

Year at a Glance - Fifth Grade Mathematics

What Students Learn

To start the school year, students develop fluency with addition and subtraction of fractions with like and unlike denominators, including mixed numbers, by replacing given fractions with equivalent fractions with like denominators. Students continue their work with fractions by multiplying and dividing fractions, applying and extending previous understanding of multiplication to multiply two fractions or whole numbers by fractions. Dividing unit fractions by whole numbers and whole numbers by unit fractions are new concepts for students in grade five.

Students next develop fluency with multiplying multi-digit whole numbers using the standard algorithm with an understanding of place value. This unit also includes multiple strategies for division with one and two digit divisors and simplifying numerical expressions. Fifth graders are also expected to understand the volume of rectangular prisms and relate volume to multiplication and addition. Other critical areas within Trimester Two include integrating decimal fractions into the place-value system and developing fluency with the addition and subtraction of decimals.

Students continue their work on understanding operations with decimals to the hundredths through multiplication and division. Students also classify two-dimensional polygons, use two perpendicular number lines to define a coordinate system (focusing on the first quadrant), and begin to understand the structure of the coordinate system.

Unit Numbers and Titles	Overview of Depth of Mastery
0. Introductory Days (1 week)	<p><u>Grade 5 students should master:</u></p> <ul style="list-style-type: none"> • Adding, subtracting and multiplying fractions without simplification • Multiplying multi-digit whole numbers using an algorithm • Place value with whole numbers and decimals to the thousandths place <p><u>Grade 5 students work towards fluency in:</u></p> <ul style="list-style-type: none"> • Dividing whole numbers by 2-digit divisors using strategies • Volume of rectangular prisms • Adding, subtracting, multiplying, and dividing decimals to the hundredths place <p><u>Grade 5 students are introduced to:</u></p> <ul style="list-style-type: none"> • Dividing unit fractions by whole numbers and whole numbers by unit fractions • Writing simple expressions and simplifying them with parentheses, brackets, or braces • Rounding decimals • The coordinate plane and graphing ordered pairs in the first quadrant
1. Addition and Subtraction of Fractions (4.5 weeks)	
2. Multiplication of Fractions (3 weeks)	
3. Division of Fractions (3.5 weeks)	
4. Whole Number Expressions and Operations (3 weeks)	
5. Volume (3 weeks)	
6. Place Value and Decimals (3 weeks)	
7. Decimal Operations: Add and Subtract (3 weeks)	
8. Decimal Operations: Multiply and Divide (6 weeks)	
SBAC Exposure (2 weeks)	
9. Classifying Two-Dimensional Polygons (2 weeks)	
10. Graphing on the Coordinate Plane (2 weeks)	