Sub: Exercise: MAT 111 Day

Time: Date: 18/01/22

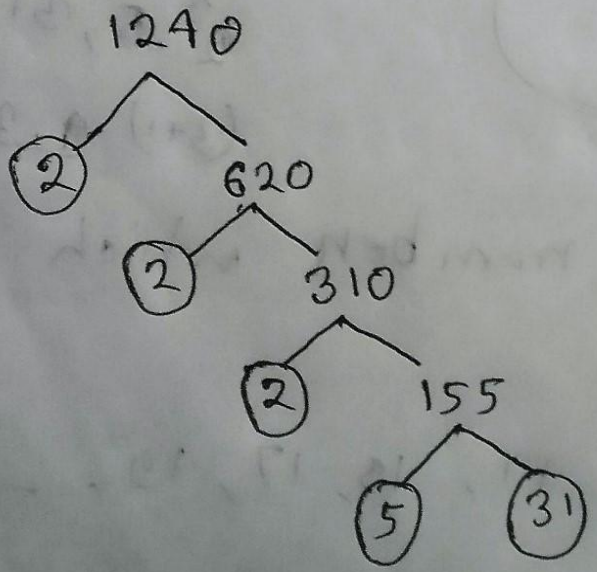
1. Find the prime factorization of 1240 using three different methods.

= Division method:

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

Therefore, the prime factorization in division method is $2^3 . 5 . 31$

Tree Diagram:



Therefore, the prime factorization in Tree diagram is $2^3 . 5 . 31$.

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Multiplication method:

$1240 = 2 \times 620$

$= 2 \times 2 \times 310$

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

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

$= 2^3 . 5 . 31$

Therefore, the prime factorization in multiplication method is $2^3 . 5 . 31$

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

The prime factorization of 1240 in tree diagram is $2^3 . 5 . 31$

So, the total number of factors of 1240 is $= (l+1)(m+1)(n+1)$

here,

$l = 3$

$m = 1$

$n = 1$

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

$= 4 . 2 . 2$

$= 16 .$

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Calculation for all factors of 1240 :

$1240 = 1 \times 1240$

$= 2 \times 620$

$= 4 \times 310$

$= 5 \times 248$

$= 8 \times 155$

~~$= 40 \times 31$~~

$= 10 \times 124$

$= 20 \times 62$

$= 40 \times 31$

The all factors of 1240 are

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

3. Find the all prime factors of 1240 is

2, 5, 31.

4. Find the all composite factors of 1240 is.

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