Pennsylvania Tutorials are designed specifically for the Pennsylvania Core Standards and the Pennsylvania Academic Standards to prepare students for the Keystone Exams and the Pennsylvania System of School Assessment (PSSA).

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: Ratios and Rates

- **RATIOS**
  - CC.2.1.6.D.1: Numbers and Operations Ratios & Proportional Relationships Understand ratio concepts and use ratio reasoning to solve problems.
  - CC.2.1.6.E.4: Numbers and Operations The Number System Apply and extend previous understandings of numbers to the system of rational numbers.
- **RATES AND UNIT RATES**
  - CC.2.1.6.D.1: Numbers and Operations Ratios & Proportional Relationships Understand ratio concepts and use ratio reasoning to solve problems.
- **SOLVING PERCENT PROBLEMS**
  - CC.2.1.6.D.1: Numbers and Operations Ratios & Proportional Relationships Understand ratio concepts and use ratio reasoning to solve problems.
- **UNIT CONVERSIONS**
  - CC.2.1.6.D.1: Numbers and Operations Ratios & Proportional Relationships Understand ratio concepts and use ratio reasoning to solve problems.

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Unit 2: Number Sense

- **DIVIDING FRACTIONS**
  - CC.2.1.6.E.1: Numbers and Operations The Number System Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
  - CC.2.1.6.E.4: Numbers and Operations The Number System Apply and extend previous understandings of numbers to the system of rational numbers.
- **SOLVING PROBLEMS BY DIVIDING FRACTIONS**
  - CC.2.1.6.E.1: Numbers and Operations The Number System Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
- **DIVIDING MULTI-DIGIT WHOLE NUMBERS**
  - CC.2.1.6.E.2: Numbers and Operations The Number System Identify and choose appropriate processes to compute fluently with multi-digit numbers.
- **DECIMAL OPERATIONS**
  - CC.2.3.6.A.1: Geometry Geometry Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.
- **GREATEST COMMON FACTOR AND LEAST COMMON MULTIPLE**
  - CC.2.1.6.E.3: Numbers and Operations The Number System Develop and/or apply number theory concepts to find common factors and multiples.

Unit 3: Signed Numbers

- **SIGNED NUMBERS**
  - CC.2.1.6.E.4: Numbers and Operations The Number System Apply and extend previous understandings of numbers to the system of rational numbers.
- **INEQUALITIES AND COMPARISON**
  - CC.2.1.6.E.4: Numbers and Operations The Number System Apply and extend previous understandings of numbers to the system of rational numbers.
- **ABSOLUTE VALUE**
  - CC.2.1.6.E.4: Numbers and Operations The Number System Apply and extend previous understandings of numbers to the system of rational numbers.

Unit 4: The Coordinate Plane

- **PLOTTING POINTS IN THE COORDINATE PLANE**
  - CC.2.3.6.A.1: Geometry Geometry Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.
- **USING GRAPHS TO SOLVE PROBLEMS**
  - CC.2.3.6.A.1: Geometry Geometry Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.

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Unit 5: Numerical and Algebraic Expressions

- **EXPONENTS**
  - CC.2.2.6.B.1: Algebraic Concepts Expressions and Equations Apply and extend previous understandings of arithmetic to algebraic expressions.
- **WRITING EXPRESSIONS**
  - CC.2.2.6.B.1: Algebraic Concepts Expressions and Equations Apply and extend previous understandings of arithmetic to algebraic expressions.
- **UNDERSTANDING PARTS OF EXPRESSIONS**
  - CC.2.2.6.B.1: Algebraic Concepts Expressions and Equations Apply and extend previous understandings of arithmetic to algebraic expressions.
- **EVALUATING EXPRESSIONS**
  - CC.2.2.6.B.1: Algebraic Concepts Expressions and Equations Apply and extend previous understandings of arithmetic to algebraic expressions.
- **EQUIVALENT EXPRESSIONS**
  - CC.2.2.6.B.1: Algebraic Concepts Expressions and Equations Apply and extend previous understandings of arithmetic to algebraic expressions.

Unit 6: Expressions and Equations

- **WRITING EXPRESSIONS TO SOLVE PROBLEMS**
  - CC.2.2.6.B.1: Algebraic Concepts Expressions and Equations Apply and extend previous understandings of arithmetic to algebraic expressions.
- **INDEPENDENT AND DEPENDENT VARIABLES**
  - CC.2.2.6.B.3: Algebraic Concepts Expressions and Equations Represent and analyze quantitative relationships between dependent and independent variables.
- **MULTIPLE REPRESENTATIONS: TABLES, GRAPHS, AND EQUATIONS**
  - CC.2.2.6.B.3: Algebraic Concepts Expressions and Equations Represent and analyze quantitative relationships between dependent and independent variables.

Unit 7: Solving Equations and Inequalities

- **SOLUTIONS OF EQUATIONS AND INEQUALITIES**
  - CC.2.2.6.B.2: Algebraic Concepts Expressions and Equations Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems.
- **SOLVING ADDITION EQUATIONS**
  - CC.2.2.6.B.2: Algebraic Concepts Expressions and Equations Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems.
- **SOLVING MULTIPLICATION EQUATIONS**

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- CC.2.2.6.B.2: Algebraic Concepts Expressions and Equations Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems.

- **SOLVING INEQUALITIES**
  - CC.2.2.6.B.2: Algebraic Concepts Expressions and Equations Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems.

Unit 8: Geometry

- **AREA**
  - CC.2.3.6.A.1: Geometry Geometry Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.
- **VOLUME**
  - CC.2.3.6.A.1: Geometry Geometry Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.
- **COORDINATE GEOMETRY**
  - CC.2.3.6.A.1: Geometry Geometry Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.
- **SOLID FIGURES**
  - CC.2.3.6.A.1: Geometry Geometry Apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.

Unit 9: Introduction to Statistics

- **STATISTICAL QUESTIONS AND DATA DISTRIBUTIONS**
  - CC.2.4.6.B.1: Measurement, Data, and Probability Statistics and Probability Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.
- **MEASURES OF CENTER AND VARIABILITY**
  - CC.2.4.6.B.1: Measurement, Data, and Probability Statistics and Probability Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.
- **BOX PLOTS**
  - CC.2.4.6.B.1: Measurement, Data, and Probability Statistics and Probability Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.
- **DOT PLOTS AND HISTOGRAMS**
  - CC.2.4.6.B.1: Measurement, Data, and Probability Statistics and Probability Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.

Unit 10: Summarizing Data

- **COLLECTING DATA**
  - CC.2.4.6.B.1: Measurement, Data, and Probability Statistics and Probability Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.

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- **SUMMARIZING DATA USING MEASURES OF CENTER AND VARIABILITY**
  - CC.2.4.6.B.1: Measurement, Data, and Probability Statistics and Probability Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.
- **CHOOSING APPROPRIATE MEASURES TO SUMMARIZE DATA SETS**
  - CC.2.4.6.B.1: Measurement, Data, and Probability Statistics and Probability Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.

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