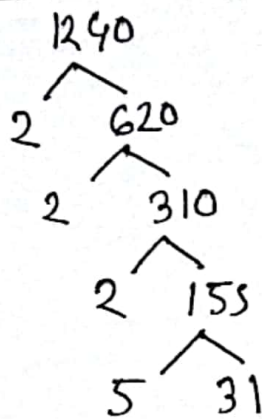


1. Find the prime factorization of 1240 using three different methods,

division method

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

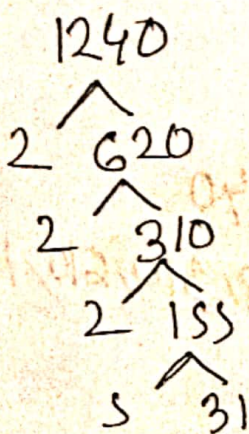
Tree diagram



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

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

2. Find the all factors of 1240 using the tree diagram.



hence for the prime factorization of

~~1240~~ 1240 is = $2^3 \cdot 5 \cdot 31$

So the total number of factors of ~~1240~~ 1240 is

$$(3+1)(1+1)(1+1) = 4 \cdot 2 \cdot 2 = 16$$

Calculation for all factors

$$1240 = 1 \times 1240$$

$$2 \times 620$$

$$4 \times 310$$

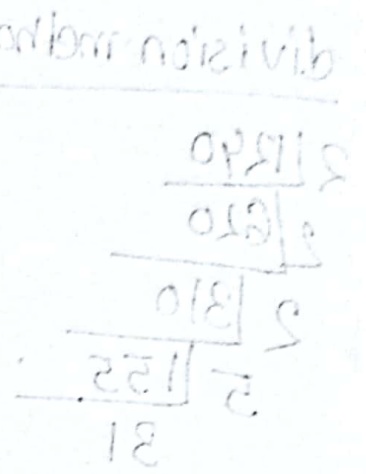
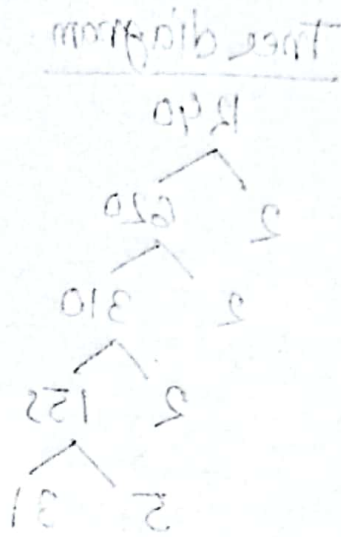
$$5 \times 248$$

$$8 \times 155$$

$$10 \times 124$$

$$20 \times 62$$

$$31 \times 40$$



The factors of 1600 are

- 1, 2, 4, 5, 8, 10, 20, 31, 40, 62, 124, 155, 248, 310, 610, 1240

Calculation for all factors of 1240

3. Find the all prime factors of 1240

- 2, 5, 31

4. Find the all composite factors of 1240

- 4, 8, 10, 20, 40, 62, 124, 155, 248, 310, 610, 1240

Factorization of 1240 = $2^3 \times 5 \times 31$

Factors = $(2+1)(5+1)(31+1)$