

3. Find the all prime factors of 1240.

$$1240 = 1 \times 1240$$

$$= 2$$

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$$= 2 \times 620$$

$$= 4 \times 310$$

$$= 8 \times 155$$

$$= 40 \times 31$$

$$= 20 \times 62$$

$$= 10 \times 124$$

$$= 5 \times 248$$

\therefore Prime factors = 2, 5, 31

4. Find the all composite factors of 1240.

$$1240 = 1 \times 1240$$

$$= 2 \times 620$$

$$= 4 \times 310$$

$$= 8 \times 155$$

$$= 40 \times 31$$

$$= 20 \times 62$$

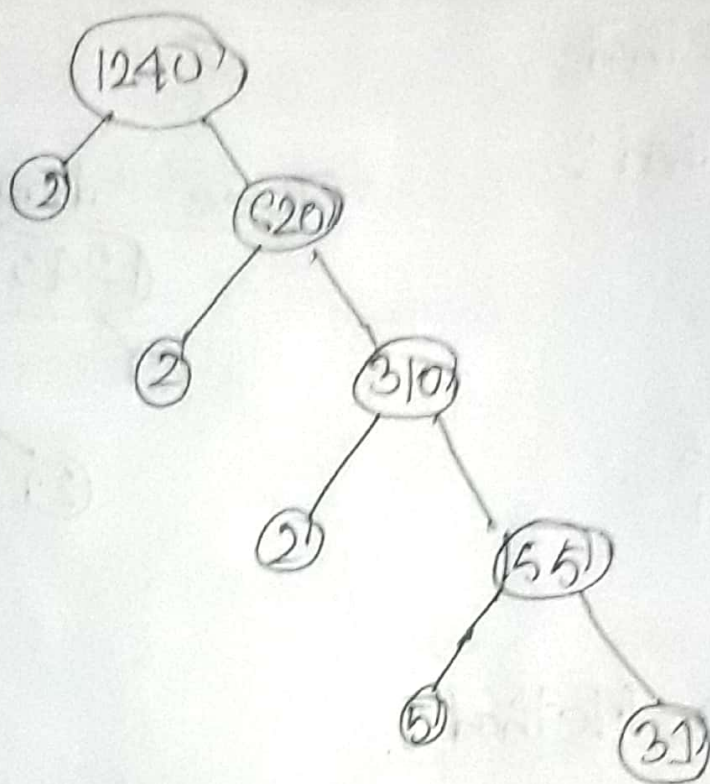
$$= 10 \times 124$$

$$= 5 \times 248$$

\therefore composite factors = 4, 8, 40, 20, 10, 5,

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

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



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

So, the total number of factors of 1240 is

$$(3+1) \cdot (1+1) \cdot (1+1)$$

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

$$= 16.$$

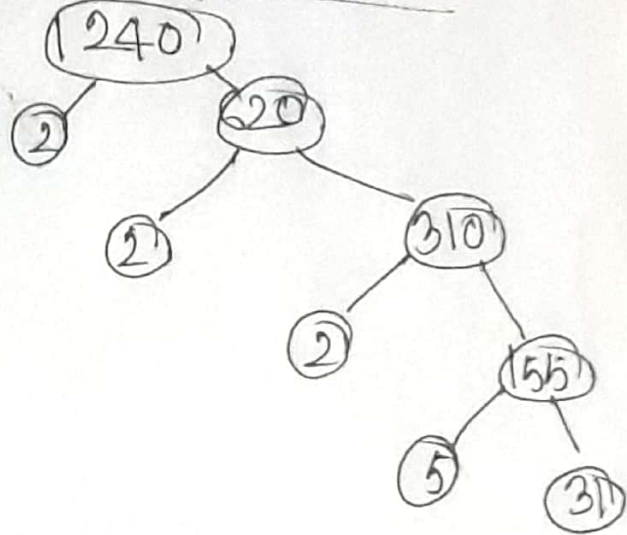
Exercise: [Math]

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

Division Method:

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

Tree diagram:



Multiplication Method:

$$1240 = 2 \times 620$$

$$= 2^2 \times 310$$

$$= 2^3 \times 155$$

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

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