Muhammad Harun

Exercise :

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

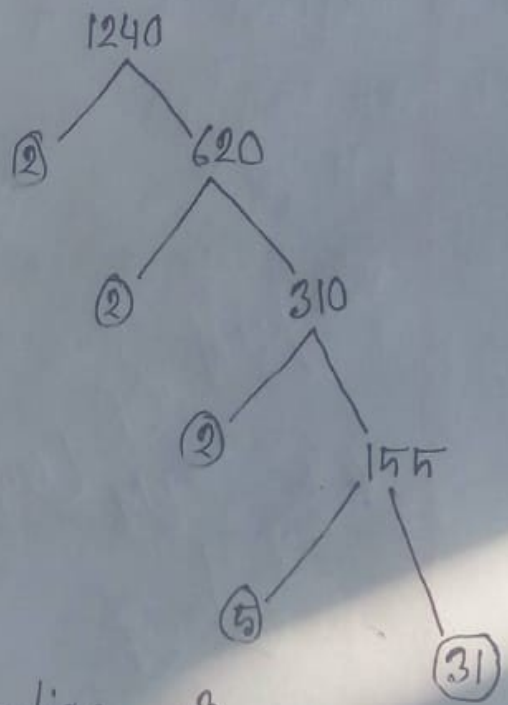
⇒ prime factorization of 1240 :

→ Division method :

$$\begin{array}{r|l} 2 & 1240 \\ \hline 2 & 620 \\ \hline 2 & 310 \\ \hline 5 & 155 \\ \hline & 31 \end{array}$$

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

Tree Diagram :



Therefore, the prime factorization $= 2^3, 5, 31$

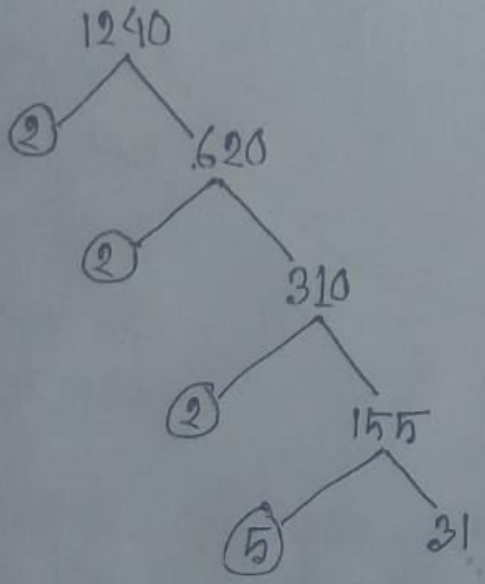
of $1240 = 2^3, 5, 31$

Multiplication Mathod :

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

2. Find the all factors of 1240 using tree diagram. # ~~tree~~

Tree diagram of 1240 :



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

So, the total number of factors of 1240 is $= (3+1)(1+1)(1+1)$

$= 4 \cdot 2 \cdot 2$

$= 16$

calculation for all factors:

$1240 = 1 \times 1240$

$= 2 \times 620$

$= 4 \times 310$

$= 5 \times 248$

$= 8 \times 155$

$= 10 \times 124$

$= 20 \times 62$

$= 31 \times 40$

So, the factors of 1240 are:

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

3. Find all the prime factors of 1240

calculation of 1240 factors :

$1240 = 1 \times 1240$
$= 2 \times 620$
$= 4 \times 310$
$= 5 \times 248$
$= 8 \times 155$
$= 10 \times 124$
$= 20 \times 62$
$= 31 \times 40$

So, all the prime factors of 1240 are $\Rightarrow 2, 5$ and 31

4. Find all the composite factors of 1240

calculation of 1240 factors :

$1240 = 1 \times 1240$
$= 2 \times 620$
$= 4 \times 310$
$= 5 \times 248$
$= 8 \times 155$
$= 10 \times 124$
$= 20 \times 62$
$= 31 \times 40$

So, all the composite factors are:

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

Muhammad Harun
221-15-5742
Section : U