

Grade 5

Adopted 2023

Fifth Grade

Math Attributes

Problem-Solving

- P.** Learners can develop and carry out a logical plan to problem-solve situations, reflect on the reasonableness of solutions, and explore alternate strategies with guidance. **5.MA.P**

Connections

- C.** Learners can make connections and summarize related ideas using supporting evidence. **5.MA.C**

Reasoning and Proof

- R.** Learners can reason logically based on experience and knowledge, citing evidence to support their reasoning and conclusions. **5.MA.R**

Number and Operations

Counting and Cardinality

- 1.** Read and write decimals to the thousandths including standard, word, and expanded forms. **5.NO.CC.1**

Base Ten

1. Understand that in a multi-digit whole number, a digit in one place represents ten times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left. **5.NO.NBT.1**
2. Compare two decimals to the thousandths place using symbols $>$, $<$, and $=$. Justify comparisons based on the value of the digits. **5.NO.NBT.2**
3. Apply place value understanding to round decimals to any place. **5.NO.NBT.3**
4. Multiply multi-digit whole numbers using strategies flexibly, including the algorithm. **5.NO.NBT.4**
5. Use concrete models, drawings, place value strategies, properties of operations and/or relationships to add, subtract, and multiply decimals to hundredths. **5.NO.NBT.5**
6. Find whole-number quotients and remainders with up to four-digit dividends and two-digit divisors using place value strategies. Show and justify the calculation by using equations, rectangular arrays, and/or area models. **5.NO.NBT.6**
7. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10. Explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. **5.NO.NBT.7**

Fractions

1. Generate equivalent forms of commonly used fractions and decimals (e.g., halves, fourths, fifths, tenths). **5.NO.NF.1**
2. Explain why multiplying a given number by a fraction greater than one results in a product greater than the given number and explain why multiplying a given number by a fraction less than one results in a product smaller than the given number. **5.NO.NF.2**
3. Solve authentic word problems by adding and subtracting fractions and mixed numbers with unlike denominators using visual fraction models and equations. **5.NO.NF.3**
4. Solve authentic word problems by multiplying fractions and mixed numbers using visual fraction models and equations. **5.NO.NF.4**

Algebraic Reasoning

Operations and Algebraic Thinking

1. Automatically multiply and divide through 12×12 . [5.AR.OA.1](#)
2. Analyze problems using the order of operations to solve and evaluate expressions while justifying thinking. [5.AR.OA.2](#)
3. Write simple expressions that record calculations with numbers. Interpret numerical expressions without evaluating them. [5.AR.OA.3](#)
4. Find factor pairs and multiples within the range of 1-100 while classifying numbers as prime or composite. [5.AR.OA.4](#)
5. Generate two numerical patterns using two given rules and form ordered pairs consisting of corresponding terms from the two patterns. (Graphing on a coordinate plane). [5.AR.OA.5](#)

Geometry and Measurement

Geometry

1. Classify two-dimensional figures in a hierarchy based on properties. [5.GM.G.1](#)
2. Identify the x-coordinate and y-coordinate to graph and name points in the first quadrant of the coordinate plane. [5.GM.G.2](#)
3. Form ordered pairs and graph points in the first quadrant on the coordinate plane to solve authentic word problems. [5.GM.G.3](#)

Measurement

1. Generate conversions among different-sized standard measurement units within a given measurement system, both customary and metric systems. Use these conversions in solving multi-step, authentic word problems. [5.GM.M.1](#)
2. Find the area and perimeter of a rectangle, including connected rectangular figures, with fractional side lengths. [5.GM.M.2](#)
3. Recognize volume as an attribute of rectangular prisms and measure volume by counting unit cubes. [5.GM.M.3](#)

Data, Probability, and Statistics

Data

1. Generate data and create line plots to display a data set of unit fractions ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use grade-level operations for fractions to solve problems involving information presented in line plots. [5.DPS.D.1](#)
2. Utilize graphs and diagrams to represent, analyze, and solve authentic word problems using information presented in one or more tables or line plots including whole numbers, fractions, and decimals. [5.DPS.D.2](#)