

## Factors and Multiples

### SPECIFIC OBJECTIVES

The students will

- know about the factors and their properties.
- learn how to find the factors of a number.
- know the common factors of two or more numbers.
- understand the multiples of a number.
- know the properties of multiples.
- be able to find out the common multiples of given numbers.
- know what LCM and HCF are.
- learn how to find out LCM and HCF of two or more numbers.
- know the types of numbers like even, odd, prime, composite, etc.
- learn the divisibility rules for the numbers 2, 3, 5 and 10.

### CONTENTS EXPLAINED INSIDE THE CHAPTER

- Factors (page 151)
- Finding Factors of a Number (pages 151–152)
- Common Factors (pages 153–154)
- Multiples (pages 154–155)
- Common Multiples (page 156)
- HCF and LCM (pages 156–158)
- Even and Odd Numbers (pages 158–159)
- Prime and Composite Numbers (pages 159–161)
- Divisibility Tests (pages 161–162)

### TEACHING AIDS

A square grid paper, a plain paper, a pencil, a chalk, a blackboard and concrete items.

### TEACHING STRATEGY

- To start the chapter, the teacher should provide a few sets of concrete items to students and ask them to arrange the items in rows and columns to get a rectangular shape each time.

Then, she should ask them to do the task given on page 150.

- Then, the teacher should introduce the term **factors** and explain its properties to the class.
- Thereafter, she should explain how to find the factors of a number. She should also develop the idea of common factors. For text and exercise, she should go to pages 151–154.
- Further, the teacher should talk about the **multiples** along with their properties. Also, she should discuss about common multiples. Then, she should go to pages 154–156 for text and exercise.
- After that, the teacher should explain the HCF and LCM for two or three numbers on the blackboard. She may involve the students in performing the Maths Lab Activity for finding LCM. She should go to pages 156–158 for text and exercise.
- Then, she should discuss of even, odd, prime and composite numbers. She should go to pages 158–161 for text and exercise.
- Now, the teacher should talk about the divisibility rules for the numbers 10, 5, 2 and 3 by which the students can solve the problems quickly. For text and exercise, the teacher should go to pages 161–162.
- Moreover, she should provide them a 100-number chart to each student or ask to prepare it themselves using a  $10 \times 10$  square grid. Then, she should instruct them using the steps mentioned in Fun Zone and ask them to answer the questions given at the bottom.

## EXPECTED LEARNING OUTCOMES

Students are able to

- explain about the factors and their properties.
- find out the factors and common factors of the given numbers.
- understand the multiples and their properties.
- find out the multiples and common multiples of the given numbers.
- calculate HCF and LCM of 2 or 3 numbers.
- identify the even, odd, prime or composite numbers.
- use the divisibility terms to resolve the simple problems.

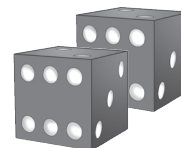
## SUGGESTED ACTIVITY

**Aim:** The group GCF activity is useful for practising factors as well as understanding the concept of the Greatest Common Factor.

**Materials:** 2 dice per pair of students, paper and pencil for each child

### **Teacher's Instruction**

1. Review the concept of the Greatest Common Factor.
2. Find the GCF for a few pairs of numbers to review the procedure.
3. Divide the class into pairs of students.
4. Provide two dice to each pair.
5. Instruct each student to roll the pair of dice and come up with a 2-digit number using the numbers on the dice.



6. The students then find all the factors for their numbers and write them down on a sheet of paper.
7. The pairs then compare their factors and find the GCF of the two numbers.
8. Finally, instruct each pair to use the mathematical procedure for finding the GCF of the two numbers and compare the answers.
9. Let the students do the same steps for more numbers.