

Mathematics

Fraction

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Learning Objectives:

By the end of this lesson, students will be able to:

- Understand the meaning of fractions
- Identify numerator and denominator
- Recognize different types of fractions
- Find equivalent fractions

Introduction to Fractions:

A **fraction** represents a **part of a whole**.

When a whole is divided into **equal parts** and we take some of those parts, we use a fraction to show it.

Example:

If a cake is cut into 4 equal pieces and we take 1 piece $\rightarrow \frac{1}{4}$

Parts of a Fraction

A fraction has **two parts**:

- **Numerator** (Top number)
→ Shows how many parts are taken
- **Denominator** (Bottom number)
→ Shows total equal parts

Example:

$$\frac{3}{5}$$

3 = Numerator

5 = Denominator

Types of Fractions :

Fractions are mainly of **three types**:

1. Proper Fractions
2. Improper Fractions
3. Mixed Fractions

Proper Fractions

A **proper fraction** is a fraction where:

- Numerator < Denominator

Examples:

$$\bullet \frac{2}{7}$$

$$\bullet \frac{4}{9}$$

$$\bullet \frac{9}{9}$$

 Value is **less than 1**

Improper Fractions

An **improper fraction** is a fraction where:

- Numerator \geq Denominator

Examples:

$$\bullet \frac{5}{5}$$

$$\bullet \frac{9}{4}$$

➤ Value is **equal to or greater than 1**

Mixed Fractions

A **mixed fraction** contains:

- A whole number and
- A proper fraction

Example:

$$3\frac{1}{2}$$

► Means 3 whole parts and half of another part

Equivalent Fractions

Fractions that show the **same value** but look different are called **equivalent fractions**.

Examples:

$$\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$$

📌 Multiply or divide numerator and denominator by the same number

Thank You