

Exercise:

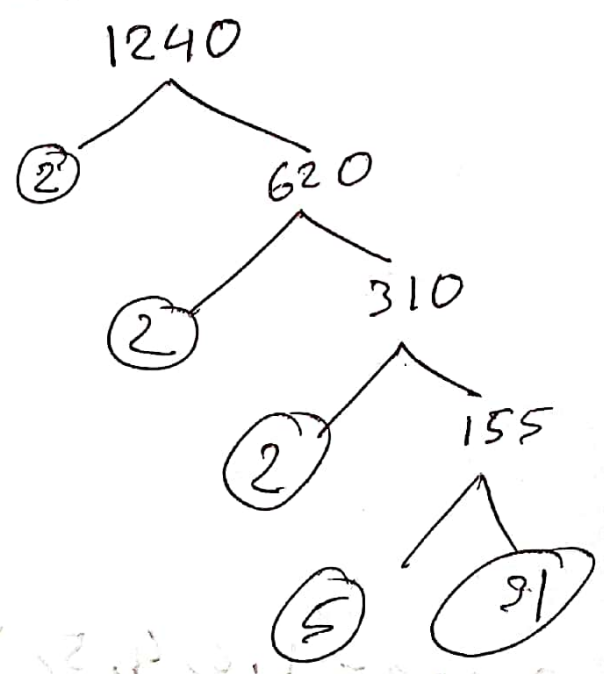
10 Prime factorization of 1240 using three methods.

Division method:

$$\begin{array}{r} 2 \overline{)1240} \\ \underline{2480} \\ 155 \\ 2 \overline{)620} \\ \underline{1240} \\ 0 \\ 2 \overline{)310} \\ \underline{620} \\ 0 \\ 5 \overline{)155} \\ \underline{155} \\ 0 \end{array}$$

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

Tree Diagram:



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

Multiplication Method:

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

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

2. All the factors of 1240.

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

$$\begin{aligned}\therefore \text{the total number of 1240 is} &= (3+1)(1+1)(1+1) \\ &= 16\end{aligned}$$

$$\begin{aligned}1240 &= 1 \times 1240 \\ &= 2 \times 620 \\ &= 4 \times 310 \\ &= 5 \times 248 \\ &= 8 \times 155 \\ &= 10 \times 124 \\ &= 20 \times 62 \\ &= 31 \times 40\end{aligned}$$

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.

The prime factors of 1240 are = 2, 5, 31

4. Find all the composite factors,

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