

I. Multiple choice questions: 6x1=6

1. The square root of 81 is _____.
a) 7 b) 5 c) 8 d) 9
2. ____ is the inverse operation of cube.
a) Square root b) Cube root c) Perfect cube d) Perfect square
3. The ratio of 6m to 30km is _____.
a) 1:5000 b) 1:500 c) 1:5 d) 1:50
4. Two quantities p and q are said to be in inverse proportion when ____
(∴ k is constant)
a) $\frac{p}{q} = k$ b) $pq = k$ c) $(p + q) = k$ d) $(p - q) = k$
5. If $m = n^2$, then square root of m is _____.
a) n^2 b) n c) mn d) mn^2
6. If m and n are two integers then $\sqrt[3]{m} \times \sqrt[3]{n} =$ _____.
a) $\sqrt[3]{m} \times \sqrt[3]{n}$ b) $\sqrt[3]{m} + \sqrt[3]{n}$ c) $\sqrt[3]{mn}$ d) Both a & c

II. Answer the following: 5x2=10

7. Express 169 as the sum of 13 odd number.
8. If 33% of a number is 99. Find the number.
9. Find the cube root of 74088 through estimation method.
10. Find the square root of 144 by repeated subtraction method.
11. Observe the pattern & fill the?

$$\begin{array}{rclclcl} 1^3 & = & 1 & = & 1 \\ 2^3 & = & 8 & = & 3 + 5 \\ 3^3 & = & 27 & = & 7 + 9 + 11 \\ 4^3 & = & ? & = & ? \end{array}$$

III. Answer the following: 4x3=12

12. Find a pythagorean triplet one of whose number is 12.
13. Find the cube root of 5832 by prime factorisation method.
14. A car covers 400 km at constant speed in 5 hours. How much time will it take to cover 720 km at the same speed?
15. Find the square root of 9216 by long division method.

IV. Answer the following: 3x4=12

16. Find the smallest number of 1280 by which it should be multiplied so as to get a perfect square number. Also find the square root of the number so obtained.
17. If 40 workers can do a job in 15 hours, how many workers working at the same rate will be required to do the same job in 8 hours?
18. Construct a square whose side is 5.5cm.