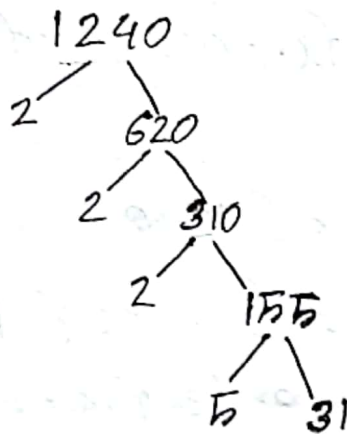


Q1) Find the prime factorization of 1240 using three different methods.

Solution:

Finding the prime factorization of 1240 using "Tree Diagram" -

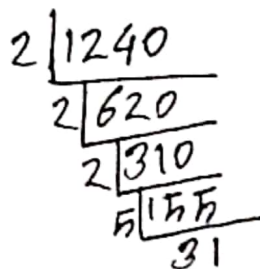
Tree Diagram



So, the prime factors of 1240 = $2^3 \cdot 5 \cdot 31$ (Ans:)

Finding the prime factorization of 1240 using "Division Method" -

Division Method



So, the prime factors of 1240 = $2^3 \cdot 5 \cdot 31$ (Ans:)

Finding the prime factors of 1240 using "Multiple Method" —

Multiple Method

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

So, the prime factors of 1240 = $2^3 \cdot 5 \cdot 31$ (Ans.)

Q2/ Find all the all factor of 1240

Solution:

The prime factors of 1240 = $2 \times 620 = 2 \times 2 \times 310$
 $= 2 \times 2 \times 2 \times 155$
 $= 2 \times 2 \times 2 \times 5 \times 31$
 $= 2^3 \times 5 \times 31$

So, total number of factors of 1240 = $(3+1) \cdot (1+1) \cdot (1+1)$
 $= 4 \cdot 2 \cdot 2$
 $= 16$

Calculation of all factors

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

So, all the factors of 1240 are: 1, 2, 4, 5, 8, 10, 20, 31, 40, 62, 124, 155, 248, 310, 620, 1240. (Ans.)

Q3] Find the all prime factors of 1240.

Solution:

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

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

So, the prime factors of 1240 are: 2, 5, 31 (Ans.)

Q4 Find the all composite factors of 1240.

Solution:

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

Therefore all the factors of 1240 are: 1, 2, 4, 5, 8, 10, 20, 31, 40, 62, 124, 155, 248, 310, 620, 1240

So, the composite factors of 1240 are: 4, 8, 10, 20, 40, 62, 124, 155, 248, 310, 620, 1240 (Ans.)