

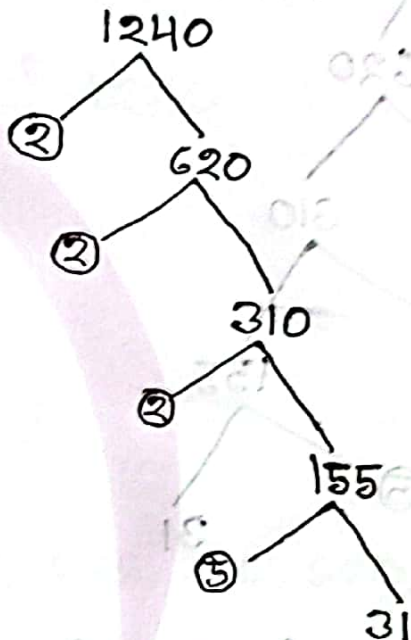
① Find the Prime Factorization of 1240, using three different methods -

Division method:-

$$\begin{array}{r}
 \cancel{1240} \\
 \cancel{200} \\
 2 \overline{)1240} \\
 \underline{2 \ 620} \\
 2 \overline{)310} \\
 \underline{2 \ 155} \\
 5 \overline{)155} \\
 \underline{5 \ 31} \\
 31
 \end{array}$$

$$= 2 \times 2 \times 2 \times 5 \times 31$$

Tree diagram:-



Multiplication method:-

$$1240 = 2 \times 620$$

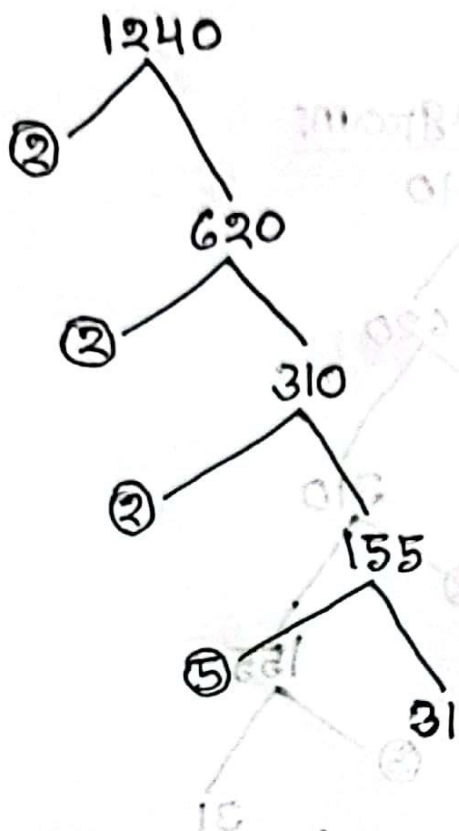
$$= 2 \times 2 \times 310$$

$$= 2^2 \times 2 \times 155$$

$$= 2^3 \times 5 \times 31$$

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

② Find all the factors using tree diagram



Prime factorization of 1240 is $\rightarrow 2^3 \cdot 5 \cdot 31$

$$\begin{aligned} \text{total number of factors of } 1240 &= (n+1) \cdot (n+1) \cdot (n+1) \\ &= (3+1) \cdot (1+1) \cdot (1+1) \\ &= 4 \cdot 2 \cdot 2 \\ &= 16 \end{aligned}$$

\therefore 1240 has 16 factors...

Now let's calculate for factors:

$$\begin{aligned} 1240 &= 1 \times 1240 &= \cancel{3} \times 248 \times 5 \\ &= 2 \times 620 &= 124 \times 10 \\ &= 4 \times 310 &= 62 \times 20 \\ &= 8 \times 155 &= 31 \times 40 \end{aligned}$$

all the factors of 1240

1, 2, 4, 8, 5, 10, 20, 40, 31, 62, 124, 248, 155, 310
620, 1240.

③ Find all the prime factors of 1240

2, 5, 31

④ Find all the composite factors

4, 8, 10, 20, 40, 62, 124, 155, 248, 310, 620, 1240.