# Factors

## **Understanding Factors**

- A factor is a number that divides another number exactly without leaving a remainder.
- Factors are the numbers we multiply to get another number.
- Every number has at least two factors: 1 and the number itself.
- Factors are always less than or equal to the number.
- Factors come in pairs.

#### **Facts about Factors**

- 1 is a factor of every number
- Every number is a factor of itself
- Factors of a number are always finite (limited)
- If a number divides exactly, it is a factor
- Even numbers have more factors than odd numbers in general

#### **Examples with Solutions**

Example: Find the factors of 6 Solution:  $1 \times 6 = 6$ ,  $2 \times 3 = 6$ Factors of 6 = 1, 2, 3, 6Example: Find the factors of 12 Solution:  $1 \times 12 = 12$ ,  $2 \times 6 = 12$ ,  $3 \times 4 = 12$ Factors of 12 = 1, 2, 3, 4, 6, 12Example: Find the factors of 15 Solution:  $1 \times 15 = 15$ ,  $3 \times 5 = 15$ Factors of 15 = 1, 3, 5, 15Example: Find the factors of 9 Solution:  $1 \times 9 = 9$ ,  $3 \times 3 = 9$ 

Factors of 9 = 1, 3, 9

Example: Find the factors of 18

**Solution:** 1 × 18 = 18, 2 × 9 = 18, 3 × 6 = 18

Factors of 18 = 1, 2, 3, 6, 9, 18

## **Summary Points**

- A factor divides a number exactly without any remainder.
- Factors come in pairs and are always equal to or smaller than the number.
- Every number has 1 and itself as factors.
- Use multiplication to find all the factors of a number.
- Practice finding factors helps improve multiplication and division skills.