

CHAPTER-1 | A Square and A Cube

QUIZ
PART-15

1. What is the cube root of 343?

- A. 5
- B. 6
- C. 7
- D. 8 (C)

Explanation: $7^3 = 343$, so the cube root of 343 is 7.

2. What is the prime factorization of 3375?

- A. $3^2 \times 5^2$
- B. $3^3 \times 5^3$
- C. $3^3 \times 5^2$
- D. $3^2 \times 5^3$ (B)

Explanation: $3375 = 15^3 = 3^3 \times 5^3$.

3. Is 3375 a perfect cube?

- A. Yes
- B. No
- C. Sometimes
- D. Cannot say (A)

Explanation: $3375 = 15^3$, so it is a perfect cube.

4. Is 500 a perfect cube?

- A. Yes
- B. No
- C. Sometimes
- D. Cannot say (B)

Explanation: $500 = 2^2 \times 5^3$, and all prime factors are not in groups of three.

5. What is $\sqrt[3]{64}$?

- A. 2
- B. 4
- C. 6
- D. 8 (B)

Explanation: $4^3 = 64$, so $\sqrt[3]{64} = 4$.

6. What is $\sqrt[3]{512}$?

- A. 6
- B. 7
- C. 8
- D. 9 (C)

Explanation: $8^3 = 512$, so $\sqrt[3]{512} = 8$.

7. What is $\sqrt[3]{729}$?

- A. 7
- B. 8
- C. 9
- D. 10 (C)

Explanation: $9^3 = 729$, so $\sqrt[3]{729} = 9$.

8. Which method is used to check perfect cubes?

- A. Addition
- B. Prime factorization
- C. Subtraction
- D. Division by 2 only (B)

Explanation: Prime factorization helps check whether factors form groups of three.

9. In a perfect cube, prime factors appear in groups of how many?

- A. 2
- B. 3
- C. 4
- D. 5 (B)

Explanation: In a perfect cube, each prime factor appears in groups of three.

10. What are the learning outcomes of this part?

- A. Squares and decimals
- B. Cube roots and prime factorization of cubes
- C. Linear equations
- D. Angles and triangles (B)

Explanation: This part focuses on cube roots and prime factorization of cubes.