Q1

Answer :

(i) $(8)^3 = (8 \times 8 \times 8) = 512$.

Thus, the cube of 8 is 512.

(ii) $(15)^3 = (15 \times 15 \times 15) = 3375$.

Thus, the cube of 15 is 3375.

(iii) $(21)^3 = (21 \times 21 \times 21) = 9261$.

Thus, the cube of 21 is 9261.

(iv) $(60)^3 = (60 \times 60 \times 60) = 216000$.

Thus, the cube of 60 is 216000.

Q2

Answer :

(i) $(1.2)^3 = (1.2 \times 1.2 \times 1.2) = 1.728$

Thus, the cube of 1.2 is 1.728.

(ii) $(3.5)^3 = (3.5 \times 3.5 \times 3.5) = 42.875$

Thus, the cube of 3.5 is 42.875.

(iii) $(0.8)^3 = (0.8 \times 0.8 \times 0.8) = 0.512$

Thus, the cube of 0.8 is 0.512.

(iv) $(0.05)^3 = (0.05 \times 0.05 \times 0.05) = 0.000125$

Thus, the cube of 0.05 is 0.000125.

Q3

Answer :

(i) $\left(\frac{4}{7}\right)^3 = \left(\frac{4}{7} \times \frac{4}{7} \times \frac{4}{7}\right) = \left(\frac{64}{343}\right)$

Thus, the cube of $\left(\frac{4}{7}\right)$ is $\left(\frac{64}{343}\right)$.

(ii) $\left(\frac{10}{11}\right)^3 = \left(\frac{10}{11} \times \frac{10}{11} \times \frac{10}{11}\right) = \left(\frac{1000}{1331}\right)$

Thus, the cube of $\left(\frac{10}{11}\right)$ is $\left(\frac{1000}{1331}\right)$.

(iii) $\left(\frac{1}{15}\right)^3 = \left(\frac{1}{15} \times \frac{1}{15} \times \frac{1}{15}\right) = \left(\frac{1}{3375}\right)$

Thus, the cube of $\left(\frac{1}{15}\right)$ is $\left(\frac{1}{3375}\right)$ $\left(1\frac{3}{10}\right)^3 = \left(\frac{13}{10}\right)^3 = \left(\frac{13}{10} \times \frac{13}{10} \times \frac{13}{10}\right) = \left(\frac{2197}{1000}\right)$

Thus, the cube of $\left(1\frac{3}{10}\right)$ is $\left(\frac{2197}{1000}\right)$.

Q4

Answer :

(i) 125

Resolving 125 into prime factors:

$125 = 5 \times 5 \times 5$

Here, one triplet is formed, which is 5^3. Hence, 125 can be expressed as the product of the triplets of 5.

Therefore, 125 is a perfect cube.

(ii) 243 is not a perfect cube.

(iii) 343

Resolving 125 into prime factors:

$343 = 7 \times 7 \times 7$

********** END **********