MATHS

BOOKS - MBD

CUBES AND CUBE ROOTS

Example

1. Find the one's digit of the cube of each of the following numbers.

3331

2. Find the one's digit of the cube of each of the following numbers.

8888

3. Find the one's digit of the cube of each of the following numbers.

149

4. Find the one's digit of the cube of each of the following numbers.

1005

5. Find the one's digit of the cube of each of the following numbers.

1024

6. Find the one's digit of the cube of each of the following numbers.

77

▶ **Watch Video Solution**

7. Find the one's digit of the cube of each of the following numbers.

5022

▶ **Watch Video Solution**

8. Find the one's digit of the cube of each of the following numbers.

53

▶ **Watch Video Solution**

9. Express the following numbers as the sum of odd numbers using the above pattern.

6^3

▶ **Watch Video Solution**

10. Express the following numbers as the sum of odd numbers using the above pattern.

8^3

11. Express the following numbers as the sum of odd numbers using the above pattern.

7^3.

12. Consider the following pattern:

$$2^3 - 1^3 = 1 + 2 \times 1 \times 3$$

$$3^3 - 2^3 = 1 + 3 \times 2 \times 3$$

$$4^3 - 3^3 = 1 + 4 \times 3 \times 3$$

Using the above pattern,find the value of the following :

$$7^3 - 6^3.$$

▶ **Watch Video Solution**

13. Consider the following pattern:

$$2^3 - 1^3 = 1 + 2 \times 1 \times 3$$

$$3^3 - 2^3 = 1 + 3 \times 2 \times 3$$

$$4^3 - 3^3 = 1 + 4 \times 3 \times 3$$

Using the above pattern,find the value of the following :

$$12^3 - 11^3.$$

14. Consider the following pattern:

$$2^3 - 1^3 = 1 + 2 \times 1 \times 3$$

$$3^3 - 2^3 = 1 + 3 \times 2 \times 3$$

$$4^3 - 3^3 = 1 + 4 \times 3 \times 3$$

Using the above pattern,find the value of the following :

$$51^3 - 50^3.$$

15. Consider the following pattern:

$$2^3 - 1^3 = 1 + 2 \times 1 \times 3$$

$$3^3 - 2^3 = 1 + 3 \times 2 \times 3$$

$$4^3 - 3^3 = 1 + 4 \times 3 \times 3$$

Using the above pattern,find the value of the following :

$$20^3 - 19^3.$$

16. Which of the following are perfect cubes :

400

 Watch Video Solution

17. Which of the following are perfect cubes :

3375

 Watch Video Solution

18. Which of the following are perfect cubes :

8000

19. Which of the following are perfect cubes :

15625

20. Which of the following are perfect cubes :

9000

▶ **Watch Video Solution**

21. Which of the following are perfect cubes :

6859

▶ **Watch Video Solution**

22. Which of the following are perfect cubes :

2025

▶ **Watch Video Solution**

23. Which of the following are perfect cubes :

10648

▶ **Watch Video Solution**

24. Check which of the following are perfect cubes :

2700

▶ **Watch Video Solution**

25. Check which of the following are perfect cubes :

16000

▶ **Watch Video Solution**

26. Check which of the following are perfect cubes :

64000

▶ **Watch Video Solution**

27. Check which of the following are perfect cubes :

900

▶ **Watch Video Solution**

28. Check which of the following are perfect cubes :

125000

 Watch Video Solution

29. Check which of the following are perfect cubes :

36000

 Watch Video Solution

30. Check which of the following are perfect cubes :

21600

▶ **Watch Video Solution**

31. Check which of the following are perfect cubes :

10000

▶ **Watch Video Solution**

32. Check which of the following are perfect cubes :

27000

▶ **Watch Video Solution**

33. Check which of the following are perfect cubes :

1000

▶ **Watch Video Solution**

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

▶ **Watch Video Solution**

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

▶ **Watch Video Solution**

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

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

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

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

▶ **Watch Video Solution**

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

▶ **Watch Video Solution**

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

▶ **Watch Video Solution**

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

▶ **Watch Video Solution**

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

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

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

▶ **Watch Video Solution**

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

▶ **Watch Video Solution**

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

▶ **Watch Video Solution**

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

▶ **Watch Video Solution**

49. 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?

▶ **Watch Video Solution**

50. State true or false, for any integers m, $m^2, \ < m^3$, why?

▶ **Watch Video Solution**

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

▶ **Watch Video Solution**

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

▶ **Watch Video Solution**

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

10648

▶ **Watch Video Solution**

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

27000

▶ **Watch Video Solution**

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

15625

▶ **Watch Video Solution**

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

13824

▶ **Watch Video Solution**

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

110592

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

46656

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

175616

▶ **Watch Video Solution**

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

91125

▶ **Watch Video Solution**

61. State true or false : Cube of any odd

number is even.

Watch Video Solution

62. State true or false : A perfect cube does

not end with two zeros.

Watch Video Solution

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

▶ **Watch Video Solution**

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

▶ **Watch Video Solution**

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

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

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

68. 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.

69. Which of the following numbers is not a perfect cube ?

A. 8

B. 64

C. 85

D. 125

Answer:

▶ Watch Video Solution

70. Which of the following number is not a perfect cube ?

A. 80

B. 125

C.

D.

Answer:

▶ **Watch Video Solution**

71. Which of the following numbers is not a perfect cube ?

A. 27

B. 64

C. 99

D. 125

Answer:

▶ **Watch Video Solution**

72. Cube of a digit is same digit then the digit will be :

A. 5

B. 9

C. 1

D. 3

Answer:

▶ **Watch Video Solution**

73. By which smallest number 72 must be multiplied so that we can find the cube root of the product obtained?

A. 2

B. 3

C. 4

D. 5

Answer:

74. By which smallest number 704 must be divided so that the quotient has a cube root:

A. 3

B. 5

C. 11

D. 7

Answer:

75. Find the one's digit of the cube of each of the following numbers.

3331

A. 1

B. 3

C. 7

D. 9

Answer:

▶ Watch Video Solution

76. Find the one's digit of the cube of each of the following numbers.

3331

    A. 1

    B. 2

    C. 3

    D. 4

Answer:

▶ Watch Video Solution

77. The value of $7^3 - 6^3$ will be :

A. 136

B. 113

C. 126

D. 127

Answer:

78. Cube root of 729 is ?

A. 8

B. 7

C. 3

D. 9

Answer:

▶ **Watch Video Solution**

79. Cube root of 343 is ?

A. 7

B. 8

C. 3

D. 4

Answer:

▶ **Watch Video Solution**

80. The cube root of 512 will be :

A. 3

B. 7

C. 4

D. 8

Answer:

▶ **Watch Video Solution**

Exercise

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

392.

> ▶ **Watch Video Solution**

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

125

> ▶ **Watch Video Solution**

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

200

> ▶ **Watch Video Solution**

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

1331

> ▶ **Watch Video Solution**

5. Which of the following numbers 400

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

432

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

32

▶ **Watch Video Solution**

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

81

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

972

10. Find the smallest number by which each of the following numbers must be multiplied to

obtain perfect cube.

3087

> ▶ **Watch Video Solution**

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

24

> ▶ **Watch Video Solution**

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

250

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

108

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

256

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

obtain a perfect cube.

432

16. Raju made a cuboid of plastic.Length,breadth and height of the cuboid are 15 cm, 30 cm, 15 cm respectively.How many such cuboids will she need to make a perfect cube ?

17. Find the cube root of the following numbers using prime factorisation?

250047

18. Find the cube root of the following numbers using prime factorisation?

21952

19. Find the cube root of the following numbers using prime factorisation?

531441

▶ **Watch Video Solution**

20. Find the cube root of the following numbers using prime factorisation?

-373248

▶ **Watch Video Solution**

21. Find the cube root of the following numbers using prime factorisation?

-970299

▶ **Watch Video Solution**

22. Write true (T) or False (F) for the following :

Cube of any even number is odd.

▶ **Watch Video Solution**

23. Write true (T) or False (F) for the following :

No cube can end with exactly two zeros.

24. Write true (T) or False (F) for the following :

There is no perfect cube which ends in 4.

25. Write true (T) or False (F) for the following

:

392 is a perfect cube.

▶ **Watch Video Solution**

26. Write true (T) or False (F) for the following

:

8640 is not a perfect cube.

▶ **Watch Video Solution**

27. If you are told that 1728 is a perfect cube.Can you guess without factorisation what is its cube root ?Similarly, guess the cube root of :

3375

28. If you are told that 1728 is a perfect cube.Can you guess without factorisation what is its cube root ?Similarly, guess the cube

root of :

13824

29. If you are told that 1728 is a perfect cube.Can you guess without factorisation what is its cube root ?Similarly, guess the cube root of :

857375