



INDIAN SCHOOL AL WADI AL KABIR

Class VIII, Mathematics (2023-24)

Worksheet DTQ – CUBES & CUBEROOTS

SHORT ANSWER TYPE QUESTIONS- 7 QUESTIONS. (2 Marks each)

Q1.	If one side of a cube is 15m in length, find its volume.
Q2.	The product $864 \times n$ is a perfect cube. What is the smallest possible value of n.
Q3.	Evaluate $\sqrt[3]{2744} \div \sqrt[3]{8}$
Q4.	What will be the unit digit of the cube of each of the following numbers? a) 129, b) 980, c) 192, d) 704
Q5.	Find the value of $\frac{\sqrt[3]{27} \times \sqrt[3]{216}}{\sqrt[3]{729}}$
Q6.	Find the length of each side of a cube if its volume is 512cm^3 .
Q7.	Is 68600 a perfect cube? If not, find the smallest number by which 68600 must be multiplied to get a perfect cube.

SHORT ANSWER TYPE- 5 QUESTIONS. (3 Marks each)

Q8.	Find the smallest number by which each of the following numbers must be multiplied to get a perfect cube. a) 162 b) 3456
Q9.	Find the smallest number by which each of the following numbers must be divided to obtain a perfect cube. a) 2662 b) 5488
Q10.	Find the cube root of each of the following numbers by estimation method. (i) 12167 (ii) 262144
Q11.	Find the value of $\sqrt[3]{343} \times \sqrt[3]{64}$
Q12.	The volume of material used to make a cube is 4913 cm^3 . What is the length of the edge of the cube?

LONG ANSWER TYPE- 3 QUESTIONS. (4 Marks each)

Q.13	Deeksha made a cuboid of size $3\text{ cm} \times 3\text{ cm} \times 5\text{ cm}$. How many such cuboids will be required to make a cube?
Q14.	Three numbers are in the ratio 1:2:3 and the sum of their cubes is 4500. Find the numbers.
Q15.	Find the cube root of each of the following numbers by prime factorization method. (i) 64 (ii) 512 (iii) 10648

ANSWERS

Q1.	3375m ³	Q2.	2	Q3.	7	Q4.	a)9, b) 0, c)8; d)4
Q5.	1	Q6.	8cm	Q7.	No, 4	Q8.	a)36; b) 4
Q9.	a)2; b) 2	Q10.	i)23 ii) 64	Q11.	28	Q12.	17cm
Q13.	75	Q14.	5, 10, 15	Q15.	4, 8, 22		