



GRADE -8

QUESTION BANK - MATHEMATICS

2024-'25

CHAPTER -9

CUBES AND CUBE ROOTS

Name :

Date:.....

B. Find the cube roots of the following:

1) 2197

2) -3375

3) $3^3 \times 5^3 \times 7^3$

4) $2^6 \times 7^3 \times 9^6$

5) $(-4)^3 \times (-7)^3 \times (-9)^6$

6) $\frac{-64}{125}$

7) $\frac{-2744}{5832}$

8) 0.729

9) 4.096

10) 19.683

C. Find the cube roots of the following by factorisation:

1) 1728

2) 5832

D. Find the length of the side of a cube of volume 4096 cm^3 .

E. A metal block has dimensions of $9 \text{ cm} \times 9 \text{ cm} \times 9 \text{ cm}$. It is to be melted and made into smaller cubes of side $1.5 \text{ cm} \times 1.5 \text{ cm} \times 1.5 \text{ cm}$. How many cubes can be made from the bigger cube?

F. Complete the table.

| Number | Cube | Property satisfied by the cube number |
|--------------------|------|---------------------------------------|
| 1) 15 | | |
| 2) -27 | | |
| 3) $\frac{7}{8}$ | | |
| 4) $\frac{-3}{11}$ | | |
| 5) 2×8 | | |
| 6) -4×5 | | |

F. Determine the cube roots of the following numbers.

1) $\frac{-215}{2197}$

2) $\frac{2744}{4913}$

3) $2\frac{93}{125}$

4) $6\frac{303}{512}$

G. Evaluate the following.

1) $\sqrt[3]{900 \times 30}$

2) $\frac{\sqrt[3]{1331}}{\sqrt[3]{1728}}$

3) $\sqrt[3]{0.000125}$

H. The area of the base of a cuboidal box is 36 cm^2 . If its height is 6 cm, how many dice of side 1 cm can be placed in it?

I. If the side of an open cubical box is 3.25 cm, how many litres of air does it contain? (1 litre = 1000 cu. cm)

J. A metal block has the dimensions of $4 \text{ cm} \times 5 \text{ cm} \times 8 \text{ cm}$. It is to be melted and some more metal is to be added to make a bigger block. What is the minimum volume of metal that should be added if the dimensions of the block are to be integer values? What is the minimum volume of metal that should be removed to make a smaller block with integer dimensions?