

Adding and Subtracting Unlike Fractions

Chapter 11: Finding Common Ground · Topic 2

Key Concept

For example, to add $\frac{1}{3}$ and $\frac{1}{4}$: find the LCM of 3 and 4 (which is 12), convert both fractions ($\frac{1}{3} = \frac{4}{12}$, $\frac{1}{4} = \frac{3}{12}$), then add: $\frac{4}{12} + \frac{3}{12} = \frac{7}{12}$. This systematic process ensures accuracy even with more complex unlike fractions, and mastering it is essential before moving on to algebraic fractions in higher classes, where the same common-denominator principle applies to expressions with variables.

Quick Revision Notes

- Unlike fractions (different denominators) must be converted to a common denominator before adding/subtracting.
- Example: $\frac{1}{3} + \frac{1}{4} = \frac{4}{12} + \frac{3}{12} = \frac{7}{12}$.
- Simplify the final answer to lowest terms if possible.
- This same principle later applies to algebraic fractions with variables in higher classes.

Practice Questions

- 1 Add $\frac{2}{3}$ and $\frac{1}{6}$.
- 2 Subtract $\frac{1}{5}$ from $\frac{3}{4}$.
- 3 Explain the steps needed to add two fractions with different denominators.