STD - 10

MATHS

CHAPTER - 1

REAL NUMBER

EXERCISE-1.2 (Q.3)(Q.4)

- 3. Find the LCM and HCF of the following integers by applying the prime factorisation method.
- (i) 12, 15 and 21
- > Writing the product of prime factors for all the three numbers, we get,

$$12 = 2 \times 2 \times 3$$

$$15 = 5 \times 3$$

$$21 = 7 \times 3$$

Therefore,

HCF (12, 15, 21)

= 3

LCM (12, 15, 21)

 $=2\times2\times3\times5\times7$

= 420

(ii) 17, 23 and 29

- Writing the product of prime factors for all the three numbers, we get,
- **> 17**
- $= 17 \times 1$
- **> 23**
- $= 23 \times 1$
- **> 29**
- $= 29 \times 1$

Therefore,

- > HCF (17, 23, 29)
- = 1
- > LCM (17,23,29)
- $= 17 \times 23 \times 29$
- = 11339

(iii) 8, 9 and 25

Writing the product of prime factors for all the three numbers, we get,

$$=2\times2\times2\times1$$

$$=3\times3\times1$$

$$=5\times5\times1$$

Therefore,

HCF (8, 9, 25)

= 1

LCM (8,9,25)

 $=2\times2\times2\times3\times3\times5\times5$

= 1800

- 4. Given that HCF (306, 657) = 9, find LCM (306, 657).
- > As we know that,

HCF × LCM

= Product of the two given numbers

Therefore,

 $9 \times LCM = 306 \times 657$

> LCM

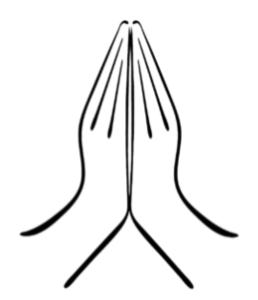
$$=\frac{(306\times657)}{9}$$

= 22338

Hence, LCM (306,657)

= 22338

Thanks



For watching