

Florida Tutorials are designed specifically for the New Florida Standards for Math and English Language Arts and the Next Generation Sunshine State Standards (NGSSS) for science and social studies to prepare students for the Florida Standards Assessments and the NGSSS End-of-Course (EOC) exams.

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.

## 1. PROPORTIONAL RELATIONSHIPS

### ● IDENTIFYING PROPORTIONAL RELATIONSHIPS

- **MA.7.AR.3.2** Apply previous understanding of ratios to solve real-world problems involving proportions.
- **MA.7.AR.4.5** Solve real-world problems involving proportional relationships.
- **MA.7.AR.4.1** Determine whether two quantities have a proportional relationship by examining a table, graph or written description.
- **MA.7.AR.4.4** Given any representation of a proportional relationship, translate the representation to a written description, table or equation.
- **MA.7.AR.4.3** Given a mathematical or real-world context, graph proportional relationships from a table, equation or a written description.

### ● ANALYZING PROPORTIONAL RELATIONSHIPS

- **MA.7.AR.4.4** Given any representation of a proportional relationship, translate the representation to a written description, table or equation.
- **MA.7.AR.4.2** Determine the constant of proportionality within a mathematical or real-world context given a table, graph or written description of a proportional relationship.
- **MA.7.AR.4.1** Determine whether two quantities have a proportional relationship by examining a table, graph or written description.
- **MA.7.AR.4.3** Given a mathematical or real-world context, graph proportional relationships from a table, equation or a written description.
- **MA.7.AR.3.2** Apply previous understanding of ratios to solve real-world problems involving proportions.
- **MA.7.AR.4.5** Solve real-world problems involving proportional relationships.

### ● REPRESENTING PROPORTIONAL RELATIONSHIPS

- **MA.7.AR.3.2** Apply previous understanding of ratios to solve real-world problems involving proportions.
- **MA.7.AR.4.4** Given any representation of a proportional relationship, translate the representation to a written description, table or equation.
- **MA.7.AR.4.2** Determine the constant of proportionality within a mathematical or real-world context given a table, graph or written description of a proportional relationship.

- **MA.7.AR.4.5** Solve real-world problems involving proportional relationships.
- **MA.7.AR.4.1** Determine whether two quantities have a proportional relationship by examining a table, graph or written description.
- **MA.7.AR.4.3** Given a mathematical or real-world context, graph proportional relationships from a table, equation or a written description.

- **USING PROPORTIONS TO SOLVE PROBLEMS**

- **MA.7.AR.4.5** Solve real-world problems involving proportional relationships.
- **MA.7.AR.3.1** Apply previous understanding of percentages and ratios to solve multi-step real-world percent problems.
- **MA.7.AR.3.2** Apply previous understanding of ratios to solve real-world problems involving proportions.
- **MA.7.NSO.1.2** Rewrite rational numbers in different but equivalent forms including fractions, mixed numbers, repeating decimals and percentages to solve mathematical and real-world problems.

## 2. ADDING AND SUBTRACTING RATIONAL NUMBERS

- **ADDING RATIONAL NUMBERS**

- **MA.7.NSO.2.2** Add, subtract, multiply and divide rational numbers with procedural fluency.
- **MA.7.NSO.2.3** Solve real-world problems involving any of the four operations with rational numbers.

- **SUBTRACTING RATIONAL NUMBERS**

- **MA.7.NSO.2.2** Add, subtract, multiply and divide rational numbers with procedural fluency.
- **MA.7.NSO.2.3** Solve real-world problems involving any of the four operations with rational numbers.

- **USING PROPERTIES TO ADD AND SUBTRACT RATIONAL NUMBERS**

- **MA.7.NSO.2.2** Add, subtract, multiply and divide rational numbers with procedural fluency.
- **MA.7.NSO.2.3** Solve real-world problems involving any of the four operations with rational numbers.
- **MA.7.NSO.2.1** Solve mathematical problems using multi-step order of operations with rational numbers including grouping symbols, whole-number exponents and absolute value.

## 3. MULTIPLICATION AND DIVISION OF RATIONAL NUMBERS

- **MULTIPLYING RATIONAL NUMBERS**

- **MA.7.NSO.2.2** Add, subtract, multiply and divide rational numbers with procedural fluency.
- **MA.7.NSO.2.3** Solve real-world problems involving any of the four operations with rational numbers.

- **DIVIDING RATIONAL NUMBERS**

- **MA.7.NSO.2.2** Add, subtract, multiply and divide rational numbers with procedural fluency.
- **MA.7.NSO.2.3** Solve real-world problems involving any of the four operations with rational numbers.

- **USING PROPERTIES TO MULTIPLY AND DIVIDE RATIONAL NUMBERS**

- **MA.7.NSO.2.2** Add, subtract, multiply and divide rational numbers with procedural fluency.
- **MA.7.NSO.2.3** Solve real-world problems involving any of the four operations with rational numbers.
- **MA.7.NSO.2.1** Solve mathematical problems using multi-step order of operations with rational numbers including grouping symbols, whole-number exponents and absolute value.

## 4. WORKING WITH RATIONAL NUMBERS

- **PROPERTIES OF EXPONENTS**

- **MA.7.NSO.1.1** Know and apply the Laws of Exponents to evaluate numerical expressions and generate equivalent numerical expressions, limited to whole-number exponents and rational number bases.

- **SOLVING MULTI-STEP PROBLEMS WITH RATIONAL NUMBERS**

- **MA.7.NSO.2.2** Add, subtract, multiply and divide rational numbers with procedural fluency.
- **MA.7.NSO.2.3** Solve real-world problems involving any of the four operations with rational numbers.
- **MA.7.NSO.2.1** Solve mathematical problems using multi-step order of operations with rational numbers including grouping symbols, whole-number exponents and absolute value.
- **MA.7.NSO.1.2** Rewrite rational numbers in different but equivalent forms including fractions, mixed numbers, repeating decimals and percentages to solve mathematical and real-world problems.

## 5. NUMBER SENSE

- **EXPRESSING RATIONAL NUMBERS IN DECIMAL FORM**

- **MA.7.NSO.1.2** Rewrite rational numbers in different but equivalent forms including fractions, mixed numbers, repeating decimals and percentages to solve mathematical and real-world problems.

- **USING OPERATIONS ON RATIONAL NUMBERS TO SOLVE PROBLEMS**

- **MA.7.NSO.2.2** Add, subtract, multiply and divide rational numbers with procedural fluency.
- **MA.7.NSO.2.3** Solve real-world problems involving any of the four operations with rational numbers.
- **MA.7.NSO.2.1** Solve mathematical problems using multi-step order of operations with rational numbers including grouping symbols, whole-number exponents and absolute value.

## 6. ALGEBRAIC EXPRESSIONS, EQUATIONS, AND INEQUALITIES

- **SIMPLIFYING AND REWRITING ALGEBRAIC EXPRESSIONS**

- **MA.7.AR.1.2** Determine whether two linear expressions are equivalent.
- **MA.7.AR.1.1** Apply properties of operations to add and subtract linear expressions with rational coefficients.

- **SOLVING TWO-STEP EQUATIONS**

- **MA.7.AR.2.2** Write and solve two-step equations in one variable within a mathematical or real-world context, where all terms are rational numbers.

- **SOLVING LINEAR INEQUALITIES**

- **MA.7.AR.2.1** Write and solve one-step inequalities in one variable within a mathematical context and represent solutions algebraically or graphically.

## 7. GEOMETRY IN TWO AND THREE DIMENSIONS

- **SCALE DRAWINGS**

- **MA.7.GR.1.5** Solve mathematical and real-world problems involving dimensions and areas of geometric figures, including scale drawings and scale factors.

- **CIRCLES**

- **MA.7.GR.1.3** Explore the proportional relationship between circumferences and diameters of circles. Apply a formula for the circumference of a circle to solve mathematical and real-world problems.
- **MA.7.GR.1.4** Explore and apply a formula to find the area of a circle to solve mathematical and real-world problems.

- **AREA, VOLUME, AND SURFACE AREA**

- **MA.7.GR.1.5** Solve mathematical and real-world problems involving dimensions and areas of geometric figures, including scale drawings and scale factors.
- **MA.7.GR.1.1** Apply formulas to find the areas of trapezoids, parallelograms and rhombi.

- **MA.7.GR.1.2** Solve mathematical or real-world problems involving the area of polygons or composite figures by decomposing them into triangles or quadrilaterals.

- **VOLUME OF CYLINDERS AND CONES**

- **MA.7.GR.2.3** Solve mathematical and real-world problems involving volume of right circular cylinders.

## 8. STATISTICS

- **USING STATISTICAL MEASURES TO COMPARE DATA SETS**

- **MA.7.DP.1.2** Given two numerical or graphical representations of data, use the measure(s) of center and measure(s) of variability to make comparisons, interpret results and draw conclusions about the two populations.
- **MA.7.DP.1.1** Determine an appropriate measure of center or measure of variation to summarize numerical data, represented numerically or graphically, taking into consideration the context and any outliers.

- **CHOOSING APPROPRIATE MEASURES TO SUMMARIZE DATA SETS**

- **MA.7.DP.1.2** Given two numerical or graphical representations of data, use the measure(s) of center and measure(s) of variability to make comparisons, interpret results and draw conclusions about the two populations.
- **MA.7.DP.1.1** Determine an appropriate measure of center or measure of variation to summarize numerical data, represented numerically or graphically, taking into consideration the context and any outliers.

## 9. PROBABILITY

- **PROBABILITY**

- **MA.7.DP.2.2** Given the probability of a chance event, interpret the likelihood of it occurring. Compare the probabilities of chance events.

- **CALCULATING PROBABILITY**

- **MA.7.DP.2.1** Determine the sample space for a simple experiment.
- **MA.7.DP.2.3** Find the theoretical probability of an event related to a simple experiment.
- **MA.7.DP.2.4** Use a simulation of a simple experiment to find experimental probabilities and compare them to theoretical probabilities.

- **SIMULATIONS**

- **MA.7.DP.2.1** Determine the sample space for a simple experiment.
- **MA.7.DP.2.4** Use a simulation of a simple experiment to find experimental probabilities and compare them to theoretical probabilities.