

# Session 18: Addition and subtraction of fractions

Session Title	Addition and subtraction of fractions
Objective	<ol style="list-style-type: none"><li>Students will understand and solve addition and subtraction problems with like and unlike denominators.</li><li>Students will represent and simplify fraction operations visually and numerically.</li><li>Students will explore and identify equivalent fractions using fraction strips.</li></ol>
Concept	<ul style="list-style-type: none"><li>To understand how to add and subtract fractions with like and unlike denominators.</li></ul>
Materials Required	<ol style="list-style-type: none"><li>Blackboard</li><li>Fraction manipulatives (circles, bars, or fraction strips)</li><li>Paper plates (for fraction pizza activity)</li><li>Colored pencils or markers</li><li>Pre-cut fraction cards (e.g., <math>\frac{1}{2}</math>, <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, etc.)</li></ol>
Methodology	<ul style="list-style-type: none"><li>Start with basic concepts of fractions</li><li>Provide clear step by step explanation and examples through activity.</li></ul>
Session Duration	90 Minutes

## Introduction Activity (40 minutes)

Create Fraction Strips: (15 minutes)

- Give each student (or group) colored strips of paper.

Have them fold and cut the strips to show different fractions:

- 1 strip = whole
- Fold in 2 = halves
- Fold in 3 = thirds
- Fold in 4, 6, 8 = corresponding fractions

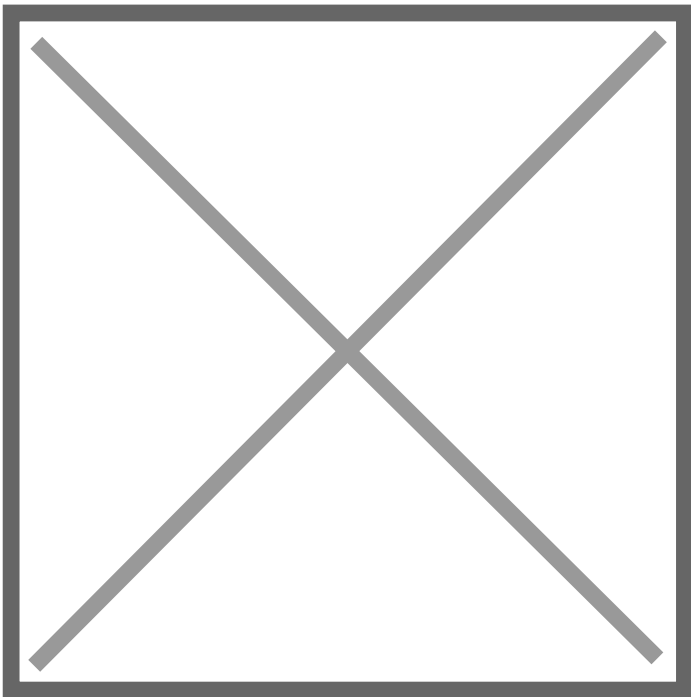
**Label the Strips:**

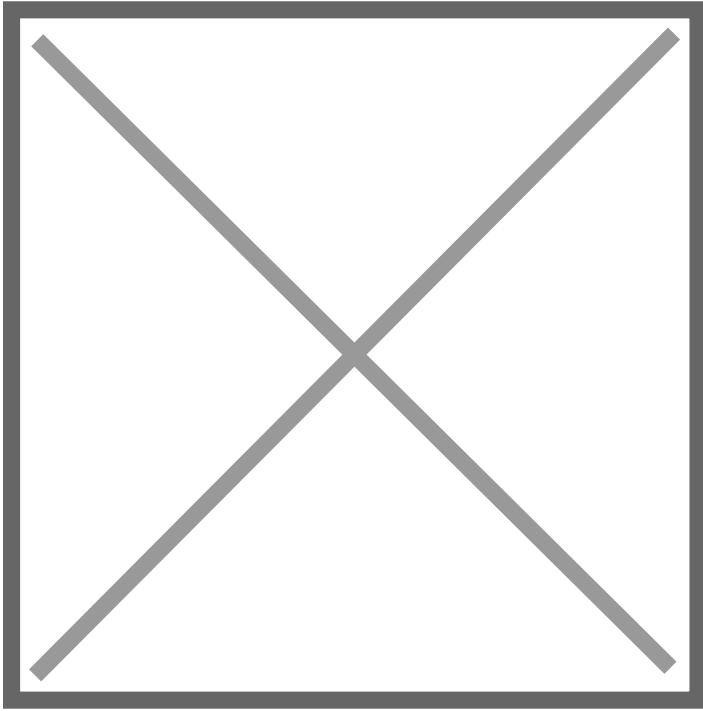
- Students write the fraction name on each part of the strip (e.g., " $\frac{1}{2}$ ", " $\frac{1}{4}$ ")

**Explore Equivalents: (15 minutes)**

- Students lay out their strips and compare lengths.
- They find and stack strips that are the same total length. For example:
- Place to  $\frac{1}{4}$  strips over one  $\frac{1}{2}$  strip to see they are equal.
- Match three  $\frac{1}{6}$  strips to one  $\frac{1}{2}$  strip.

**Worksheet Time (10 minutes)**





## Main Activity (35 minutes)

### Discussion (10 minutes)

**Ask:** “Can we add  $\frac{1}{2}$  and  $\frac{1}{3}$  as they are?” (No)

Show visually with fraction strips that they are different-sized parts.

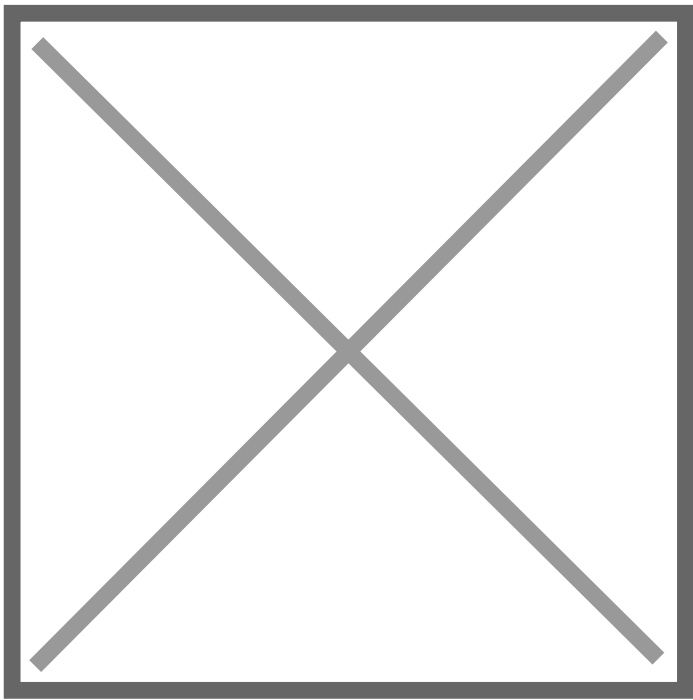
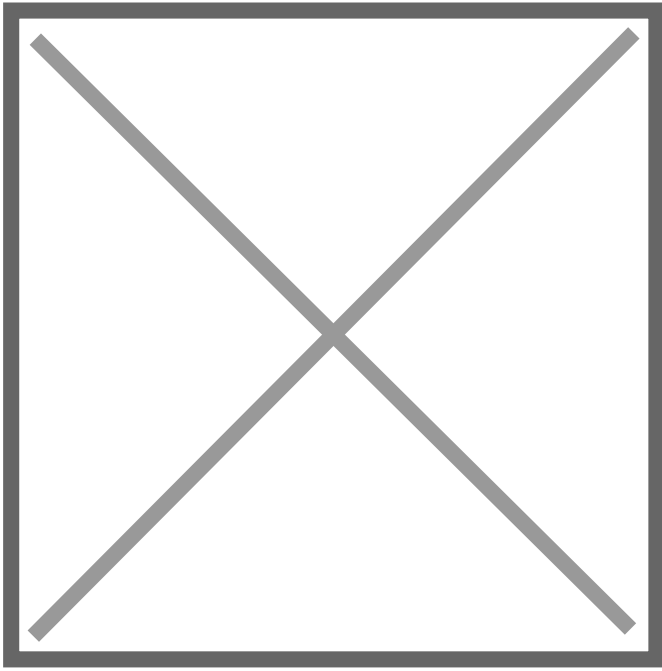
**Explain:** “To add or subtract fractions, we need to make the pieces the same size — we need a common denominator.”

Find the Least Common Denominator (6)

**Convert:**  $\frac{1}{2} = \frac{3}{6}$ ,  $\frac{1}{3} = \frac{2}{6} \rightarrow \frac{3}{6} + \frac{2}{6} = \frac{5}{6}$

### "Fraction Friends Challenge" (25 minutes)

1. Group students in pairs or small groups.
2. Each group gets two set of fraction cards



### Challenge

- Pick two cards, find a common denominator, and solve.
- Each person solves it on their own first.
- Then compare answers and explain how they got it.
- Use fraction strips to physically represent their answer and confirm visually

## Review Questions (5 minutes)

- $\frac{1}{2} + \frac{2}{4} =$
- $\frac{3}{6} - \frac{2}{6} =$

## Follow-up Tasks (10 minutes)

1.  $\frac{1}{2} + \frac{3}{3}$
2.  $\frac{4}{8} + \frac{6}{4}$
3.  $\frac{5}{10} + \frac{3}{2}$

## Expected Learning Outcome:

### Knowledge building:

- To understand how to add and subtract like fractions
- Expert in the conversion of unlike fractions to like
- To understand how to add and subtract unlike fractions.

### Skill Building:

- Collaborate with a peer
- Respectful communication and empathy
- Logical thinking
- Problem solving

### Resources

[https://drive.google.com/file/d/1PTdWkV6p0GqVwmCJTn1luKZ\\_O5zkiHsb/view?usp=drivesdk](https://drive.google.com/file/d/1PTdWkV6p0GqVwmCJTn1luKZ_O5zkiHsb/view?usp=drivesdk)

[https://drive.google.com/file/d/1PXe1puienAKC\\_nuBOUKZjgR0ccxS1fHW/view?usp=drivesdk](https://drive.google.com/file/d/1PXe1puienAKC_nuBOUKZjgR0ccxS1fHW/view?usp=drivesdk)

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