EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Real Numbers

Grade : SSC Grade X



1. $log\,24 + log\,10 =$

   (i) $log\,240$ (ii) $log\,239$ (iii) $log\,240^2$ (iv) $log\,237$ (v) $log\,242$

2. Find the exponential notation of
   $-16 \times -16 \times -16 \times -16 \times -16$

   (i) $(-13)^5$ (ii) $(-16)^6$ (iii) $(-16)^4$ (iv) $(-19)^5$ (v) $(-16)^5$

3. Solve $\frac{log\,x}{log\,3} = \frac{log\,25}{log\,\frac{1}{5}}$

   (i) $\frac{1}{9}$ (ii) $\frac{1}{11}$ (iii) $\frac{1}{3}$ (iv) $\frac{1}{7}$ (v) $(\frac{-1}{9})$

4. Find the prime factorization of 93

   (i) $3^2 \times 31$ (ii) $2 \times 31$ (iii) $6 \times 31$ (iv) $3 \times 29$ (v) $3 \times 31$

5. Simplify the expression $\left(\frac{7}{2}\right)_2 \times \left(\frac{4}{3}\right)_2 \times \left(\frac{9}{8}\right)_2$

   (i) $\left(\frac{153}{26}\right)_2$ (ii) $\left(\frac{133}{22}\right)_2$ (iii) $\left(\frac{143}{24}\right)_2$ (iv) $\left(\frac{143}{24}\right)_4$ (v) $\left(\frac{47}{8}\right)_2$

6. Find the period of the recurring decimal $30.55555555555555...$

   (i) 50 (ii) 0 (iii) 2 (iv) 5 (v) 1

7. Find the HCF of $\{1020,960,3000\}$

   (i) 63 (ii) 60 (iii) 59 (iv) 57 (v) 61

8. The base in the term $\left(\frac{9}{2}\right)_2$ is

   (i) -1 (ii) 2 (iii) $(\frac{-9}{2})$ (iv) $\frac{9}{2}$ (v) -2

9. Find the HCF of $\{18,14\}$

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

10. Convert the non-terminating recurring decimal $3.\overline{259}$ to rational number

(i) $\frac{88}{27}$ (ii) $\frac{10}{3}$ (iii) $\frac{88}{25}$ (iv) $\frac{86}{27}$ (v) $\frac{88}{29}$

11. $log\,82^{9} + log\,82^{6} =$

(i) $log\,82^{15}$ (ii) $log\,85^{15}$ (iii) $log\,82^{14}$ (iv) $log\,79^{15}$ (v) $log\,82^{16}$

12. Simplify the expression $\left(\frac{4}{3}\right)^{(-7/9)} \times \left(\frac{4}{3}\right)^{(-7/9)}$

(i) $\left(\frac{4}{3}\right)^{(-14/11)}$ (ii) $2^{\left(\frac{-14}{9}\right)}$ (iii) $\left(\frac{4}{3}\right)^{-2}$ (iv) $\left(\frac{2}{3}\right)^{(-14/9)}$ (v) $\left(\frac{4}{3}\right)^{(-14/9)}$

13. Find the value of $x$ if $log_{3} x = 2$

(i) 7 (ii) 8 (iii) 10 (iv) 12 (v) 9

14. 3.437 =

(i) $\frac{3437}{100}$ (ii) $\frac{3437}{10000}$ (iii) $\frac{3437}{1000}$ (iv) $\frac{3437}{10}$ (v) $\frac{3437}{100000}$

15. $log\,\frac{9}{23} + log\,\frac{3}{26} =$

(i) $log\left(\frac{27}{598}\right)^{2}$ (ii) $log\,\frac{25}{598}$ (iii) $log\,\frac{27}{596}$ (iv) $log\,\frac{29}{598}$ (v) $log\,\frac{27}{598}$

16. Simplify the expression $2^{-6} \times 2^{-9} \times 2^{-3}$

(i) $2^{-19}$ (ii) $2^{-21}$ (iii) $2^{-18}$ (iv) $4^{-18}$ (v) $2^{-17}$

17. $log_{512} 64 =$

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

18. Convert the fraction $\frac{113}{27}$ to non-terminating recurring decimal

(i) $0.4\overline{185}$ (ii) $41.\overline{851}$ (iii) $0.04\overline{185}$ (iv) $418.\overline{518}$ (v) $4.\overline{185}$

19. $log_{125} 25 =$

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

20. $log_3 9 =$

(i) $log_6 9 - log_3 6$ (ii) $log_3 6 \div log_6 9$ (iii) $log_6 9 + log_3 6$ (iv) $log_6 9 \times log_3 6$ (v) $log_6 9 \div log_3 6$

21. Simplify the expression $(-3)^3 \times (-3)^2 \times (-3)^7$

(i) $(-6)^{12}$ (ii) $(-3)^{12}$ (iii) $(-3)^{11}$ (iv) $(-3)^{14}$ (v) $(-3)^{13}$

22. Which of the following is a decimal fraction?

(i) $14\frac{8}{13}$ (ii) $\frac{11}{7}$ (iii) $\frac{9}{10000}$ (iv) $\frac{2}{9}$ (v) $13\frac{6}{19}$

23. The base of $log_{\frac{4}{5}} 32$ is

(i) $\frac{6}{5}$ (ii) $32$ (iii) $\frac{4}{3}$ (iv) $\frac{2}{5}$ (v) $\frac{4}{5}$

24. $log \frac{1}{2} + log \frac{3}{5} =$

(i) $log \frac{3}{8}$ (ii) $log \frac{3}{10}$ (iii) $log \frac{1}{10}$ (iv) $log \frac{1}{2}$ (v) $log \left(\frac{3}{10}\right)^2$

25. Express $\frac{8219}{10000}$ as a decimal correct to 4 decimal places

(i) 0.8219 (ii) 0.9219 (iii) 0.6219 (iv) 8.219 (v) 0.0822

## Assignment Key

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|---|---|---|---|---|---|
| 1) (i) | 2) (v) | 3) (i) | 4) (v) | 5) (iii) | 6) (iv) |
| 7) (ii) | 8) (ii) | 9) (v) | 10) (i) | 11) (i) | 12) (v) |
| 13) (v) | 14) (iii) | 15) (v) | 16) (iii) | 17) (iv) | 18) (v) |
| 19) (i) | 20) (iv) | 21) (ii) | 22) (iii) | 23) (v) | 24) (ii) |
| 25) (i) | | | | | |