



## 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

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

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  $\frac{7}{10} = 0.7$

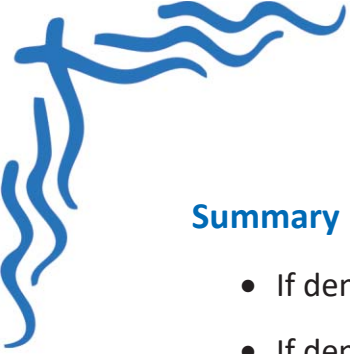
Since  $0.8 > 0.7$ ,  $\frac{4}{5} > \frac{7}{10}$

#### 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.