



# MATHS

## BOOKS - PSEB

### CUBES AND CUBE ROOTS

#### Example

1. Is 243 a perfect cube?



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





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4. 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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5. 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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6. Find the cube root of 8000.



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



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8. Find the cube root of 17576 through estimation.



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## Exercise

1. Which of the following numbers are not perfect cubes : 216



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2. Which of the following numbers are not perfect cubes : 128



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3. Which of the following numbers are not perfect cubes : 1000



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4. Which of the following numbers are not perfect cubes : 100



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5. Which of the following numbers are not perfect cubes : 46656



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6. Find the smallest number by which each of the following numbers must be multiplied to obtain a perfect cube : 243



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7. Find the smallest number by which each of the following numbers must be multiplied to obtain a perfect cube : 256



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8. Find the smallest number by which each of the following numbers must be multiplied to obtain a perfect cube : 72



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9. Find the smallest number by which each of the following numbers must be multiplied to obtain a perfect cube : 675



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**10.** Find the smallest number by which each of the following numbers must be multiplied to obtain a perfect cube : 100



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**11.** Find the smallest number by which each of the following numbers must be divided to obtain a perfect cube: 81



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**12.** Find the smallest number by which each of the following numbers must be divided to obtain a perfect cube: 128



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**13.** Find the smallest number by which each of the following numbers must be divided to obtain a perfect cube: 135



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**14.** Find the smallest number by which each of the following numbers must be divided to obtain a perfect cube: 192



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**15.** Find the smallest number by which each of the following numbers must be divided to obtain a perfect cube: 704



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**16.** 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?



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**17.** Find the cube root of each of the following numbers by prime factorisation method : 64



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**18.** Find the cube root of each of the following numbers by prime factorisation method : 512



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**19.** Find the cube root of each of the following numbers by prime factorisation method :  
10648



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**20.** Find the cube root of each of the following numbers by prime factorisation method :

27000



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**21.** Find the cube root of each of the following numbers by prime factorisation method :

15625



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**22.** Find the cube root of each of the following numbers by prime factorisation method :

13824



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**23.** Find the cube root of each of the following numbers by prime factorisation method :

110592



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**24.** Find the cube root of each of the following numbers by prime factorisation method :

46656



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**25.** Find the cube root of each of the following numbers by prime factorisation method :

175616



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**26.** Find the cube root of each of the following numbers by prime factorisation method :

91125



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**27.** State true or false : Cube of any odd number is even.



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**28.** State true or false : A perfect cube does not end with two zeros.



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**29.** State true or false : If square of a number ends with 5, then its cube ends with 25.



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**30.** State true or false : There is no perfect cube which ends with 8 .



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**31.** State true or false : The cube of a two digit number may be a three digit number.



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**32.** State true or false : The cube of a two digit number may have seven or more digits.



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**33.** State true or false : The cube of a single digit number may be a single digit number.



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**34.** You are told that 1,331 is a perfect cube. Can you guess without factorization what is its cube root? Similarly, guess the cube roots of 4913, 12167, 32768.



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