

## CCS.M30.03: Adding Fractions: Unlike Denominators (9 - 12)

### Grade 4: Introduce the concept of equivalent fractions as foundation for adding unlike denominators.

**CCSS.MATH.CONTENT.4.NF.B.3.B – Decompose a fraction into a sum of fractions with the same denominator**

**Standard Summary:** Begin to understand and manipulate fractions through equivalent parts.

**Focus Area:** Prepare to generate common denominators.

**Students will:**

- Use materials to identify equivalent fractions.
- Decompose and rename fractions to set up for addition.

**CCSS.MATH.CONTENT.4.NF.C.5 – Express fractions with denominators of 10 as equivalent fractions with denominators of 100**

**Standard Summary:** Understand how to generate equivalent fractions.

**Focus Area:** Apply fraction equivalency before adding.

**Students will:**

- Convert fractions to shared denominators (e.g.,  $1/2$  to  $2/4$ ).
- Add after matching denominators visually or symbolically.

### Grade 5: Master the formal process of adding fractions with unlike denominators using LCM and equivalent fractions.

**CCSS.MATH.CONTENT.5.NF.A.1 – Add and subtract fractions with unlike denominators**

**Standard Summary:** Generate equivalent fractions to perform operations.

**Focus Area:** Fluently add unlike fractions using visuals and equations.

**Students will:**

- Solve equations like  $1/3 + 1/4$  using LCM or fraction insets.
- Justify steps by showing equivalencies (e.g.,  $1/3 = 4/12$ ,  $1/4 = 3/12$ ).
- Use answer cards to check for accuracy.

**CCSS.MATH.CONTENT.5.NF.A.2 – Solve word problems involving addition of fractions**

**Standard Summary:** Apply addition to story problems or contextual math.

**Focus Area:** Use addition of unlike fractions in real-world tasks.

**Students will:**

- Add quantities with unlike denominators using hands-on tools.
- Interpret and explain their mathematical process.

**Grade 6: Use unlike fraction addition within multi-step expressions and rational number problems.**

**CCSS.MATH.CONTENT.6.NS.A.1 – Interpret and compute quotients of fractions**

**Standard Summary:** Understand operations with all types of rational numbers.

**Focus Area:** Review and apply fraction addition in complex settings.

**Students will:**

- Use fluency in unlike denominators to complete multi-step expressions.
- Transition from visual to symbolic representation confidently.