LOUISIANA DEPARTMENT OF EDUCATION

Teaching and Learning

Family Roadmap to Math Success in Louisiana

Grade 6 Overview

In Grade 6, students develop a deeper understanding of relationships between quantities as they work with ratios, rates, and numerical reasoning. They use mathematical reasoning to solve real-world problems involving fractions, decimals, and percentages. Students begin representing situations using algebraic expressions and equations, helping them make sense of patterns and unknown quantities. They also extend their understanding of numbers to include positive and negative values and use data to describe and interpret real-world situations.

By the end of the grade, your child will be able to:

- Understand and describe relationships between quantities using ratios and unit rates.
- Use ratio reasoning to solve real-world problems involving scaling, pricing, and measurement.
- Apply understanding of fractions and decimals to solve problems, including division of fractions.
- Reason about positive and negative numbers and represent them in real-world contexts.
- Write and interpret algebraic expressions to represent real-world situations.
- Solve equations and inequalities and explain what solutions mean in context.
- Represent relationships using tables, graphs, and equations.

How can families help at home?

- Ask your student to explain how two quantities are related (for example, “What does this rate mean?”).
- Use real-life situations like shopping, cooking, or traveling to discuss ratios and unit rates.
- Encourage your student to explain their thinking, not just answer.
- Ask your student to describe patterns they see in tables, graphs, or everyday situations.
- Use real-world examples (temperature, money, sports stats) to talk about positive and negative numbers.
- Have your student write expressions or equations to represent everyday situations.
- Ask your student to estimate an answer before solving and explain whether their answer is reasonable.

Building reasoning and problem-solving through word problems

Working through word problems helps students develop both their mathematical vocabulary and their reasoning abilities. Word problems support critical thinking, improve problem-solving strategies, and help students apply math concepts to real-world situations. Here are example word problems that Grade 6 students might work on:

- A recipe uses 2 cups of juice for every 3 cups of water. If you make a larger batch with 10 cups of water, how much juice will you need? Explain how you know.
- A store sells granola bars in packs of 6 for $4.50. What is the cost per bar? How can you use this to compare prices at another store?
- You have ¾ of a yard of ribbon. Each craft project uses ⅛ of a yard. How many projects can you make? Explain your reasoning.
- The temperature is −6°F in the morning and rises 9 degrees by the afternoon. What is the new temperature? What does this change represent?
- A student earns $8 per week and saves an additional $5 each week from doing extra chores. Write an expression for how much the student saves after 4 weeks. How much will they have saved?
- A backpack weighs 2 pounds plus 1.5 pounds for each book inside. The total weight is 8 pounds. Write and solve an equation to determine how many books are in the backpack.

Family Engagement Tips

- Talk positively about math and encourage your child to maintain a growth mindset.
- Encourage your child to share/show you a different way to solve a math problem than you are familiar with and explain the reasoning for their approach.
- Celebrate mistakes as learning opportunities. Remind your child that making mistakes is part of learning and praise their efforts.
- Stay in touch with your child's teacher to learn what your child is learning and how to support it at home.
- Create a learning space for your child with supplies such as paper, pencils, rulers, calculators, and age-appropriate math manipulatives.

How does grade 6 math build on grade 5?

Grade 6 builds on students' understanding of fractions and operations from Grade 5 by extending these ideas to ratios, rates, and more complex problem-solving. Students begin using algebraic expressions and equations to represent situations and deepen their understanding of numbers by including positive and negative values. They also expand their data-driven work to describe and interpret patterns and variability.

Math Conversations

Communicate with your child about math using open-ended questions:

- What strategy did you use to solve the problem?
- Why do you think your answer makes sense?
- If your answer was wrong, how could you check your work?
- How did you solve that problem?

Online Resources

- Family Math Resources
- Family Literacy Resources
- School System Parent and Family Engagement Resources