Comparison of Fraction

Understanding of Comparison of Fractions

- Comparison of fractions means finding which fraction is greater, smaller, or if they are equal.
- To compare fractions easily, we either make the denominators same or convert the fractions to decimals.
- Fractions with the same denominator can be compared by comparing their numerators.

Important Points

- If denominators are the same, compare numerators directly
- If denominators are different, find the LCM and make denominators same
- Alternatively, convert fractions into decimals and compare
- Proper fractions (numerator smaller than denominator) are less than 1
- Improper fractions (numerator greater than denominator) are greater than or equal to 1

Examples with Solutions

Example 1: Same Denominator

Compare $\frac{3}{7}$ and $\frac{5}{7}$.

Solution: 3 < 5, so $\frac{3}{7} < \frac{5}{7}$

Example 2: Different Denominators

Compare $\frac{2}{5}$ and $\frac{3}{7}$.

Solution: LCM of 5 and 7 = 35

$\frac{2}{5} = \frac{14}{35}$ and $\frac{3}{7} = \frac{15}{35}$

Since 14 < 15, $\frac{2}{5} < \frac{3}{7}$

Example 3: Using Decimals

Compare $\frac{4}{5}$ and $\frac{7}{10}$.

Solution: $\frac{4}{5}$ = 0.8 and $\frac{7}{10}$ = 0.7

Since 0.8 > 0.7, $\frac{4}{5} > \frac{7}{10}$

Example 4: Comparing Proper and Improper Fractions

Compare $\frac{5}{6}$ and $\frac{7}{5}$.

Solution: $\frac{5}{6} \approx 0.833$, $\frac{7}{5}$ = 1.4

Since 0.833 < 1.4, $\frac{5}{6} < \frac{7}{5}$

Summary Points

- If denominators same, compare numerators.
- If denominators different, make them same using LCM.
- Convert fractions to decimals if needed.
- Proper fractions are less than 1, improper are greater than or equal to 1.
- Always compare carefully by checking numerator and denominator.