

Math Moments that Matter

THIRD GRADE

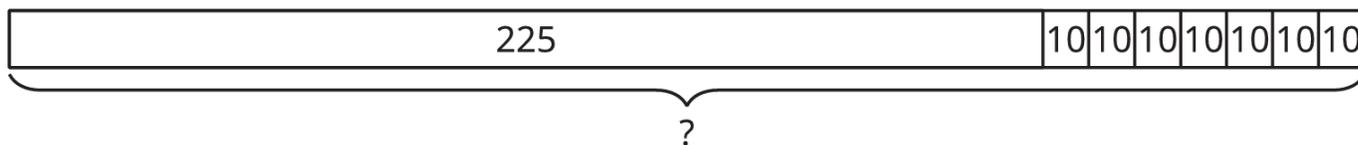


Solve Problems Involving the Four Operations

In 3rd grade, students use the four operations—addition, subtraction, multiplication, and division—to make sense of everyday math stories. They use drawings, number lines, and simple models to show what’s happening and choose strategies that fit the situation. As they work with numbers in different ways—combining them, comparing them, or breaking them apart—they begin to see how the four operations —addition, subtraction, multiplication, and division— connect. These hands-on experiences help students understand what a problem is asking, explain their thinking, and build confidence as flexible, thoughtful problem solvers.

Students use drawings, models, and bar diagrams (rectangular models that show parts of a whole) to show what is happening in a story problem. In this image, a bar model shows a problem in which Andre starts with 225 crayons and then buys 7 more boxes with 10 crayons in each. This picture helps students see the situation clearly: the crayons he already had and the packs he bought. Modeling the parts of the story helps students understand how the numbers fit together, making the problem easier to solve and talk about.

EXAMPLE: A bar model showing the number 225 with seven small sections labeled 10, representing seven packs of crayons added to Andre’s total.



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Problem Solving in Math

When students solve problems involving all four operations, they’re learning to think flexibly about numbers and choose strategies that make sense. Real-life examples—like sharing snacks equally, finding totals, or comparing amounts—help students understand what a problem is really asking. They learn to:

- Make sense of a story problem and decide which operation fits
- Represent their thinking with drawings, equations, or models like arrays or bar diagrams
- Check their work by estimating or using the opposite operation
- Use math language, like “groups of,” “each,” “difference,” or “in all”
- Explain their reasoning: “I know this works because I can show it with my model.”

These habits help students grow as confident thinkers who can solve problems in more than one way and explain how they know their answer makes sense.

What You Might See in the Classroom

Students using drawings, equations, and models to show how they solved a story problem.

Teachers asking questions like:

- “What is this problem asking you to find?”
- “How do you know which operation to use?”
- “Can you show your thinking another way?”

Students using arrays, number lines, or patterns when they repeat steps to solve multiplication and division.

Students explaining how multiplication and division are connected through fact families (related number facts that use the same numbers).

Partners sharing strategies and discussing which method made the most sense and why.

What You Can Do at Home

Use everyday examples: “We have 18 apples and 3 bags. How many apples go in each bag?”

Ask: “How did you decide whether to add, subtract, multiply, or divide?”

Play quick math games: Roll dice to create addition, subtraction, or multiplication problems.

Connect ideas: “If you know $45 + 35 = 80$, how could that help you solve $80 - 35$?”

Talk it out: “Show me what your math looks like. How do you know your answer makes sense?”

Make it a Math Moment!

Math helps us figure things out. When students explain how they solved a problem using the four operations, they’re showing what the numbers mean and why their strategy makes sense—building confidence and helping math feel useful and understandable.

