



# INDIAN SCHOOL NIZWA - WORKSHEET

## Mathematics

### Chapter 7 Cubes and cube roots

Name:

Class : VIII Sec:

- Find the smallest number by which each of the following numbers must be divided to obtain a perfect cube. a) 5184 b) 11664 c) 2916
- Three numbers are in the ratio 1:2:3 and the sum of their cubes are 4500. Find the numbers.
- Find the side of the cube whose volume is a)  $17576 \text{ m}^3$  b)  $64 \text{ cm}^3$
- Deepiksha 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?
- Match the following:

Number		Unit digit in cube	
I.	45	A.	9
II.	87	B.	8
III.	56	C.	5
IV.	112	D.	3
V.	69	E.	6
- The dimensions of a cuboid are 7 cm, 2 cm and 7 cm respectively. Find the number of identical cuboids required to form a cube.
- Find the smallest three-digit number which is a perfect cube.
- Find the value of
  - $\sqrt[3]{343} \times \sqrt[3]{64}$
  - $\sqrt[3]{729} \times \sqrt[3]{27}$
- Find the cube roots by prime factorization method
  - 15625
  - 2744
  - $125/2197$
  - 5832
  - 64000
  - 12167
  - 262144
- What is the smallest number by which 288 must be multiplied so the product is a perfect cube?
- Find the cube of  $4/5$ .
- Show that 0.001728 is a cube of a rational number
- If the surface area of a cube is  $486 \text{ cm}^2$ , find its volume.
- Show that if a number is doubled, then its cube becomes eight times the cube of the given number
- Case study based question:**

Smart watches are a big innovation in the wearable industry, performing too many functions. The most common now a days is to count the number of steps. This has a big impact on health.



Gunjan noticed the number of steps she walked on her smart watch in the evening and found it to be 23, 328 steps.

- a) Is the given number a perfect cube?
- b) If not, then what is the smallest number to be multiplied to make it a perfect cube?
- c) What is the cube root of the resulting number.
- d) Find the one's digit in the cube of the number 9999.