LOUISIANA DEPARTMENT OF EDUCATION

Teaching and Learning

# Family Roadmap to Math Success in Louisiana

## Grade 5 Overview

In grade 5, students deepen their understanding of fractions, decimals, and volume while continuing to build fluency with whole-number operations. Students extend their work with equivalent fractions to add and subtract fractions with unlike denominators, multiply fractions, and divide whole numbers by unit fractions and vice versa. They also build understanding of the coordinate plane and use numerical expressions involving parentheses, brackets, and braces. These skills lay the foundation for sixth-grade math, where students will extend their understanding of ratios, fractions, and decimals, work with negative numbers, and begin using more formal algebraic reasoning to solve real-world problems.

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

- Evaluate and compare simple expressions.
- Fluently multiply multi-digit whole numbers using a standard algorithm.
- Divide multi-digit whole numbers with two-digit divisors.
- Multiply a fraction by a whole number or a fraction.
- Read and write decimals to the thousandths.
- Compare and order whole numbers and decimals, identifying greater than, less than, or equal to.
- Estimate and round multi-digit numbers with decimals to any place.
- Add and subtract fractions with unlike denominators.

**How can families help at home?**

- Talk through real-world math during shopping, cooking, measuring, or budgeting, so your child naturally practices reading and writing decimals to the hundredths or thousandths place.
- Ask your child to explain their thinking when solving homework or everyday math problems to strengthen reasoning and deepen conceptual understanding.
- Use food and recipes to practice fraction and decimal operations, such as doubling or halving ingredients, converting measurements, or comparing fractional amounts with measuring cups.
- Use two dice to create a fraction using the numbers for the numerator and denominator. Then roll the dice again to create another fraction. Add or subtract the two fractions. Continue this process to create more fractions to add or subtract.
- Do real-world number comparisons using grocery store advertisements or receipts using greater than, less than, or equal to.

- Use two to three dice to create multi-digit numbers for multiplication problems (e.g., 223 x 48). Estimate the answer, then solve using the standard algorithm. Have your child compare their answer to the estimate.

### 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 fifth-grade students might work on:

- A baker used $\frac{5}{6}$ cup of flour on Monday and $\frac{3}{4}$ cup on Tuesday. How much flour did she use over both days?
- A school bookstore sold $42.75 worth of notebooks and $18.60 worth of pencils. They spent $15.80 to restock supplies. How much profit did the bookstore make?
- A mural is 3/5 as long as the school hallway. If the hallway is 25 feet long, how long is the mural?
- A craft teacher has 4 yards of ribbon. Each project requires $\frac{1}{3}$ yard of ribbon. How many projects can be completed?
- A fish tank is 18 inches long, 10 inches wide, and 12 inches tall. What is the volume of the tank?
- Sasha solved the problem $\frac{2}{3} + \frac{3}{5}$ by writing $\frac{5}{8}$, explaining that she added the numerators and added the denominators. Explain why Sasha's method is incorrect. Draw a model to support your answer reasoning. Find the correct sum.
- For the school's art night, students are creating sets of paint kits to sell. Each paint bottle costs $2.45, and each kit needs 4 bottles. The students want to make 15 kits. They collected $200.00 in donations to pay for the supplies. After purchasing all the paint bottles needed for the kits, how much money will the students have left? Show or explain how you got the answer.

### 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 5 math build on grade 4?

Grade 5 math builds on grade 4 by extending students' understanding of fractions, whole numbers, decimals, and measurement. In grade 4, students learned equivalent fractions, compared decimals, and worked with multi-digit multiplication and basic long division. In grade 5, they use this foundation to add and subtract fractions with unlike denominators, multiply and divide fractions, fluently multiply multi-digit numbers, and divide larger whole numbers while interpreting remainders. Decimal knowledge grows from comparing tenths and hundredths to performing all four operations with decimals to thousandths. Measurement also progresses as students move from area and perimeter to finding the volume of

rectangular prisms. Additionally, number line skills from grade 4 support new grade 5 work on the coordinate plane, where students graph and interpret points in real-world contexts.

### 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