



Multiplication of Fractions

Understanding the Topic

- Multiplication of fractions means finding a part of a part.
- To multiply two fractions, multiply the numerators together and the denominators together.
- The answer should be simplified if possible.
- Whole numbers can be written as fractions by putting 1 as the denominator.
- If the result is an improper fraction, convert it into a mixed number.

Examples with Solutions

Example:

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

Multiply numerators: $1 \times 1 = 1$

Multiply denominators: $2 \times 3 = 6$

Answer: $\frac{1}{6}$

Example:

Multiply $\frac{2}{5} \times \frac{3}{4}$

Numerators: $2 \times 3 = 6$

Denominators: $5 \times 4 = 20$

Simplify: $\frac{6}{20} = \frac{3}{10}$

Answer: $\frac{3}{10}$

Example:

Multiply $2 \times \frac{3}{7}$

Convert 2 into $\frac{2}{1}$

$$\frac{2}{1} \times \frac{3}{7} = \frac{6}{7}$$

Answer: $\frac{6}{7}$



Example:

Multiply $\frac{4}{9} \times \frac{3}{8}$

$$4 \times 3 = 12, 9 \times 8 = 72$$

$$\frac{12}{72} = \frac{1}{6}$$

Answer: $\frac{1}{6}$

Example:

Multiply $\frac{5}{6} \times \frac{1}{2}$

$$5 \times 1 = 5, 6 \times 2 = 12$$

Answer: $\frac{5}{12}$

Summary Points

- To multiply fractions, multiply numerators and denominators directly.
- Always simplify the final fraction if possible.
- Whole numbers can be written as fractions by putting 1 in the denominator.
- The product of two proper fractions is always smaller than both.
- Multiplication of fractions helps in finding parts of quantities like in recipes, area, and measurement.