

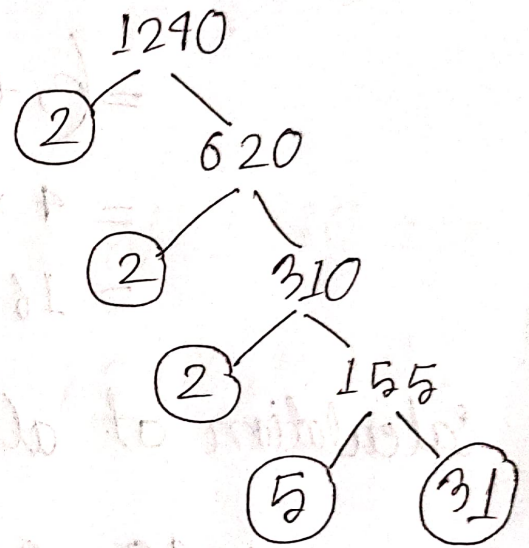
1. Find the prime factorization of 1240 using three different methods.

Solⁿ:-

Division method-

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

Tree Diagram-



Multiplication method-

$$\begin{aligned} 1240 &= 2 \times 620 \\ &= 2 \times 2 \times 310 \\ &= 2 \times 2 \times 2 \times 155 \\ &= 2 \times 2 \times 2 \times 5 \times 31 \\ &= 2^3 \times 5 \times 31 \end{aligned}$$

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

2. Find the all factors of 1240.

Solⁿ:-

From '1' we get the prime factorization of 1240 is = $2^3 \cdot 5 \cdot 31$

∴ The total number of factors of 1240 is

$$= (3+1)(1+1)(1+1)$$

$$= 4 \times 2 \times 2$$

$$= 16$$

Calculation of all factors,

$$1240 = \cancel{2 \times 620} 1 \times 1240$$

$$= 2 \times 620$$

$$= 4 \times 310$$

$$= 5 \times 248$$

$$= 8 \times 155$$

$$= 10 \times 124$$

$$= 20 \times 62$$

$$= \cancel{31 \times 40}$$

∴ The factors of 1240 are

1, 2, 4, 5, 8, 10, 20, 31, 40, 62, 124, 155, 248, 310, 620, 1240.

3. Find the all prime factors of 1240.

Solⁿ:-

The prime factors of 1240 are = 2^3

2, 5, 31

4. Find the all composite factors of 1240.

Solⁿ:-

All the composite factors of 1240 are,

4, 8, 10, 20, 40, 62, 124, 155, 248, 310,

620, 1240.