

**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)**

**=  $2 \times 2 \times 3 \times 5 \times 7$**

**= 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 × 23 × 29**

**= 11339**

### **(iii) 8, 9 and 25**

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

➤ **8**

$$= 2 \times 2 \times 2 \times 1$$

➤ **9**

$$= 3 \times 3 \times 1$$

➤ **25**

$$= 5 \times 5 \times 1$$

**Therefore,**

**HCF (8, 9, 25)**

**= 1**

**LCM (8,9,25)**

**=  $2 \times 2 \times 2 \times 3 \times 3 \times 5 \times 5$**

**= 1800**

**4. Given that HCF (306, 657) = 9, find LCM (306, 657).**

➤ **As we know that,**

$$\text{HCF} \times \text{LCM}$$

**= Product of the two given numbers**

**Therefore,**

$$9 \times \text{LCM} = 306 \times 657$$



➤ **LCM**

$$= \frac{(306 \times 657)}{9}$$

$$= 22338$$

**Hence, LCM (306,657)**

$$= 22338$$

# Thanks



# For watching