

Math Class test

Class: VIII-A

Topic : Cube and Cube Roots

F.M: 15

1. Read the text carefully and answer the questions:

(For MCQ – only answer & for 2 marks question – show your calculations)

Anik is a student of SCMS. He is in class VIII. He has a classmate friend Arnab. Arnab is a studious boy, He is fond of studying the number patterns. He has found some patterns like:

- $1 = 1^3$ (The very first odd number = 1^3)
- $3 + 5 = 8 = 2^3$ (Sum of next 2 odd numbers = 2^3)
- $7 + 9 + 11 = 27 = 3^3$ (Sum of next 3 odd numbers = 3^3)
- $13 + 15 + 17 + 19 = 64 = 4^3$ (Sum of next 4 odd numbers = 4^3)

- i. How many consecutive odd numbers will be needed to obtain the sum as 10^3 ?
(1 mark)

a) 5	b) 20	c) 10	d) 6
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- ii. $31+33+35+37+39+41 = ?$ (1 mark)

a) 6^3	b) 6^2	c) 7^3	d) 7^2
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- iii. Which of the following is not a perfect cube? (1 mark)

a) $43+45+47+49+51+53+55$	b) $21+23+25+27+29$
c) 1331	d) $3+4+5+6+7$

- iv. Write 343 as a sum of consecutive odd numbers . (2 marks)

2. Write the one's digit of the cube of the following numbers: ($\frac{1}{2}+\frac{1}{2}$ marks)

(i) 88888 , (ii) 54273 (only answer)

3. Answer the following questions (show your calculations): (3 marks)

- (i) Is 9720 a perfect cube?
If not then find the smallest number by which it should be divided to get a perfect cube.
Also find the cube root of the quotient (obtained number).

(ii) $(85.814 \div 1.331)^{\frac{1}{3}}$

- (iii) How many minimum number of cuboids of dimension $15\text{cm} \times 45\text{cm} \times 32\text{cm}$ are required to make a cube?
Also find the length of each edge of that large cube.