EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Real Numbers

Grade : SSC Grade X

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1. $log_{\frac{203}{100}} 10^2 =$

(i) $2 log_{\frac{203}{100}} 13$ (ii) $2 log_{\frac{203}{100}} 10$ (iii) $log_{\frac{203}{100}} 10$ (iv) $log_{\frac{201}{100}} 7^2$ (v) $3 log_{\frac{203}{100}} 10$

2. Express $log \frac{p}{q^5}$ in terms of $log\, p$ and $log\, q$

(i) $\frac{\frac{1}{5} log\, p}{log\, q}$ (ii) $log\, p - 5 log\, q$ (iii) $5 log\, q - log\, p$ (iv) $log\, p + 5 log\, q$

3. Simplify the expression $2^3 \times 2^{\left(\frac{5}{3}\right)}$

(i) $5^{\left(\frac{14}{3}\right)}$ (ii) $2^{\left(\frac{14}{3}\right)}$ (iii) 2^6 (iv) 2^4 (v) $2^{\left(\frac{22}{5}\right)}$

4. Convert the non-terminating recurring decimal $0.\overline{3}$ to rational number

(i) $\frac{1}{3}$ (ii) $\frac{1}{5}$ (iii) 1 (iv) $\left(\frac{-1}{3}\right)$

5. $log_{10^{10}} 24^2 =$

(i) $2 log\, 24 \times 10 log\, 10$ (ii) $2 log\, 24 \div 10 log\, 10$ (iii) $10 log\, 10 \div 2 log\, 24$ (iv) $2 log\, 24 - 10 log\, 10$

(v) $2 log\, 24 + 10 log\, 10$

6. Simplify the expression $(-8)^{\left(\frac{-5}{7}\right)} \times (-8)^{\left(\frac{-6}{5}\right)}$

(i) $(-10)^{\left(\frac{-67}{35}\right)}$ (ii) $(-8)^{\left(\frac{-69}{37}\right)}$ (iii) $(-8)^{\left(\frac{-65}{33}\right)}$ (iv) $(-5)^{\left(\frac{-67}{35}\right)}$ (v) $(-8)^{\left(\frac{-67}{35}\right)}$

7. If $(x^2+y^2)=18xy$, then $log(x-y)=$

(i) $\frac{1}{2}log\,x+\frac{1}{2}log\,y-log\,4$ (ii) $\frac{1}{2}log\,x-\frac{1}{2}log\,y-log\,4$ (iii) $\frac{1}{2}log\,x+\frac{1}{2}log\,y+log\,4$

(iv) $\frac{1}{2}log\,x-\frac{1}{2}log\,y+log\,4$

8. Which of the following is true?

a) $8.1300\times(19.9200-20.7100)=(8.1300\times19.9200)-(8.1300\times20.7100)$
b) $19.9200-(20.7100\times2.2300)=(19.9200-20.7100)\times(19.9200-2.2300)$
c) $2.2300\times(8.1300+19.9200)=(2.2300\times8.1300)+(2.2300\times19.9200)$
d) $20.7100\div(2.2300+8.1300)=(20.7100\div2.2300)+(20.7100\div8.1300)$

(i) {b,d,a} (ii) {a,c} (iii) {d,c} (iv) {b,c,a} (v) {b,a}

9. $log_{343}2401=$

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

10. $log_{5^4}3^8=$

(i) $log_{3^4}3^5$ (ii) $7\,log_{5^4}3$ (iii) $8\,log_{5^4}3$ (iv) $8\,log_{5^4}6$ (v) $9\,log_{5^4}3$

11. $log\frac{7}{8}-log\frac{16}{49}=$

(i) $log\frac{341}{128}$ (ii) $log\frac{49}{18}$ (iii) $log\left(\frac{343}{128}\right)^2$ (iv) $log\frac{345}{128}$ (v) $log\frac{343}{128}$

12. The base of $log_{10}\frac{31}{36}$ is

(i) 12 (ii) 9 (iii) $\frac{31}{36}$ (iv) 10 (v) 7

13. $log\,36.5000-log\,41.0300=$

(i) $log\,0.8896$ (ii) $log\,2.8896$ (iii) $log\,7.8896$ (iv) $log\,8.8896$ (v) $log\,1.8896$

14. Find the HCF of {300,330}

(i) 30 (ii) 31 (iii) 28 (iv) 33 (v) 29

15. Express $log\ p^2q^5$ in terms of $log\,p$ and $log\,q$

(i) $2\,log\,p+5\,log\,q$ (ii) $5\,log\,q-2\,log\,p$ (iii) $2\,log\,p-5\,log\,q$ (iv) $\frac{\frac{2}{5}log\,p}{log\,q}$

16. The base of $log_{6.00} 81.0000$ is

(i) 81 (ii) 5 (iii) 8 (iv) 4 (v) 6

Find the exponential notation of

17. $\frac{7}{5} \times \frac{7}{5} \times \frac{7}{5} \times \frac{7}{5} \times \frac{7}{5} \times \frac{7}{5}$

(i) $\left(\frac{7}{5}\right)^5$ (ii) $\left(\frac{7}{5}\right)^7$ (iii) $\left(\frac{9}{5}\right)^6$ (iv) 1 (v) $\left(\frac{7}{5}\right)^6$

18. $log_{10} \frac{448}{1125} =$

(i) $6\,log\,2 + log\,6 - 2\,log\,3 - 3\,log\,5$ (ii) $6\,log\,2 + log\,7 - -1\,log\,3 - 3\,log\,5$ (iii) $7\,log\,2 + log\,7 - 2\,log\,3 - 3\,log\,5$

(iv) $6\,log\,2 + log\,7 - 2\,log\,6 - 3\,log\,5$ (v) $6\,log\,2 + log\,7 - 2\,log\,3 - 3\,log\,5$

19. $log\,5.1000 + log\,28.3200 =$

(i) $log\,144.4320$ (ii) $log\,142.4320$ (iii) $log\,145.4320$ (iv) $log\,143.4320$ (v) $log\,146.4320$

20. $log_{7^9} 83^7 =$

(i) $\frac{7}{9} log_5 80$ (ii) $\frac{14}{9} log_7 83$ (iii) $\frac{7}{9} log_7 86$ (iv) $\frac{7}{9} log_7 83$ (v) $\frac{7}{9} log_7 82$

21. The exponent in the term $7^{\left(\frac{9}{5}\right)}$ is

(i) $\frac{7}{1}$ (ii) $\frac{9}{5}$ (iii) -7 (iv) $\left(\frac{-9}{5}\right)$ (v) $\frac{7}{5}$

Find the exponential notation of

22. $\left(\frac{-7}{6}\right) \times \left(\frac{-7}{6}\right) \times \left(\frac{-7}{6}\right) \times \left(\frac{-7}{6}\right) \times \left(\frac{-7}{6}\right)$

(i) $\left(\frac{-7}{6}\right)^5$ (ii) $\left(\frac{-5}{6}\right)^5$ (iii) $\left(\frac{-3}{2}\right)^5$ (iv) $\left(\frac{-7}{6}\right)^6$ (v) $\left(\frac{-7}{6}\right)^4$

23. Find the exponential notation of
$15 \times 15 \times 15 \times 15$

(i) 12^4 (ii) 15^3 (iii) 15^4 (iv) 17^4 (v) 15^5

24. $log\,37.0000 - log\,76.0000 =$

(i) $log\,7.4868$ (ii) $log\,2.4868$ (iii) $log\,0.4868$ (iv) $log\,8.4868$ (v) $log\,1.4868$

25. Express $\frac{5}{6}$ as a decimal correct to 1 decimal places

(i) 0.8 (ii) 0.9 (iii) 0.6 (iv) 1 (v) 0.7

Assignment Key

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

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