

Unit 3

Addition and Subtraction of Fractions

Grade 5 Math

Description:

Students use models, manipulatives, or number lines to add fractions with unlike denominators. They find equivalent denominators to add fractions, and solve problems involving addition and subtraction of fractions with unlike denominators. They also use benchmarks, comparisons and mental math to justify their thinking and to determine whether their answer is reasonable.

Standards:

Number and Operation in Base Ten	
Use equivalent fractions as a strategy to add and subtract fractions.	
5.NF.A.1	Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. <i>For example, $\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}$. (in general, $\frac{a}{b} + \frac{c}{d} = \frac{ad + bc}{bd}$.)</i>
5.NF.A.2	Solve word problems involving addition and subtraction of fractions. <ol style="list-style-type: none"> Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and justify the reasonableness of answers. <i>For example, recognize an incorrect result $\frac{2}{5} + \frac{1}{2} = \frac{3}{7}$, by observing that $\frac{3}{7} < \frac{1}{2}$.</i>

Enduring Understandings:

- Models can be used to compute fractions with like and unlike denominators.
- Equivalent fractions represent the same amount of area in a rectangle.
- Equivalent fractions represent the same point on the number line.
- Equivalent fractions can be used as a strategy to add and subtract fractions.

Essential Questions:

- When would I need to use benchmark fractions?
- How can models (line plots, etc.) be used to compute fractions with like and unlike denominators?
- How can I tell if a fraction is greater than, less than, or equal to one whole?
- How can fractions with different denominators be added together? Subtracted?

- What strategies can be used to determine if answers are reasonable?