

## Number System

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

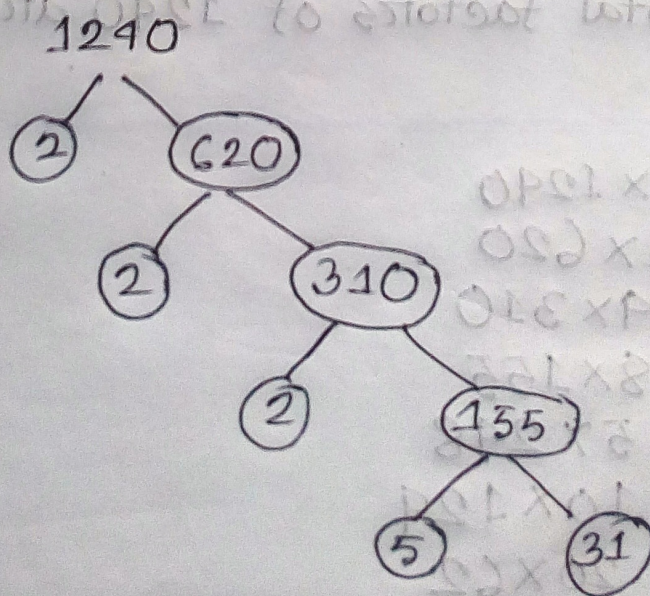
Ans:

Division Method:

$$\begin{array}{r} 2 \overline{)1240} \\ \underline{2} \phantom{00} \\ 2 \overline{)620} \\ \underline{2} \phantom{00} \\ 2 \overline{)310} \\ \underline{3} \phantom{00} \\ 3 \overline{)155} \\ \underline{31} \phantom{00} \\ 31 \end{array}$$

The prime factorization of 1240 is  $= 2^3 \cdot 5 \cdot 31$ .

Tree diagram:



The prime factorization of 1240 is  $= 2^3 \cdot 5 \cdot 31$ .

Multiplication method:

$$1240 = 2 \times 620$$

$$= 2 \times 2 \times 310 = 2^2 \times 310$$

$$= 2 \times 2 \times 2 \times 155 = 2^3 \times 155$$

$$= 2 \times 2 \times 2 \times 5 \times 31 = 2^3 \times 5 \times 31$$

The prime factorization of 1240 is  $2^3 \cdot 5 \cdot 31$ .

2. Find the All factors of 1240

Ans:

$$1240 = 1 \times 1240$$

$$= 2 \times$$

The factors of 1240 are  $2^3, 5^1, 31^1$ .

The total factors of 1240 are  $(3+1)(1+1)(1+1) = 16$

$$1240 = 1 \times 1240$$

$$= 2 \times 620$$

$$= 4 \times 310$$

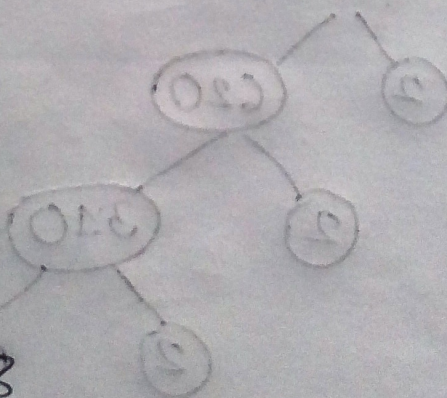
$$= 8 \times 155$$

$$= 5 \times 248$$

$$= 10 \times 124$$

$$= 20 \times 62$$

$$= 31 \times 40$$



∴ 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

The Prime factors of 1240 are 2, 5, 31,

4. Find the All composite factors of 1240

The ~~Prime factors~~ composite factors of

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