



Cubes and Cubes Roots Ex 4.5 Q9

Answer :

We have:

$$250 = 25 \times 100$$

\therefore Cube root of 250 would be in the column of $\sqrt[3]{10x}$ against 25.

By the cube root table, we have:

$$\sqrt[3]{250} = 6.3$$

Thus, the required cube root is 6.3.

Cubes and Cubes Roots Ex 4.5 Q10

Answer :

By prime factorisation, we have:

$$5112 = 2^3 \times 3^2 \times 71 \Rightarrow \sqrt[3]{5112} = 2 \times \sqrt[3]{9} \times \sqrt[3]{71}$$

By the cube root table, we have:

$$\sqrt[3]{9} = 2.080 \text{ and } \sqrt[3]{71} = 4.141$$

$$\therefore \sqrt[3]{5112} = 2 \times \sqrt[3]{9} \times \sqrt[3]{71} = 2 \times 2.080 \times 4.141 = 17.227 \text{ (upto three decimal places)}$$

Thus, the required cube root is 17.227.

Cubes and Cubes Roots Ex 4.5 Q11

Answer :

We have:

$$9800 = 98 \times 100$$

$$\therefore \sqrt[3]{9800} = \sqrt[3]{98 \times 100} = \sqrt[3]{98} \times \sqrt[3]{100}$$

By cube root table, we have:

$$\sqrt[3]{98} = 4.610 \text{ and } \sqrt[3]{100} = 4.642$$

$$\therefore \sqrt[3]{9800} = \sqrt[3]{98} \times \sqrt[3]{100} = 4.610 \times 4.642 = 21.40 \text{ (upto three decimal places)}$$

Thus, the required cube root is 21.40.

Cubes and Cubes Roots Ex 4.5 Q12

Answer :

We have:

$$730 < 732 < 740 \Rightarrow \sqrt[3]{730} < \sqrt[3]{732} < \sqrt[3]{740}$$

From cube root table, we have:

$$\sqrt[3]{730} = 9.004 \text{ and } \sqrt[3]{740} = 9.045$$

For the difference (740–730), i.e., 10, the difference in values

$$= 9.045 - 9.004 = 0.041$$

∴ For the difference of (732–730), i.e., 2, the difference in values

$$= \frac{0.041}{10} \times 2 = 0.0082$$

$$\therefore \sqrt[3]{732} = 9.004 + 0.008 = 9.012$$

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