

Section 1: Basic Concepts

1. Define the terms HCF (Highest Common Factor) and LCM (Lowest Common Multiple).
2. Fill in the blank: The LCM of two co-prime numbers is their _____.
3. True or False: The HCF of two consecutive numbers is always 1.
4. Fill in the blank: $\text{HCF} \times \text{LCM} = \text{Product of the two}$ _____.

Section 2: Finding HCF

Find the HCF of the following numbers using the prime factorization method:

5. 24 and 36

6. 45, 75, and 105

Find the HCF using the long division method:

7. 108 and 88

8. 144 and 192

Section 3: Finding LCM

Find the LCM of the following numbers using the division method:

9. 12, 16, and 24

10. 20, 25, and 30

Find the LCM using the prime factorization method:

11. 36 and 60

Section 4: Properties & Relationships

12. The HCF of two numbers is 12, and their LCM is 180. If one of the numbers is 36, find the other number.

13. Find the HCF and LCM of 16 and 20, and verify the relationship: $\text{HCF} \times \text{LCM} = \text{Product of numbers}$.

Section 5: Word Problems

14. Two tankers contain 36 liters and 60 liters of petrol, respectively. Find the maximum capacity of a container that can measure the petrol of either tanker in an exact number of times.
15. Three bells toll at intervals of 12 minutes, 15 minutes, and 20 minutes respectively. If they start tolling together, after what time will they toll together again?
16. Find the smallest 3-digit number that is exactly divisible by 6, 8, and 12.