1. Evaluate: $\sqrt[3]{-a^6} \times \sqrt[3]{b^6}$ .

2. Simplify : $\sqrt[3]{-125+44}$ .

3. Evaluate: $\sqrt[3]{\frac{-27}{216}}$ .

4. What is the digit at the unit's place in the cube of 12542?

5. Evaluate: $\sqrt[3]{300} \times \sqrt[3]{90}$ .

6. Find the value of ' $x$ ' if $\sqrt[3]{\frac{216}{x}} = \frac{6}{13}$ .

7. Case study

Three solid cubes of side $3\,\text{cm}, 4\,\text{cm}$ and $5\,\text{cm}$ are melted and transformed into a single cube.

Choose the correct option:

(i) What will be the side of the new cube?

a. $5\,\text{cm}$ b. $6\,\text{cm}$ c. $7\,\text{cm}$ d. $4\,\text{cm}$

(ii) What will be the volume of the new cube?

a. $216\,\text{cm}^3$ b. $125\,\text{cm}^3$ c. $1000\,\text{cm}^3$ d. $800\,\text{cm}^3$

4. What will be the increased volume, if the edge of the cube is doubled. If the edge are ' $x$ ' $\text{cm}$ is ' $y$ ' $\text{cm}^3$ .

5. What will be the volume of cube whose edge measures $0.072\,\text{cm}$ .

6. Find the edge of a cube whose volume is $9261\,\text{cm}^3$ .

7. Find the smallest number by which 8640 must be divided so that the quotient is a perfect cube. Also find the cube root of the number so obtained.

8. A cuboid measuring $75\,\text{cm} \times 10\,\text{cm} \times 36\,\text{cm}$ is melted to form a cube. Find the length of the edge of the cube.

9. Three numbers are in the ratio of 2:3:4. The sum of their cubes is 2673 . Find the numbers.

10. A cube is formed by joining 27 cubes of edge $2\,\text{cm}$ each. Find the volume of the cube so obtained.