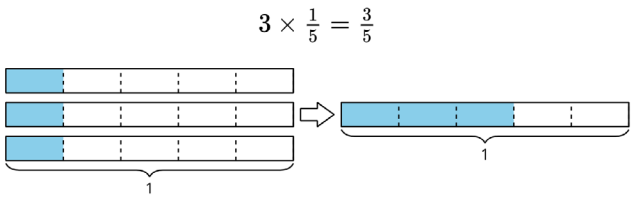
# Math Moments that Matter
# FOURTH GRADE

## Operations on Fractions

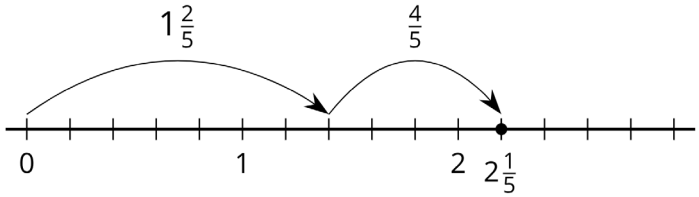
In 4th grade, students learn how fractions can describe real situations—like measuring ingredients, sharing food, or comparing amounts. They begin using models, number lines, and drawings to see how fractions can be added, subtracted, and multiplied by whole numbers in ways that make sense. These experiences help students understand what fraction operations mean and how they show up in everyday life.

Students learn to work with fractions by using visuals that show what fractional quantities represent. In the first image, fraction strips help students see how repeating the same fraction, like ⅕, builds a larger amount. A number line shows how two fractions combine to make a new total. In the second image, these models help students picture what is happening in the problem and connect the math to real situations—like measuring, comparing, or sharing.

**EXAMPLE:** *Fraction strips showing repeated unit fractions*




**EXAMPLE:** *Number line showing the addition of two fractions*






## Modeling and Data Analysis in Math

When students work with fractions, they're learning to use math to represent real situations and make sense of their results. Modeling helps them picture what's happening and explain their ideas clearly. They learn to:

- Apply math to situations like combining ingredients or sharing objects
- Identify how many equal parts make a whole
- Show how fractions are connected using pictures, equations, or number lines
- Explain what their models show and why their answers make sense

These habits help students see that fraction operations aren't just rules—they're tools for describing and solve everyday problems.

## What You Might See in the Classroom

Students using number lines or fraction strips to show how fractions are added, subtracted, or multiplied.

Teachers asking:

- "What does your model show?"
- "Can you represent this problem in another way?"
- "Is your answer more than 1? Less than 1? How do you know?"

Students explaining how their visual models match their equations.

Students comparing different models to decide which best represents the problem.

Partner talks where students describe their models and explain how they know their answers are reasonable.

## What You Can Do at Home

Use real-life examples: "We used ¾ cup of flour and added ½ cup. How much is that altogether?"

Ask: "How do you know your answer makes sense?" or "Can you show it another way?"

Look for fractions around you. Use measuring cups, clocks, or board games and talk about what each fraction means.

Playing: "This recipe uses ½ cup of sugar. If we double the recipe, how much sugar will we need?"

Talk it out: Encourage your student to explain what each fraction shows and how the model helped them figure it out.

## Make it a Math Moment!

We can model the world with math. When students use models to think about fractions, they're connecting math to real situations—helping them build strong reasoning and confidence as they see how fractions show up in everyday life.

**Tap or Scan for Interactive Tools and More Resources!**

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