

Q1 Find the prime factorization of 1240 using three different methods.

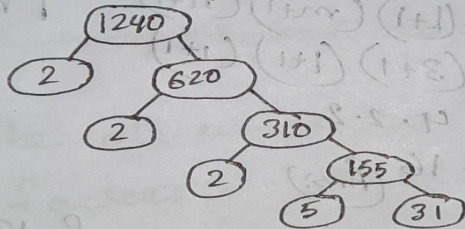
Ans:-

(i) Division Method :-

$$\begin{array}{r} 2 \overline{)1240} \\ \underline{2} \\ 2 \overline{)620} \\ \underline{2} \\ 2 \overline{)310} \\ \underline{5} \\ 5 \overline{)155} \\ \underline{31} \end{array}$$

$$2^3 \cdot 5 \cdot 31 = 1240$$

(ii) Tree Diagram :-



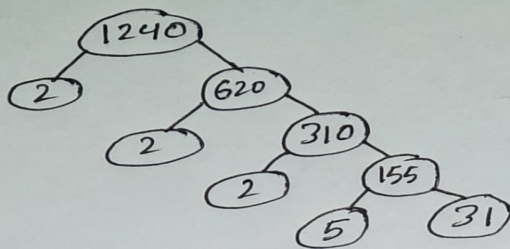
$$2^3 \cdot 5 \cdot 31 = 1240$$

(iii) Multiplication Method :-

$$1240 = 2 \times 620 = 2 \times 2 \times 310 = 2 \times 2 \times 2 \times 155 = 2 \times 2 \times 2 \times 5 \times 31$$

Q2 Find the all factors of 1240 using tree diagram.

Ans:-



$$2^3 \cdot 5 \cdot 31$$

Total number of factors 1240.

$$\begin{aligned} \therefore 1240 \text{ Total factors} &= p^l \cdot q^m \cdot r^n \\ &= (l+1)(m+1)(n+1) \\ &= (3+1)(1+1)(1+1) \\ &= 4 \cdot 2 \cdot 2 \\ &= 16 \text{ (Ans)} \end{aligned}$$

Q3 Finding the all prime factors of 1240.

$$1240 = 2 \times 620 = 2 \times 2 \times 310 = 2 \times 2 \times 2 \times 155 = 2^3 \times 5 \times 31$$

Therefore, the prime factorization of 1240 is $2^3 \cdot 5 \cdot 31$

Q4. Finding the all composite factors of 1240,
composite factors:-

$$1240 = 1, 2, 4, 5, 8, 10, 20, 62, 31, 124, 248, 155,$$

$$310, 620, 1240, 40$$

$$= 4, 8, 10, 20, 62, 124, 248, 155, 310, 620, 1240, 40$$