INDIAN SCHOOL NIZWA- WORKSHEET

Chapter 1 A square and a cube (Questions based on cube)

Name: **Class :VIII Sec:**

Multiple choice questions

1. The cube of an even natural number is
   (a) odd (b) even (c) maybe odd, maybe even (d) prime number
2. Which of the following number is not a cube number?
   (a) 100000 (b) 3375 (c) 125 (d) 1331
3. The number of zeros at the end of the cube root of the cube number 1000000 is…
   (a) 2 (b) 3 (c) 4 (d) 1
4. If a number is doubled then which of the following is a correct statement?
   (a) Its cube is two times the cube of the given number.
   (b) Its cube is three times the cube of the given number.
   (c) Its cube is six times the cube of the given number.
   (d) Its cube is eight times the cube of the given number
5. **Assertion (A):** The cube root of a number is one-third of the cube of that number.
   Reason (R): Cube and cube root are inverse operations.
   (a) Both A and R are true, and R is the correct explanation of A.
   (b) Both A and R are true, but R is not the correct explanation of A.
   (c) A is true, but R is false.
   (d) A is false, but R is true.
6. **Assertion (A):** The cube of a negative number is negative.
   Reason (R): When a negative number is multiplied three times, the result is negative.
   (a) Both A and R are true and R is the correct explanation of A
   (b) Both A and R are true but R is not the correct explanation of A
   (c) A is true but R is false
   (d) A is false but R is true
7. 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
8. Find the side of the cube whose volume is a)l7576 m^3 b) 64 cm^3
9. Deepiksha made a cuboid of size 3 cmx 3 cm x 5 cm. How many such cuboids will be required to make a cube?
10. The cube of a two–digit number is 4096. Find the number using:
    (i) Prime factorization method
    (ii) Estimation method.
11. 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

12. Find the value of cube root of:

    a) $\frac{1}{343} \times \frac{1}{64}$

    b) $\frac{1}{729} \times \frac{1}{27}$

13. Find the cube roots by prime factorization method
    15625 b) 2744 c) 125/2197 d) 5832 e) 64000 f)12167 9)262144
14. What is the smallest number by which 288 must be multiplied so the product is a perfect cube?
15. Find the cube of 4/5.
16. Show that 0.001728 is a cube of a rational number
17. If the surface area of a cube is 486 cm^2, find its volume.
18. Show that if a number is doubled, then its cube becomes eight times the cube of the given number.
19. **Case study based question:**
    Smart watches are a big innovation in the wearable industry, performing too many functions. One of the most common trends these days is to count the number of steps. This has a big impact on health.

    

    Gunman 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.
20. **Case study based question:**
    Mohan has to prepare a physics project in form of a cubical box for a social work campaign but he had a cuboidal box of sides 4 cm, 2 cm, 4 cm. Now he has to change it in the form of cube so that he can complete his project. For this, he needed more cuboids so that he can make his project in form of cube.
    a) What is the volume of the cuboidal box?
    b) How many cuboids are needed more to make a cube?
21. Revision:
    a. Add: 12.58, 46.307, 9.82 and 0.605
    b. If 278.64 ÷ 32 = 8.7, then find the value of 2786.4 ÷ 0.32.
    c. Divide: 7 1/2 ÷ 3 3/4
    d. Multiply: 24.06 × 3.15
    e. Simplify: (-2)/9 × 3/(-6) × (-18)/5
    f. Subtract: (-7)/20 from 5/8
    g. Find the LCM of 18, 30, and 45
    h. Find: (–120) ÷ (–40) × (–36) + 28
    i. Find: 25 × (-6) × (-5) × (-2)