Id: 221-15-5145

Exercise;

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

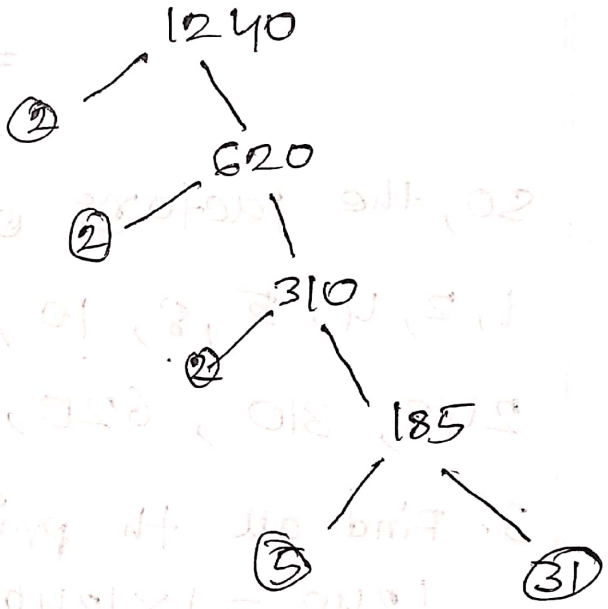
Prime factorization of 1240

* Division method

| | |
|---|---|
| 2 | 1240 |
| 2 | 620 |
| 2 | 310 |
| 5 | 155 |
| | 31 |

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

* Tree method




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

* Multiplication method;

$1240 = 2 \times 620$

$= 2 \times 2 \times 310$

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

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

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

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

2. Calculation for all factors:

$$1240 = 1 \times 1240$$
$$= 2 \times 620$$
$$= 4 \times 310$$
$$= 5 \times 240$$
$$= 8 \times 155$$
$$= 10 \times 124$$
$$= 20 \times 62$$
$$= 31 \times 40$$

So, the factors of 1240 are:

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

3. Find all th prime factors of 1240

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

so, all the prime factors of 1240 are = 2, 5 and 31

(4) Find all the composite factors of 1240

$1240 = 1 \times 1240$

$= 2 \times 620$

$= 4 \times 310$

$= 5 \times 248$

$= 8 \times 155$

$= 10 \times 124$

$= 20 \times 62$

$= 31 \times 40$

so, all the composite factors are:

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