{92}{13}$ (ii) $\log \left(\frac{92}{15}\right)^2$ (iii) $\log \frac{94}{15}$

(iv) $\log \frac{92}{15}$ (v) $\log 6$

42. $\log \frac{29}{41} - \log \frac{53}{55} =$

(i) $\log \frac{1595}{2171}$ (ii) $\log \left(\frac{1595}{2173}\right)^2$ (iii) $\log \frac{1593}{2173}$

(iv) $\log \frac{1597}{2173}$ (v) $\log \frac{1595}{2173}$

43. $\log 1 - \log 1 =$

(i) $\log 2^{-4}$ (ii) $\log 1$ (iii) $\log (-2)^{-4}$

(iv) $\log 3^{-4}$

44. $\log 78.0000 - \log 57.0000 =$

(i) $\log 9.3684$ (ii) $\log 3.3684$ (iii) $\log 0.3684$

(iv) $\log 1.3684$ (v) $\log 2.3684$

45. $\log 8 - \log 62 =$

(i) $\log \left(\frac{4}{31} \right)^2$ (ii) $\log \frac{2}{31}$ (iii) $\log \frac{6}{31}$

(iv) $\log \frac{4}{29}$ (v) $\log \frac{4}{31}$

46. $\log \frac{10}{27} - \log \frac{9}{86} =$

(i) $\log \frac{862}{243}$ (ii) $\log \left(\frac{860}{243} \right)^2$ (iii) $\log \frac{860}{241}$

(iv) $\log \frac{860}{243}$ (v) $\log \frac{286}{81}$

47. $\log 98^8 - \log 98^3 =$

(i) $\log 95^5$ (ii) $\log 100^5$ (iii) $\log 98^4$

(iv) $\log 98^5$ (v) $\log 98^6$

48. $\log 79.4400 - \log 65.5300 =$

(i) $\log 3.2123$ (ii) $\log 1.2123$ (iii) $\log 9.2123$

(iv) $\log 0.2123$ (v) $\log 2.2123$

49. $\log 42 - \log 4 =$

(i) $\log \frac{23}{2}$ (ii) $\log \frac{19}{2}$ (iii) $\log \left(\frac{21}{2} \right)^2$

(iv) $\log 21$ (v) $\log \frac{21}{2}$

50. $\log \frac{4}{6} - \log \frac{38}{68} =$

(i) $\log \frac{68}{55}$ (ii) $\log \left(\frac{68}{55} \right)^2$ (iii) $\log \frac{22}{19}$

$$(iv) \log \frac{70}{57} \quad (v) \log \frac{68}{57}$$

$$51. \log 13^{10} - \log 13^6 =$$

$$(i) \log 13^4 \quad (ii) \log 13^5 \quad (iii) \log 11^4$$

$$(iv) \log 15^4 \quad (v) \log 13^3$$

$$52. \log 17.8600 - \log 77.1100 =$$

$$(i) \log 0.2316 \quad (ii) \log 1.2316 \quad (iii) \log 7.2316$$

$$(iv) \log 8.2316 \quad (v) \log 2.2316$$

$$53. \log 87.0000 - \log 91.0000 =$$

$$(i) \log 0.9560 \quad (ii) \log 2.9560 \quad (iii) \log 8.9560$$

$$(iv) \log 7.9560 \quad (v) \log 1.9560$$

$$54. \log 0.1081 - \log 0.1481 =$$

$$(i) \log 8.7297 \quad (ii) \log 1.7297 \quad (iii) \log 2.7297$$

$$(iv) \log 0.7297 \quad (v) \log 7.7297$$

$$55. \log 85^5 - \log 85^5 =$$

$$(i) \log 85^3 \quad (ii) \log 85^{-1} \quad (iii) \log 1$$

$$(iv) \log 85 \quad (v) \log 85^{-3}$$

$$56. \log 8.7000 - \log 92.6600 =$$

$$(i) \log 8.0939 \quad (ii) \log 2.0939 \quad (iii) \log 7.0939$$

$$(iv) \log 1.0939 \quad (v) \log 0.0939$$

57. The logarithmic notation of $9^4 = 6561$ is

(i) $\log_7 6559 = 4$

(ii) $\log_9 6560 = 4$

(iii) $\log_9 6563 = 4$

(iv) $\log_9 6561 = 4$

(v) $\log_9 6561^2 = 4$

58. The base exponent form of $\log_4 256 = 4$ is

(i) $6^4 = 256$ (ii) $4^3 = 256$ (iii) $4^4 = 256$

(iv) $4^5 = 256$

59. $\log_5 12^6 =$

(i) $7 \log_5 12$ (ii) $\log_3 9^6$ (iii) $6 \log_5 15$

(iv) $5 \log_5 12$ (v) $6 \log_5 12$

60. $\log_{\frac{7}{8}} 29^7 =$

(i) $6 \log_{\frac{7}{8}} 29$ (ii) $7 \log_{\frac{7}{8}} 31$ (iii) $\log_{\frac{5}{8}} 26^7$

(iv) $8 \log_{\frac{7}{8}} 29$ (v) $7 \log_{\frac{7}{8}} 29$

61. $\log_{8^8} 89^2 =$

(i) $\log_{86} 2$ (ii) $2 \log_{92}$ (iii) $\log_{89}$

$$5^8$$

$$8^8$$

$$8^8$$

$$(iv) 2 \log_{8^8} 89 \quad (v) 3 \log_{8^8} 89$$

$$62. \log_{\frac{181}{20}} 33^7 =$$

$$(i) 7 \log_{\frac{181}{20}} 35 \quad (ii) 6 \log_{\frac{181}{20}} 33 \quad (iii) \log_{\frac{179}{20}} 30^7$$

$$(iv) 8 \log_{\frac{181}{20}} 33 \quad (v) 7 \log_{\frac{181}{20}} 33$$

$$63. \log_{10} \frac{12}{35} =$$

$$(i) 2 \log 2 + 2 \log 3 - \log 5 - \log 7$$

$$(ii) 2 \log 2 + \log 2 - \log 5 - \log 7$$

$$(iii) 2 \log 2 + \log 3 - \log 5 - \log 10$$

$$(iv) 2 \log 2 + \log 3 - \log 3 - \log 7$$

$$(v) 2 \log 2 + \log 3 - \log 5 - \log 7$$

$$64. \log_{10} \frac{245}{81} =$$

$$(i) \log 5 + \log 7 - 4 \log 3$$

$$(ii) 2 \log 5 + 2 \log 7 - 4 \log 3$$

$$(iii) \log 5 + 2 \log 7 - 2 \log 3$$

$$(iv) \log 5 + 2 \log 7 - 4 \log 3$$

$$(v) \log 5 + 2 \log 7 - 4 \log 5$$

$$65. \log_{10} 100 =$$

$$(i) \log 2 + 2 \log 5$$

(ii) $2 \log 2 + 2 \log 5$

(iii) $2 \log 2 + 2 \log 2$

(iv) $2 \log 2 + 2 \log 7$

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

66. $\log_{10} 1920 =$

(i) $7 \log 2 + \log 3 + \log 5$

(ii) $8 \log 2 + \log 3 + \log 5$

(iii) $7 \log 2 + \log 2 + \log 5$

(iv) $7 \log 2 + \log 3 + \log 7$

(v) $7 \log -1 + \log 3 + \log 5$

67. $\log 988 =$

(i) $76 \log 13$ (ii) $\log 13 \div \log 76$

(iii) $\log 13 + \log 76$ (iv) $\log 13 \times \log 76$

(v) $\log 13 - \log 76$

68. $\log \frac{12}{62} =$

(i) $62 \log 12$ (ii) $\log 12 + \log 62$

(iii) $\log 12 - \log 62$ (iv) $\log 12 \div \log 62$

(v) $\log 12 \times \log 62$

69. $\log_2 \frac{7}{68} =$

(i) $\log \frac{7}{68} - \log 2$ (ii) $\log \frac{7}{68} \times \log 2$

(iii) $\log \frac{7}{68} + \log 2$ (iv) $\log \frac{7}{68} \div \log 2$

(v) $\frac{7}{68}$

$$\log 2 \div \log 3$$

70. $\log_3 11 =$

(i) $\log 11 - \log 3$ (ii) $\log 11 + \log 3$

(iii) $\log 11 \times \log 3$ (iv) $\log 11 \div \log 3$

(v) $\log 3 \div \log 11$

71. $\log_{8.05} 49.5600 =$

(i) $\log 49.5600 - \log 8.05$ (ii) $\log 8.05 \div \log 49.5600$

(iii) $\log 49.5600 \times \log 8.05$ (iv) $\log 49.5600 + \log 8.05$

(v) $\log 49.5600 \div \log 8.05$

72. $\log_3 \frac{3}{4} =$

(i) $\log \frac{3}{17} \div \log \frac{3}{4}$ (ii) $\log \frac{3}{17} - \log \frac{3}{4}$

(iii) $\log \frac{3}{17} \times \log \frac{3}{4}$ (iv) $\log \frac{3}{17} + \log \frac{3}{4}$

(v) $\log \frac{3}{4} \div \log \frac{3}{17}$

73. $\log_4 73^8 =$

(i) $8 \log 73 + 7 \log 4$ (ii) $8 \log 73 \times 7 \log 4$

(iii) $7 \log 4 \div 8 \log 73$ (iv) $8 \log 73 - 7 \log 4$

(v) $8 \log 73 \div 7 \log 4$

74. $\log_2 86^5 =$

(i) $\frac{5}{2} \log_2 89$ (ii) $\frac{5}{2} \log_2 85$ (iii) $5 \log_2 86$

(iv) $\frac{5}{2} \log_{-1} 83$ (v) $\frac{5}{2} \log_2 86$

75. $\log_{10} 19 =$

(i) $\log_{19} 73 \div \log_{10} 73$ (ii) $\log_{10} 73 \times \log_{19} 73$

(iii) $\log_{10} 73 + \log_{19} 73$ (iv) $\log_{10} 73 - \log_{19} 73$

(v) $\log_{10} 73 \div \log_{19} 73$

76. $\log_{10} 30 =$

(i) $\log_9 30 \div \log_{10} 9$ (ii) $\log_9 30 \times \log_{10} 9$

(iii) $\log_9 30 - \log_{10} 9$ (iv) $\log_{10} 9 \div \log_9 30$

(v) $\log_9 30 + \log_{10} 9$

77. $\log_{11} \frac{34}{6} =$

(i) 6.6667 (ii) 5.6667 (iii) 7.6667 (iv) 3.6667 (v) 4.6667

Assignment Key

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

- 56) (v)
- 57) (iv)
- 58) (iii)
- 59) (v)
- 60) (v)
- 61) (iv)
- 62) (v)
- 63) (v)
- 64) (iv)
- 65) (ii)
- 66) (i)
- 67) (iii)
- 68) (iii)
- 69) (iv)
- 70) (iv)
- 71) (v)
- 72) (i)
- 73) (v)
- 74) (v)
- 75) (v)
- 76) (ii)
- 77) (ii)