

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

(i) Division Method:

$$\begin{array}{r}
 2 \overline{)1240} \\
 \underline{2} \\
 2 \overline{)620} \\
 \underline{2} \\
 2 \overline{)310} \\
 \underline{5} \\
 5 \overline{)155} \\
 \underline{31} \\
 0
 \end{array}$$

Therefore, the Prime factorization of 1240 is $1240 = 2 \times 2 \times 2 \times 5 \times 31$

$$= 2^3 \cdot 5^1 \cdot 31^1$$

The total of factor is $= (3+1)(1+1)(1+1)$

(ii) Multiplication Method:

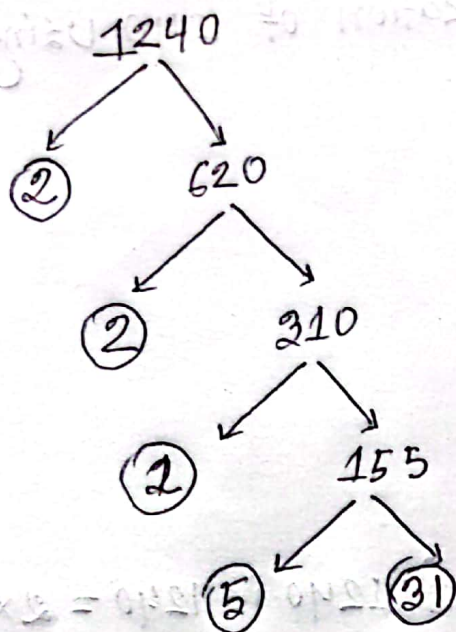
$$1240 = 2 \times 620 = 2 \times 2 \times 310$$

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

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

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

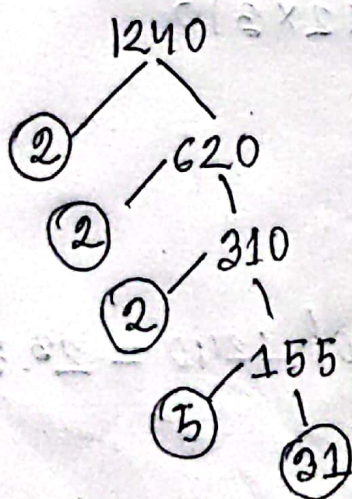
(iii) Tree Diagram:



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

Q.2 Find all the factors of 1240 using tree diagram:

Tree diagram



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

So, the total number of factors of 1240 is

$$(3+1)(1+1)(1+1) = 16$$

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▣ Calculation for all factors

$$1240 = 1 \times 1240$$

$$= 2 \times 620$$

$$= 4 \times 310$$

$$= 5 \times 248$$

$$= 8 \times 155$$

$$= 20 \times 124$$

$$= 20 \times 62$$

$$= 31 \times 40$$

The factors of 1240 are 1, 2, 4, 5, 8, 10, 20, 31, 40, 62, ~~124~~ 124, 155, 248, 310, 620, 1240

Q.3 Find the prime factors of 1240

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

\therefore Prime factors of 1240 = 2, 5, 31

Q.4 The composite factors of 1240 are 4, 8, 10, 20, 40, 62, 124, 155, 248, 310, 620, 1240