

Operations on Fractions

Chapter 4: Operations on Fractions · Topic 1

Key Concept

Adding or subtracting fractions with different denominators requires finding a common denominator first, using the LCM.

Multiplying fractions involves multiplying the numerators together and the denominators together, like $\frac{2}{3} \times \frac{3}{4} = \frac{6}{12} = \frac{1}{2}$.

Dividing fractions involves multiplying by the reciprocal (flipped fraction) of the second fraction, like $\frac{2}{3} \div \frac{1}{4} = \frac{2}{3} \times \frac{4}{1} = \frac{8}{3}$.

Simplifying fractions to their lowest terms after operations makes results easier to understand and use.

Quick Revision Notes

- Adding/subtracting: need common denominator (LCM).
- Multiplying: multiply numerators, multiply denominators.
- Example: $\frac{2}{3} \times \frac{3}{4} = \frac{6}{12} = \frac{1}{2}$.
- Dividing: multiply by reciprocal.
- Example: $\frac{2}{3} \div \frac{1}{4} = \frac{2}{3} \times \frac{4}{1} = \frac{8}{3}$.
- Simplify results to lowest terms.
- This makes results easier to use.
- Practice builds fraction operation skills.

Practice Questions

- 1 Add $\frac{1}{4} + \frac{1}{3}$.
- 2 Subtract $\frac{3}{5} - \frac{1}{4}$.
- 3 Multiply $\frac{2}{5} \times \frac{3}{7}$.
- 4 Divide $\frac{3}{4} \div \frac{1}{2}$.
- 5 Simplify a fraction result to lowest terms.
- 6 Solve a word problem using fraction operations.