Fractions and its types

Understanding the Topic

- A fraction is a part of a whole
- It is written in the form $\frac{a}{b}$, where a is the numerator and b is the denominator
- The numerator shows how many parts are taken
- The denominator shows how many equal parts the whole is divided into
- Fractions are used in everyday life like cutting a cake, dividing a pizza, sharing things, and measuring

Types of Fractions

- **Proper Fraction –** Numerator is smaller than the denominator (e.g., $\frac{3}{4}$)
- **Improper Fraction –** Numerator is equal to or greater than the denominator (e.g., $\frac{5}{4}\ or\ \frac{6}{6}$)
- **Mixed Fraction –** A whole number and a proper fraction together (e.g., $1\frac{1}{2}$)
- **Like Fractions –** Fractions with the same denominator (e.g., $\frac{2}{5},\frac{3}{5}$)
- **Unlike Fractions –** Fractions with different denominators (e.g., $\frac{1}{3},\frac{2}{5}$)
- **Unit Fraction –** Numerator is 1 (e.g., $\frac{1}{2},\frac{1}{7}$)

Examples with Solutions

Example:

Identify the type: $\frac{3}{5}$

Numerator < Denominator

Answer: Proper fraction

Example:

Identify the type: $\frac{7}{4}$

Numerator > Denominator

Answer: Improper fraction

Convert $1\frac{3}{4}$ into an improper fraction

$(1 \times 4) + 3 = 7 \rightarrow \frac{7}{4}$

Answer: $\frac{7}{4}$

Example:

Are $\frac{2}{7}$ and $\frac{5}{7}$ like or unlike fractions?

Both have the same denominator

Answer: Like fractions

Example:

Write a unit fraction with denominator 8

Numerator should be 1

Answer: $\frac{1}{8}$

Summary Points

- A fraction shows a part of a whole
- It has two parts – numerator and denominator
- Fractions can be proper, improper, mixed, like, unlike, or unit
- Identifying the type helps in solving fraction problems easily
- Fractions are used in cooking, shopping, measuring, and daily life