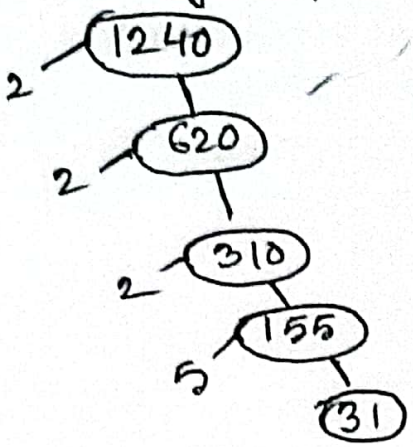
1. Find the prime factorization of 1240 using three different methods.

Division method

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

Tree Diagram



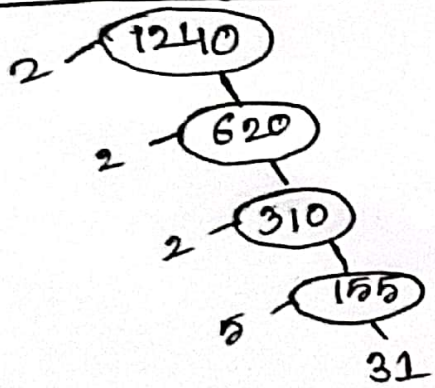
Multiplication Method

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

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

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

Calculation for all factors

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

The factors of 1240 are

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

2, 5, 31,

4||

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

3|| Find the prime factors of 1240

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

∴ Prime factors of 1240 = 2, 5, 31