Exercise:
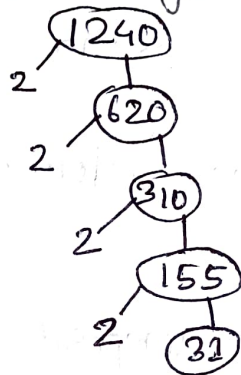
1. Find the prime factorization of 1240 using three different methods.
2. " " all factors of 1240 " " "
3. " " " p.f of 1240.
4. " " " composite factors of 1240.

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

Division method:

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

Tree Diagram:

Multiplication Method:

$1240 = 2 \times 620 = 2 \times 2 \times 310$

$= 2^3 \times 155$

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

Therefore, the prime factorization of $1240 = 2^3 . 5 . 31$

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

Tree diagram:
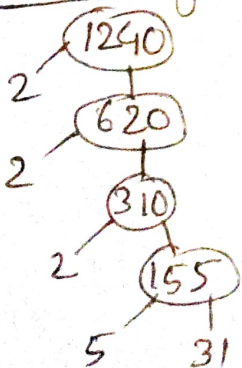
Therefore, the prime factorization of 1240 is

$= 2^3 . 5 . 31$

So, the total number of factors of 1240 is

$(3+1)(1+1)(1+1) = 16$

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 1240 are 1, 2, 34, 5, 8, 10, 20, 31, 40, 62, 124, 155, 248, 310, 620, 1240

3. Finding the all prime factors of 1240,

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

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

4. Finding the all composite factors of 1240,

$\Rightarrow$ Composite factors:-

$1240 = 2, 620, 310, 4, 8, 155, 5, 31,$

$= 2, 4, 8, 5, 31, 155, 310, 620$