

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

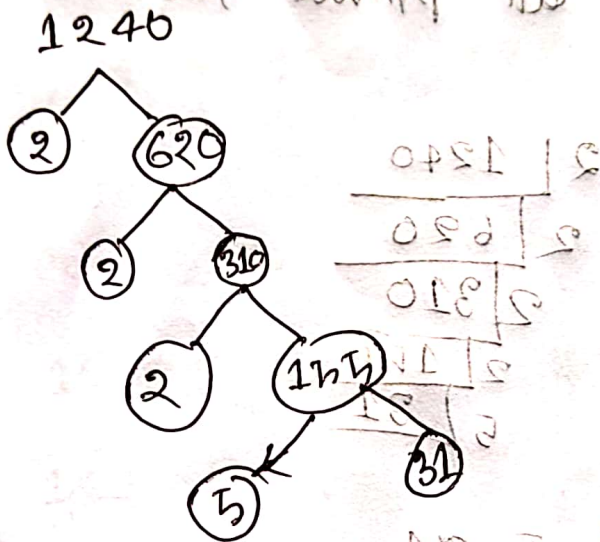
Auswen:

Division Method	Multiplication Method	Tree Diagram
$ \begin{array}{r} 2 \overline{) 1240} \\ \underline{2 } \\ 2 \\ \underline{2 } \\ 5 \\ \underline{5 } \\ 31 \end{array} $ <p>The prime factorization is $2^3 \cdot 5^1 \cdot 31$</p>	$ \begin{aligned} 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 \cdot 5^1 \cdot 31 \end{aligned} $	<pre> graph TD 1240 --> 2_1((2)) 1240 --> 620((620)) 620 --> 2_2((2)) 620 --> 310((310)) 310 --> 2_3((2)) 310 --> 155((155)) 155 --> 5((5)) 155 --> 31((31)) </pre>

The prime factorization of 1240 is $2^3 \cdot 5^1 \cdot 31^1$

2. Find the all factors of 1240 using tree Diagram

Ans:-



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

\therefore total number of factors of 1240 $= (1+1)(1+1)(1+1)$

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

$$= 4 \cdot 2 \cdot 2 = 16$$

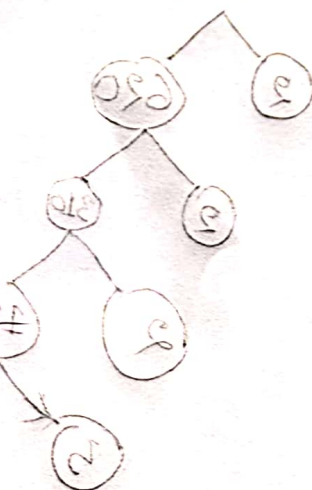
$$\begin{aligned}
 \text{NOW, } 1240 &= 1 \times 1240 \\
 &= 2 \times 620 \\
 &= 4 \times 310 \\
 &= 5 \times 248 \\
 &= 8 \times 155 \\
 &= 10 \times 124 \\
 &= 20 \times 62 \\
 &= 31 \times 40
 \end{aligned}$$

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

3. Find the all prime factors of 1240 ?

Answer :

$$\begin{array}{r}
 2 \overline{) 1240} \\
 \underline{2 620} \\
 2 \overline{) 310} \\
 \underline{2 155} \\
 5 \overline{) 31} \\
 \underline{5 31} \\
 0
 \end{array}$$



$\therefore 1240 = 2^3 \cdot 5 \cdot 31$

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

4. Find the composite factors of 1240

Answer: From problem 2 we get the factors

of 1240 are 1, 2, 4, 5, 8, 10, 20, 31,

40, 62, 124, 155, 248, 310, 620, 1240.

\therefore the composite factors of 1240 are

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

620, 1240