MATHS

NCERT - NCERT MATHEMATICS(ENGLISH)

CUBES AND CUBE ROOTS

Exercise 7 1

1. Find the smallest number by which each of the following numbers must be divided to

obtain a perfect cube.(i) 81 (ii) 128 (iii) 135 (iv) 192(v) 704

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2. Find the smallest number by which each of the following numbers must be multiplied to obtain a perfect cube.(i) 243 (ii) 256 (iii) 72 (iv) 675(v) 100

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3. Which of the following numbers are not perfect cubes?

(i) 216 (ii) 128 (iii) 1000

(iv) 100

(v) 46656

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4. Parikshit makes a cuboid of plasticine of sides 5 cm, 2 cm, 5 cm. How many such cuboids will he need to form a cube?

A. 22

B. 21

C. 23

D. 20

Answer: D

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Exercise 7 2

1. State true or false.

(i) Cube of any odd number is even.

(ii) A perfect cube does not end with two zeros.

(iii) If square of a number ends with 5, then its cube ends with 25.

(iv) There is no perfect cube which ends with 8.

(v) The cube of a two digit number may be a three digit number.

(vi) The cube of a two digit number may have seven or more digits.

(vii) The cube of a single digit number may be a single digit number.

2. You are told that 4913 is a perfect cube. Can you guess without factorisation what is its cube root?

3. Find the cube root of each of the following numbers by prime factorisation method.(i) 64 (ii) 512 (iii) 10648 (iv) 27000 (v) 15625

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Solved Examples

1. Find the cube root of 17576 through estimation.

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2. Is 243 a perfect cube?

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3. Is 392 a perfect cube? If not, find the smallest natural number by which 392 must be multiplied so that the product is a perfect cube.

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4. Is 53240 a perfect cube? If not, then by which smallest natural number should 53240 be divided so that the quotient is a perfect cube?

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5. Is 1188 a perfect cube? If not, by which smallest natural number should 1188 be divided so that the quotient is a perfect cube?

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6. Is 68600 a perfect cube? If not, find the smallest number by which 68600 must be multiplied to get a perfect cube.

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7. Find the cube root of 8000.

A. 30

B. 20

C. 40

D. 10

Answer: B

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8. Find the cube root of 13824 by prime factorisation method.

A. 24

B. 21

C. 22

D. 23

Answer: A

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