Number System

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Q: 01

Find the prime factorization of 1240 using three different methods.

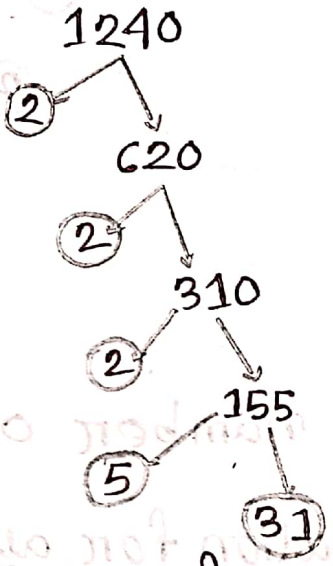
Solution:

(i) **Division method**

$$\begin{array}{r|l} 2 & 1240 \\ 2 & 620 \\ 2 & 310 \\ 5 & 155 \\ & 31 \end{array}$$

Prime factor: $2^3 . 5^1 . 31^1$

(ii) **Tree Diagram**



∴ Prime factor: $2^3 . 5^1 . 31^1$

(iii) **Multiplication method**

$$1240 = 2 \times 620 = 2 \times 2 \times 310 = 2^3 \times 2 \times 155$$

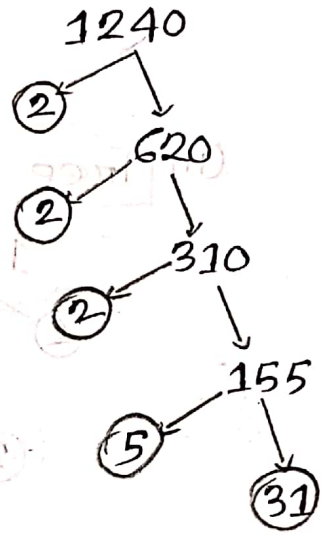
$$= 2^3 \times 5 \times 31$$

∴ prime factor: $2^3 . 5^1 . 31^1$

Q:02

Find the all factors of 1240 using tree diagram.

Solution: **Tree diagram**



Total number of factors, 1240 = (3+1) (1+1) (1+1)

calculation for all factors

= 4. 2. 2

= 16

1240 = 1×1240

= 2 × 620

= 4 × 310

= 5 × 248

= 8 × 155

= 10 × 124

= 20 × 62

= 31 × 40

All the factor of 1240 are: 1, 2, 4, 5, 8, 10, 20, 31, 40, 62, 124, 155, 248, 310, 620, 1240.

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Q.3

Find the all prime factor's of 1240.

Solution:

Prime factors of 1240 are: 2, 5, 31.

Q.4

Find the all composite factor of 1240

Solution:

Composite factors of 1240 are:

1, 4, 8, 10, 20, 40, 62, 124, 155, 248, 310, 620, 1240