



INDIAN SCHOOL NIZWA - WORKSHEET

Ch. 1 NUMBERS AND QUANTIFICATION

Name:

Class : XI Sec: B

Multiple choice questions

- The value of $512^{\left(-\frac{2}{3}\right)}$ is
(a) $\frac{1}{16}$ (b) $\frac{1}{64}$ (c) $\frac{1}{32}$ (d) $\frac{1}{8}$
- The value of $\left(\frac{32}{243}\right)^{\left(-\frac{4}{5}\right)}$ is
(a) $\frac{9}{4}$ (b) $\frac{4}{9}$ (c) $\frac{16}{81}$ (d) $\frac{81}{16}$
- The value of $5^{\frac{1}{4}} \times 125^{0.25}$ is
(a) $\sqrt{5}$ (b) 5 (c) $5\sqrt{5}$ (d) 625
- $256^{0.16} \times 256^{0.09}$ is equal to
(a) 4 (b) 16 (c) 32 (d) 64
- If $\sqrt{2^n} = 64$, then the value of n is
(a) 2 (b) 4 (c) 8 (d) 12
- If $8^{x+1} = 64$, then the value of 3^{2x+1} is
(a) 27 (b) 3 (c) 9 (d) 15
- Characteristic of $\log 436.6$ is
(a) 1 (b) 2 (c) 3 (d) 4
- If $\log 520.4 = 2.7163$ and $\log x = \bar{3}.7163$, then the value of x is
(a) 0.005204 (b) 0.0007163 (c) 5.204 (d) 0.07163
- If $3^x - 3^{x-1} = 18$, then the value of x^x is
(a) 8 (b) 27 (c) 64 (d) 216
- The value of $\log_{\sqrt{2}} 32$ is
(a) $\frac{1}{5}$ (b) 5 (c) 10 (d) $\frac{1}{10}$
- If $\log_5 0.04 = x$, then the value of x is
(a) 1 (b) 4 (c) -4 (d) -2
- If $\log_x 4 = \frac{1}{4}$, then the value of x is
(a) 4 (b) 36 (c) 64 (d) 256
- Convert the given decimal numbers to binary numbers.
i) 845 ii) 394 iii) 569 iv) 946 v) 217.8125 vi) 59.36

14.	Convert the given binary numbers to decimal numbers. i) $(1101)_2$ ii) $(100001)_2$ iii) $(110101)_2$ iv) $(101.1101)_2$ v) $(101001.10111)_2$ vi) $(110011.011)_2$
15.	Find the value of x , if $\log(x + 5) + \log(x - 5) = 4\log 2 + 2\log 3$
16.	If $\log_a m = n$, express a^{n-1} in terms of a and m .
17.	Solve for x if $\log(x - 1) + \log(x + 1) = \log 1$
18.	Express $\log(75/16) - 2\log(5/9) + \log(32/243)$ in terms of $\log 2$ and $\log 3$.
19.	Express $2\log x + 3\log y = \log a$ in logarithm free form.
20.	Prove that: $2\log(15/18) - \log(25/162) + \log(4/9) = \log 2$
21.	Find the value of $\log_{2\sqrt{3}} 1728$.
22.	Simplify: $\frac{3^{-5} \times 10^{-5} \times 125}{5^{-7} \times 6^{-5}}$
23.	If $a^x = b$, $b^y = c$, $c^z = a$, then show that $xyz = 1$
24.	If $\frac{9^n \times 3^2 \times 3^n - 27^n}{(2 \times 3^m)^3} = 3^{-3}$, then show that: $m - n = 1$
25.	Simplify and express the result in power notation with positive exponent. i) $(-4)^5 \div (-4)^8$ ii) $\left(\frac{1}{2^3}\right)^2$ iii) $(-3)^4 \times \left(\frac{5}{3}\right)^4$ iv) $(3^{-7} \div 3^{-10}) \times 3^{-5}$ v) $2^{-3} \times (-7)^{-3}$