

Comparing and Ordering Fractions

Chapter 7: Fractions · Topic 2

Key Concept

For example, to compare $\frac{2}{3}$ and $\frac{3}{4}$, find the LCM of 3 and 4 (which is 12), convert both fractions to have denominator 12 ($\frac{2}{3} = \frac{8}{12}$ and $\frac{3}{4} = \frac{9}{12}$), and then compare numerators — since $9 > 8$, $\frac{3}{4}$ is greater than $\frac{2}{3}$. This same common-denominator method is used to arrange a group of fractions in increasing or decreasing order, an important skill for solving real-world problems involving measurements and comparisons.

Quick Revision Notes

- Same denominator: compare numerators directly (larger numerator = larger fraction).
- Different denominators: convert to a common denominator (using LCM) before comparing.
- Example: $\frac{2}{3}$ vs $\frac{3}{4} \rightarrow$ convert to $\frac{8}{12}$ vs $\frac{9}{12} \rightarrow \frac{3}{4}$ is greater.
- The same method is used to order multiple fractions from smallest to largest.

Practice Questions

- 1 Arrange $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ in increasing order.
- 2 Compare $\frac{5}{6}$ and $\frac{7}{9}$ by converting to a common denominator.
- 3 Explain why we cannot directly compare numerators of fractions with different denominators.