

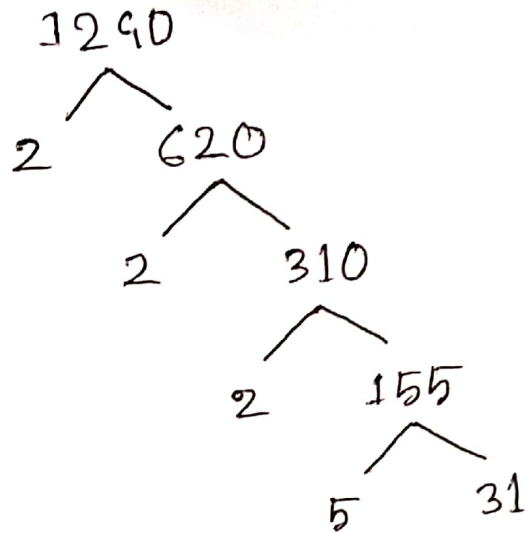
# Math

\* Find prime factorization of "1240"

## Division Method

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

## Tree Diagram



## Multiplication Method

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

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

∴ the total number of factors of 1240 is

$$\begin{aligned} &= (3+1) \cdot (1+1) \cdot (1+1) \\ &= 4 \cdot 2 \cdot 2 = 16 \end{aligned}$$

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

∴ 1, 2, 4, 8, 40, 20, 10, 5, 248, 124, 62, 31, 155, 310, 620, 1240.  
∴ Prime factor = 2, 5, 31, Composite factor = 4, 8, 40, 20, 10, 248, 124, 62, 155, 310, 620, 1240.