Georgia Tutorials are designed specifically for the Georgia Standards of Excellence and the Georgia Performance Standards to prepare students for the Georgia Milestones.

Math Tutorials offer targeted instruction, practice and review designed to develop computational fluency, deepen conceptual understanding, and apply mathematical practices. They automatically identify and address learning gaps down to elementary-level content, using adaptive remediation to bring students to grade-level no matter where they start. Students engage with the content in an interactive, feedback-rich environment as they progress through standards-aligned modules. By constantly honing the ability to apply their knowledge in abstract and real world scenarios, students build the depth of knowledge and higher order skills required to demonstrate their mastery when put to the test.

In each module, the Learn It and Try It make complex ideas accessible to students through focused content, modeled logic and process, multi-modal representations, and personalized feedback as students reason through increasingly challenging problems. The Review It offers a high impact summary of key concepts and relates those concepts to students' lives. The Test It assesses students' mastery of the module's concepts, providing granular performance data to students and teachers after each attempt. To help students focus on the content most relevant to them, unit-level pretests and posttests can quickly identify where students are strong and where they're still learning.

Unit 1: Ratio and Rates

- **RATIOS**
  - 6.NR.4.1: Explain the concept of a ratio, represent ratios, and use ratio language to describe a relationship between two quantities.
  - 6.NR.4.2: Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
  - 6.NR.4.4: Describe the concept of rates and unit rate in the context of a ratio relationship.
  - 6.PAR.8.1: Locate and position rational numbers on a horizontal or vertical number line; find and position pairs of integers and other rational numbers on a coordinate plane.
- **RATES AND UNIT RATES**
  - 6.NR.4.4: Describe the concept of rates and unit rate in the context of a ratio relationship.

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- 6.NR.4.5: Solve unit rate problems including those involving unit pricing and constant speed.

Unit 2: Proportional Reasoning

- **USING PROPORTIONS TO SOLVE PROBLEMS**
  - 6.NR.4.6: Calculate a percent of a quantity as a rate per 100 and solve everyday problems given a percent.
  - 6.NR.4.3: Solve problems involving proportions using a variety of student-selected strategies.
- **ANALYZING PROPORTIONAL RELATIONSHIPS**
  - 6.NR.4.3: Solve problems involving proportions using a variety of student-selected strategies.
  - 6.NR.4.4: Describe the concept of rates and unit rate in the context of a ratio relationship.
  - 6.NR.4.5: Solve unit rate problems including those involving unit pricing and constant speed.
- **REPRESENTING PROPORTIONAL RELATIONSHIPS**
  - 6.NR.4.3: Solve problems involving proportions using a variety of student-selected strategies.

Unit 3: Percents and Unit Conversions

- **SOLVING PERCENT PROBLEMS**
  - 6.NR.4.6: Calculate a percent of a quantity as a rate per 100 and solve everyday problems given a percent.
- **UNIT CONVERSIONS**
  - 6.NR.4.7: Use ratios to convert within measurement systems (customary and metric) to solve authentic problems that exist in everyday life.

Unit 4: Multiplication and Division of Rational Numbers

- **DIVIDING FRACTIONS**
  - 6.NR.1.2: Multiply and divide any combination of whole numbers, fractions, and mixed numbers using a student-selected strategy. Interpret products and quotients of fractions and solve word problems.
- **SOLVING PROBLEMS BY DIVIDING FRACTIONS**
  - 6.NR.1.2: Multiply and divide any combination of whole numbers, fractions, and mixed numbers using a student-selected strategy. Interpret products and quotients of fractions and solve word problems.
- **DIVIDING MULTI-DIGIT WHOLE NUMBERS**
  - 6.NR.1.2: Multiply and divide any combination of whole numbers, fractions, and mixed numbers using a student-selected strategy. Interpret products and quotients of fractions and solve word problems.
- **MULTIPLYING RATIONAL NUMBERS**

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- 6.NR.1.2: Multiply and divide any combination of whole numbers, fractions, and mixed numbers using a student-selected strategy. Interpret products and quotients of fractions and solve word problems.

Unit 5: Number Sense

- **DECIMAL OPERATIONS**
  - 6.NR.1.3: Perform operations with multi-digit decimal numbers fluently using models and student-selected strategies.
- **GREATEST COMMON FACTOR AND LEAST COMMON MULTIPLE**
  - 6.PAR.6.2: Determine greatest common factors and least common multiples using a variety of strategies to make sense of applicable problems.
  - 6.NR.3.2: Order and plot integers on a number line and use distance from zero to discover the connection between integers and their opposites.
  - 6.NR.3.3: Recognize and explain that opposite signs of integers indicate locations on opposite sides of zero on the number line; recognize and explain that the opposite of the opposite of a number is the number itself.

Unit 6: Signed Numbers

- **SIGNED NUMBERS**
  - 6.NR.3.2: Order and plot integers on a number line and use distance from zero to discover the connection between integers and their opposites.
  - 6.NR.3.3: Recognize and explain that opposite signs of integers indicate locations on opposite sides of zero on the number line; recognize and explain that the opposite of the opposite of a number is the number itself.
  - 6.NR.3.1: Identify and compare integers and explain the meaning of zero based on multiple authentic situations.
- **INEQUALITIES AND COMPARISON**
  - 6.PAR.7.4: Recognize and generate inequalities of the form , , , or to explain situations that have infinitely many solutions; represent solutions of such inequalities on a number line.
  - 6.NR.3.2: Order and plot integers on a number line and use distance from zero to discover the connection between integers and their opposites.
  - 6.NR.3.1: Identify and compare integers and explain the meaning of zero based on multiple authentic situations.
  - 6.NR.3.4: Write, interpret, and explain statements of order for rational numbers in authentic, mathematical situations. Compare rational numbers, including integers, using equality and inequality

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symbols.

- **ABSOLUTE VALUE**
  - 6.NR.3.2: Order and plot integers on a number line and use distance from zero to discover the connection between integers and their opposites.
  - 6.NR.3.3: Recognize and explain that opposite signs of integers indicate locations on opposite sides of zero on the number line; recognize and explain that the opposite of the opposite of a number is the number itself.
  - 6.NR.3.5: Explain the absolute value of a rational number as its distance from zero on the number line; interpret absolute value as distance for a positive or negative quantity in a relevant situation.
  - 6.NR.3.6: Distinguish comparisons of absolute value from statements about order.
  - 6.NR.3.1: Identify and compare integers and explain the meaning of zero based on multiple authentic situations.

Unit 7: The Coordinate Plane

- **PLOTTING POINTS IN THE COORDINATE PLANE**
  - 6.PAR.8.1: Locate and position rational numbers on a horizontal or vertical number line; find and position pairs of integers and other rational numbers on a coordinate plane.
  - 6.PAR.8.2: Show and explain that signs of numbers in ordered pairs indicate locations in quadrants of the coordinate plane and determine how two ordered pairs may differ based only on the signs.
  - 6.NR.3.2: Order and plot integers on a number line and use distance from zero to discover the connection between integers and their opposites.
  - 6.NR.3.3: Recognize and explain that opposite signs of integers indicate locations on opposite sides of zero on the number line; recognize and explain that the opposite of the opposite of a number is the number itself.
  - 6.NR.3.1: Identify and compare integers and explain the meaning of zero based on multiple authentic situations.
  - 6.PAR.8.3: Solve problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same -coordinate or the same -coordinate.
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the same -coordinate.

- **QUADRANTS AND AXES**
  - 6.PAR.8.1: Locate and position rational numbers on a horizontal or vertical number line; find and position pairs of integers and other rational numbers on a coordinate plane.
  - 6.PAR.8.2: Show and explain that signs of numbers in ordered pairs indicate locations in quadrants of the coordinate plane and determine how two ordered pairs may differ based only on the signs.
  - 6.PAR.8.3: Solve problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same -coordinate or the same -coordinate.
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  - 6.PAR.8.3: Solve problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same -coordinate or the same -coordinate.
- **USING GRAPHS TO SOLVE PROBLEMS**
  - 6.PAR.8.3: Solve problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same -coordinate or the same -coordinate.
  - 6.PAR.8.1: Locate and position rational numbers on a horizontal or vertical number line; find and position pairs of integers and other rational numbers on a coordinate plane.
  - 6.PAR.8.3: Solve problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same -coordinate or the same -coordinate.
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- 6.PAR.8.4: Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same -coordinate or the same -coordinate.

Unit 8: Exponents and Expressions

- **EXPONENTS**
  - 6.PAR.6.1: Write and evaluate numerical expressions involving rational bases and whole-number exponents.
  - 6.PAR.6.3: Write and read expressions that represent operations with numbers and variables in realistic situations.
  - 6.PAR.7.3: Solve problems by writing and solving equations of the form = , = and / = for cases in which , and are all nonnegative rational numbers.
  - 6.PAR.7.1: Solve one-step equations and inequalities involving variables when values for the variables are given. Determine whether an equation and inequality involving a variable is true or false for a given value of the variable.
- **UNDERSTANDING PARTS OF EXPRESSIONS**
  - 6.PAR.6.4: Evaluate expressions when given values for the variables, including expressions that arise in everyday situations.
  - 6.PAR.6.1: Write and evaluate numerical expressions involving rational bases and whole-number exponents.
  - 6.PAR.6.3: Write and read expressions that represent operations with numbers and variables in realistic situations.
- **EQUIVALENT EXPRESSIONS**
  - 6.PAR.6.5: Apply the properties of operations to identify and generate equivalent expressions.
  - 6.PAR.6.3: Write and read expressions that represent operations with numbers and variables in realistic situations.
  - 6.PAR.6.4: Evaluate expressions when given values for the variables, including expressions that arise in everyday situations.

Unit 9: Writing and Evaluating Expressions

- **WRITING EXPRESSIONS**
  - 6.PAR.6.1: Write and evaluate numerical expressions involving rational bases and whole-number exponents.
  - 6.PAR.6.3: Write and read expressions that represent operations with numbers and variables in realistic situations.

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- 6.PAR.6.4: Evaluate expressions when given values for the variables, including expressions that arise in everyday situations.

- **WRITING EXPRESSIONS TO SOLVE PROBLEMS**
  - 6.PAR.6.3: Write and read expressions that represent operations with numbers and variables in realistic situations.
  - 6.PAR.6.4: Evaluate expressions when given values for the variables, including expressions that arise in everyday situations.
- **EVALUATING EXPRESSIONS**
  - 6.PAR.6.1: Write and evaluate numerical expressions involving rational bases and whole-number exponents.
  - 6.PAR.6.4: Evaluate expressions when given values for the variables, including expressions that arise in everyday situations.

Unit 10: Solving Equations and Inequalities 1

- **SOLUTIONS OF EQUATIONS AND INEQUALITIES**
  - 6.PAR.7.1: Solve one-step equations and inequalities involving variables when values for the variables are given. Determine whether an equation and inequality involving a variable is true or false for a given value of the variable.
  - 6.PAR.7.2: Write one-step equations and inequalities to represent and solve problems; explain that a variable can represent an unknown number or any number in a specified set.
  - 6.PAR.7.4: Recognize and generate inequalities of the form , , , or to explain situations that have infinitely many solutions; represent solutions of such inequalities on a number line.
  - 6.PAR.7.3: Solve problems by writing and solving equations of the form = , = and / = for cases in which , and are all nonnegative rational numbers.
- **SOLVING ADDITION EQUATIONS**
  - 6.PAR.7.3: Solve problems by writing and solving equations of the form = , = and / = for cases in which , and are all nonnegative rational numbers.
  - 6.PAR.7.2: Write one-step equations and inequalities to represent and solve problems; explain that a variable can represent an unknown number or any number in a specified set.
  - 6.PAR.7.3: Solve problems by writing and solving equations of the form = , = and / = for cases in which , and are all nonnegative rational numbers.

Unit 11: Solving Equations and Inequalities 2

- **SOLVING MULTIPLICATION EQUATIONS**

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- 6.PAR.7.3: Solve problems by writing and solving equations of the form = , = and / = for cases in which , and are all nonnegative rational numbers.
- 6.PAR.7.2: Write one-step equations and inequalities to represent and solve problems; explain that a variable can represent an unknown number or any number in a specified set.

- **SOLVING INEQUALITIES**
  - 6.PAR.7.4: Recognize and generate inequalities of the form , , , or to explain situations that have infinitely many solutions; represent solutions of such inequalities on a number line.
  - 6.PAR.7.4: Recognize and generate inequalities of the form , , , or to explain situations that have infinitely many solutions; represent solutions of such inequalities on a number line.
  - 6.PAR.8.1: Locate and position rational numbers on a horizontal or vertical number line; find and position pairs of integers and other rational numbers on a coordinate plane.
  - 6.PAR.7.2: Write one-step equations and inequalities to represent and solve problems; explain that a variable can represent an unknown number or any number in a specified set.

Unit 12: Area and Volume

- **AREA**
  - 6.GSR.5.1: Explore area as a measurable attribute of triangles, quadrilaterals, and other polygons conceptually by composing or decomposing into rectangles, triangles, and other shapes. Find the area of these geometric figures to solve problems.
- **VOLUME**
  - 6.GSR.5.3: Calculate the volume of right rectangular prisms with fractional edge lengths by applying the formula, = ( ) ().

Unit 13: Geometry

- **COORDINATE GEOMETRY**
  - 6.PAR.8.1: Locate and position rational numbers on a horizontal or vertical number line; find and position pairs of integers and other rational numbers on a coordinate plane.
  - 6.PAR.8.3: Solve problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same -coordinate or the same -coordinate.
  - 6.PAR.8.4: Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same -coordinate or the same -coordinate.
  - 6.PAR.8.3: Solve problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same -coordinate or

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- 6.PAR.8.4: Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same -coordinate or the same -coordinate.
- 6.PAR.8.3: Solve problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same -coordinate or the same -coordinate.
- 6.PAR.8.4: Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same -coordinate or the same -coordinate.

- **SOLID FIGURES**
  - 6.GSR.5.2: Given the net of three-dimensional figures with rectangular and triangular faces, determine the surface area of these figures.

Unit 14: Statistics and Data Displays

- **STATISTICAL QUESTIONS AND DATA DISTRIBUTIONS**
  - 6.NR.2.3: Interpret numerical data to answer a statistical investigative question created. Describe the distribution of a quantitative (numerical) variable collected, including its center, variability, and overall shape.
  - 6.NR.2.1: Describe and interpret the center of the distribution by the equal share value (mean).
  - 6.NR.2.4: Design simple experiments and collect data. Use data gathered from realistic scenarios and simulations to determine quantitative measures of center (median and/or mean) and variability (interquartile range and range). Use these quantities to draw conclusions about the data, compare different numerical data sets, and make predictions.
  - 6.NR.2.2: Summarize categorical and quantitative (numerical) data sets in relation to the context: display the distributions of quantitative (numerical) data in plots on a number line, including dot plots, histograms, and box plots and display the distribution of categorical data using bar graphs.
- **MEASURES OF CENTER AND VARIABILITY**
  - 6.NR.2.3: Interpret numerical data to answer a statistical investigative question created. Describe the distribution of a quantitative (numerical) variable collected, including its center, variability, and overall shape.
  - 6.NR.2.6: Describe the impact that inserting or deleting a data point has on the mean and the median of a data set. Create data displays using a dot plot or box plot to examine this impact.
  - 6.NR.2.1: Describe and interpret the center of the distribution by the equal share value (mean).
  - 6.NR.2.5: Relate the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

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- 6.NR.2.4: Design simple experiments and collect data. Use data gathered from realistic scenarios and simulations to determine quantitative measures of center (median and/or mean) and variability (interquartile range and range). Use these quantities to draw conclusions about the data, compare different numerical data sets, and make predictions.
- 6.NR.2.2: Summarize categorical and quantitative (numerical) data sets in relation to the context: display the distributions of quantitative (numerical) data in plots on a number line, including dot plots, histograms, and box plots and display the distribution of categorical data using bar graphs.

- **BOX PLOTS**
  - 6.NR.2.2: Summarize categorical and quantitative (numerical) data sets in relation to the context: display the distributions of quantitative (numerical) data in plots on a number line, including dot plots, histograms, and box plots and display the distribution of categorical data using bar graphs.
  - 6.NR.2.3: Interpret numerical data to answer a statistical investigative question created. Describe the distribution of a quantitative (numerical) variable collected, including its center, variability, and overall shape.
- **DOT PLOTS AND HISTOGRAMS**
  - 6.NR.2.2: Summarize categorical and quantitative (numerical) data sets in relation to the context: display the distributions of quantitative (numerical) data in plots on a number line, including dot plots, histograms, and box plots and display the distribution of categorical data using bar graphs.

Unit 15: Summarizing Data

- **COLLECTING DATA**
  - 6.NR.2.2: Summarize categorical and quantitative (numerical) data sets in relation to the context: display the distributions of quantitative (numerical) data in plots on a number line, including dot plots, histograms, and box plots and display the distribution of categorical data using bar graphs.
  - 6.NR.2.3: Interpret numerical data to answer a statistical investigative question created. Describe the distribution of a quantitative (numerical) variable collected, including its center, variability, and overall shape.
  - 6.NR.2.4: Design simple experiments and collect data. Use data gathered from realistic scenarios and simulations to determine quantitative measures of center (median and/or mean) and variability (interquartile range and range). Use these quantities to draw conclusions about the data, compare different numerical data sets, and make predictions.
- **CHOOSING APPROPRIATE MEASURES TO SUMMARIZE DATA SETS**
  - 6.NR.2.3: Interpret numerical data to answer a statistical investigative question created. Describe the distribution of a quantitative (numerical) variable collected, including its center, variability, and overall shape.

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- 6.NR.2.6: Describe the impact that inserting or deleting a data point has on the mean and the median of a data set. Create data displays using a dot plot or box plot to examine this impact.
- 6.NR.2.1: Describe and interpret the center of the distribution by the equal share value (mean).
- 6.NR.2.5: Relate the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

- **SUMMARIZING DATA USING MEASURES OF CENTER AND VARIABILITY**
  - 6.NR.2.2: Summarize categorical and quantitative (numerical) data sets in relation to the context: display the distributions of quantitative (numerical) data in plots on a number line, including dot plots, histograms, and box plots and display the distribution of categorical data using bar graphs.
  - 6.NR.2.3: Interpret numerical data to answer a statistical investigative question created. Describe the distribution of a quantitative (numerical) variable collected, including its center, variability, and overall shape.
  - 6.NR.2.1: Describe and interpret the center of the distribution by the equal share value (mean).
  - 6.NR.2.4: Design simple experiments and collect data. Use data gathered from realistic scenarios and simulations to determine quantitative measures of center (median and/or mean) and variability (interquartile range and range). Use these quantities to draw conclusions about the data, compare different numerical data sets, and make predictions.
  - 6.NR.2.6: Describe the impact that inserting or deleting a data point has on the mean and the median of a data set. Create data displays using a dot plot or box plot to examine this impact.
  - 6.NR.2.5: Relate the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

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