Word Problems

Understanding the Topic

- Word problems with fractions involve real-life situations where we use addition, subtraction, or comparison of fractions.
- Carefully read the problem, identify the operation needed, and convert all parts into fractions if required.
- Solve step by step using rules of fraction operations.
- Always simplify your answer and convert to mixed numbers if needed.
- Understand units like pieces, liters, meters, rupees, etc., depending on the context.

Examples with Solutions

Example:

Ravi ate $\frac{2}{5}$ of a pizza and his friend ate $\frac{1}{5}$. How much did they eat together?

$\frac{2}{5} + \frac{1}{5} = \frac{3}{5}$

Answer: They ate $\frac{3}{5}$ of the pizza

Example:

A jug has 4 liters of milk. $1\frac{1}{2}$ liters is used. How much milk is left?

$4 = \frac{8}{2}, 1\frac{1}{2} = \frac{3}{2}$

$\frac{8}{2} - \frac{3}{2} = \frac{5}{2} = 2\frac{1}{2} liters$

Answer: $2\frac{1}{2}$ liters left

Example:

Riya walked $\frac{3}{4}$ km in the morning and $\frac{1}{2}$ km in the evening. How much did she walk in total?

LCM of 4 and 2 = 4

$\frac{3}{4} + \frac{2}{4} = \frac{5}{4} = 1\frac{1}{4} km$

Answer: $1\frac{1}{4}\ km$

Example:

Out of 5 meters of ribbon, $2\frac{2}{3}$ meters was used. How much ribbon is left?

$5 = \frac{15}{3}, 2\frac{2}{3} = \frac{8}{3}$

$\frac{15}{3} - \frac{8}{3} = \frac{7}{3} = 2\frac{1}{3} meters$

Answer: $2\frac{1}{3}$ meters left

Example:

A tank was full with 6 liters of water. $\frac{3}{4}$ liters of water was taken out. How much is left?

$6 = \frac{24}{4}$

$\frac{24}{4} - \frac{3}{4} = \frac{21}{4} = 5\frac{1}{4} liters$

Answer: $5\frac{1}{4}$ liters of water is left

Summary Points

- Word problems use real-life scenarios to apply fraction operations.
- Identify whether to add, subtract, or compare.
- Convert mixed numbers and whole numbers into fractions as needed.
- Use LCM to make denominators same in unlike fractions.
- Write final answers in simplest or mixed number form with correct units.