



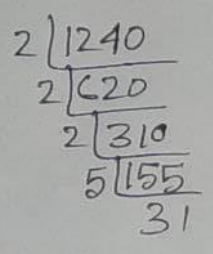
MAT - 111

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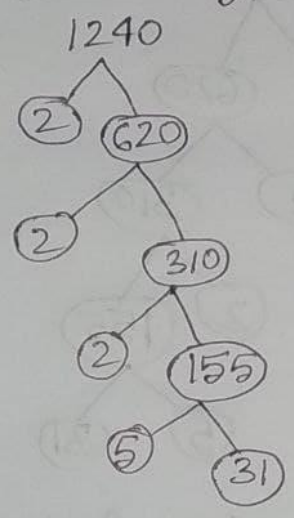


1. Finding the prime factorization of 1240 using three different methods;

1/ Division Method :-



2/ Tree diagram :-



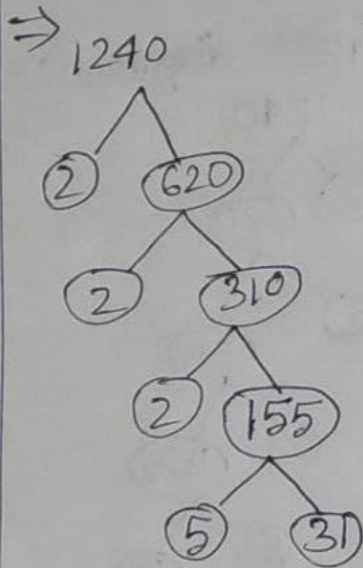
3/ Multiplication method :-

$$\begin{aligned}
 1240 &= 2 \times 620 \\
 &= 2 \times 2 \times 310 \\
 &= 2^2 \times 2 \times 155 \\
 &= 2^3 \times 5 \times 31 \\
 &= 2^3 \times 5^1 \times 31^1
 \end{aligned}$$

The prime factorization of 1240 is $= 2^3 \cdot 5^1 \cdot 31^1$

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



The prime factorization of 1240 is $= 2^3 \cdot 5^1 \cdot 31^1$

Total number of factors of 1240

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

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

$$= 16.$$

3) Find the all factors of 1240.

$$\Rightarrow 1240 = 1 \times 1240$$

$$= 2 \times 620$$

$$= 4 \times 310$$

$$= 5 \times 248$$

$$= 8 \times 155$$

$$= 10 \times 124$$

$$= 20 \times 62$$

$$= 31 \times 40$$

$$= 40 \times 31$$

$$= 62 \times 20$$

$$= 124 \times 10$$

$$= 155 \times 8$$

$$= 248 \times 5$$

$$= 310 \times 4$$

$$= 620 \times 2$$

$$= 1240 \times 1$$

\therefore Prime factors of 1240 is $= 2 \times 2 \times 2 \times 5 \times 31$
 $= 2^3 \cdot 5 \cdot 31.$

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4/ Find the all composite factors of 1240.

⇒ composite factors of 1240,

~~2, 20, 310, 4~~

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