

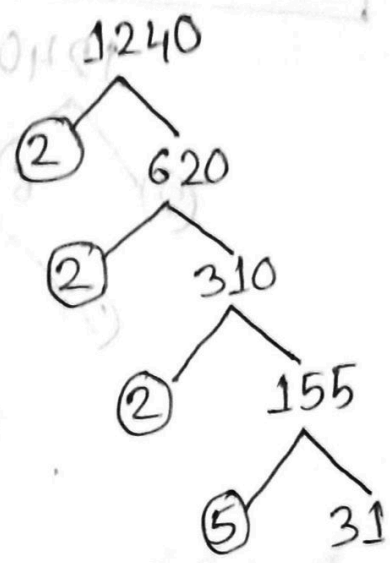
1. Find the prime factorization of 1240 using three different methods?

Solution:

Divison method

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

Tree Diagram



Multiplication Method

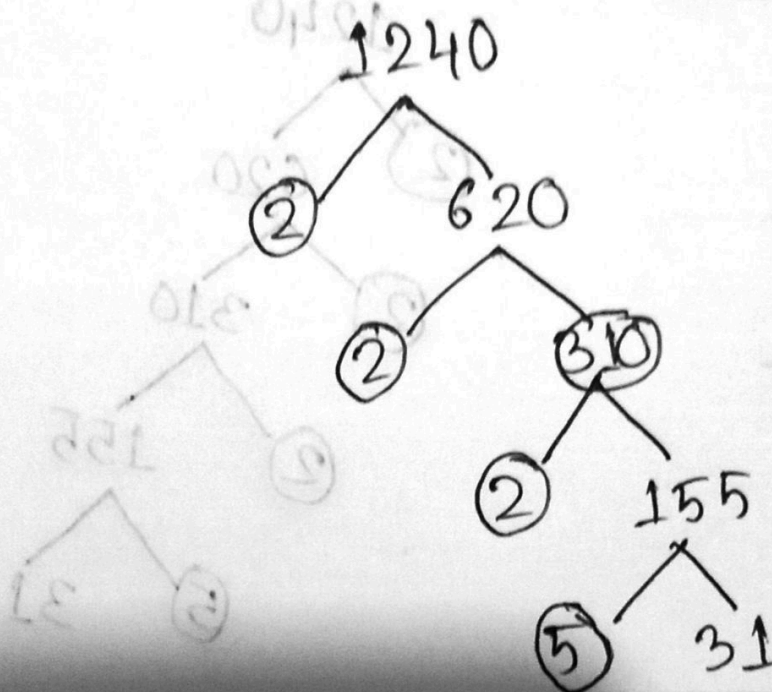
$$\begin{aligned}
 1240 &= 2 \times 620 = 2 \times 2 \times 310 \\
 &= 2^2 \times 2 \times 155 \\
 &= 2^3 \times 5 \times 31
 \end{aligned}$$

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

2. Find the all factors of 1240 using tree diagram?

Solution:

Tree Diagram



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

So, the total numbers of factors of 1240

$$\text{is} = (3+1) \cdot (1+1) \cdot (1+1)$$

$$= 4 \cdot 2 \cdot 2$$

$$= 16$$

2. Find all the ^{composite} prime factors of 1240.

Solution:

$$1240 = 1 \times 1240$$

$$= 2 \times 620$$

$$= 4 \times 310$$

$$= 5 \times 248$$

$$= 8 \times 155$$

$$= 10 \times 124$$

$$= 20 \times 62$$

$$= 31 \times 40$$

composite.

So, the ^{composite} 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.

Solution:

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

So, the prime factors of 1240 are = ~~2, 2~~, 2, 5, 31.