

CLASS	VI
SUBJECT	MATHEMATICS
TOPIC	PLAYING WITH NUMBERS
SUB TOPIC	COMMON FACTORS & COMMON MULTIPLES
NO OF SESSIONS	4 / 8

Introduction:

Common Factors and Common Multiples

Example: 1

What are the common factors of 25 and 55?

Solution:

Factors of 25 are 1, 5.

Factors of 55 are 1, 5, 11.

Common factors of 25 and 55 are 1 and 5.

Example: 2

Find the common multiples of 3 and 4.

Solution:

Multiples of 3:

0, 3, 6, 9, 12, 15, 18, 21, 24 ...

Multiples of 4:

0, 4, 8, 12, 16, 20, 24, 28 ...

Common multiples of 3 and 4 are 0, 12, 24 and so on.

Co-prime Numbers

If 1 is the only common factor between two numbers then they are said to be **Co-prime Numbers**.

Example

Check whether 7 and 15 are co-prime numbers or not.

Solution:

Factors of 7 are 1 and 7.

Factors of 15 are 1, 3, 5 and 15.

The common factor of 7 and 15 is 1 only. Hence they are the co-prime numbers.

Assignment:

1. Is the first number a factor of the second number? 9, 146
 - a) Yes
 - b) No
2. Three clocks ring once at the same time. After that, the first clock rings after every 90 minutes, the second after every 30 minutes, and the third after every 60 minutes. After how many minutes will they again all ring together?
3. Boxes that are 12 cm tall are being stacked next to boxes that are 18 cm tall. What is the shortest height at which the two stacks will be at the same height?
4. Two neon lights are turned on at the same time. One blinks every 4 seconds and the other blinks every 6 seconds. In 60 seconds, how many times will they blink at the same time?
5. Complete the patterns
 - (a) Multiples of 11 → 11, _____, _____, _____, _____
 - (b) Multiples of 15 → 15, _____, _____, _____, _____
 - (c) 8, _____, 24, _____, _____, 48, _____, _____, 72
 - (d) 20, _____, _____, _____, 100, _____, 140, _____, 180
6. Write all the multiples of 7 which lie between 32 and 80?
7. Write the first five multiples of 6 and 12. Find their common multiples and the LCM.
8. Write the greatest
 - 2-digit multiple of 3 _____
 - 3-digit multiple of 2 _____
9. Write the
 - a) first two common multiples of 4 and 5 _____
 - b) first two common multiples of 6 and 8 _____
 - c) first two common multiples of 2, 3 and 5 _____

Homework: NCERT EX3.4