South Carolina Tutorials are designed specifically for the South Carolina College and Career Readiness Standards and the South Carolina Academic Standards to prepare students for the South Carolina End-of-Course Examination Program (EOCEP), ACT Aspire, and the South Carolina Palmetto Assessment of State Standards (SCPASS).

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: Points, Lines, and Angles

- **POINTS, RAYS, LINE SEGMENTS, LINES, AND FIGURES**
  - CC.2.3.HS.A.14: Geometry Geometry Apply geometric concepts to model and solve real world problems.
- **PARALLEL AND PERPENDICULAR LINES**
  - CC.2.3.HS.A.11: Geometry Geometry Apply coordinate geometry to prove simple geometric theorems algebraically.
- **PARALLEL LINES AND ANGLE RELATIONSHIPS**
  - CC.2.3.HS.A.14: Geometry Geometry Apply geometric concepts to model and solve real world problems.
- **PERPENDICULAR BISECTOR AND ANGLE BISECTOR THEOREMS**
  - CC.2.3.HS.A.3: Geometry Geometry Verify and apply geometric theorems as they relate to geometric figures.

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- CC.2.3.HS.A.14: Geometry Geometry Apply geometric concepts to model and solve real world problems.

Unit 2: Coordinate Geometry

- **LENGTH AND THE DISTANCE FORMULA**
  - CC.2.3.HS.A.14: Geometry Geometry Apply geometric concepts to model and solve real world problems.
- **MIDPOINT FORMULA ON THE COORDINATE PLANE**
  - CC.2.3.HS.A.14: Geometry Geometry Apply geometric concepts to model and solve real world problems.
- **CONJECTURES IN COORDINATE GEOMETRY**
  - CC.2.3.HS.A.11: Geometry Geometry Apply coordinate geometry to prove simple geometric theorems algebraically.
  - CC.2.3.HS.A.8: Geometry Geometry Apply geometric theorems to verify properties of circles.

Unit 3: Perimeter, Area, and Transformations on the Coordinate Plane

- **PERIMETER ON THE COORDINATE PLANE**
  - CC.2.3.HS.A.11: Geometry Geometry Apply coordinate geometry to prove simple geometric theorems algebraically.
- **AREA ON THE COORDINATE PLANE**
  - CC.2.3.HS.A.11: Geometry Geometry Apply coordinate geometry to prove simple geometric theorems algebraically.
- **TRANSFORMATIONS ON THE COORDINATE PLANE**
  - CC.2.3.HS.A.1: Geometry Geometry Use geometric figures and their properties to represent transformations in the plane.
  - CC.2.3.HS.A.2: Geometry Geometry Apply rigid transformations to determine and explain congruence.
  - CC.2.3.HS.A.5: Geometry Geometry Create justifications based on transformations to establish similarity of plane figures.
- **DILATIONS, TRANSLATIONS, ROTATIONS, AND REFLECTIONS**
  - CC.2.3.HS.A.1: Geometry Geometry Use geometric figures and their properties to represent transformations in the plane.
  - CC.2.3.HS.A.2: Geometry Geometry Apply rigid transformations to determine and explain congruence.
  - CC.2.3.HS.A.5: Geometry Geometry Create justifications based on transformations to establish similarity of plane figures.

Unit 4: Congruence and Similarity

- **TRIANGLES AND CONGRUENCE TRANSFORMATIONS**

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- CC.2.3.HS.A.2: Geometry Geometry Apply rigid transformations to determine and explain congruence.

- **TRIANGLES AND SIMILARITY TRANSFORMATIONS**
  - CC.2.3.HS.A.5: Geometry Geometry Create justifications based on transformations to establish similarity of plane figures.
  - CC.2.3.HS.A.6: Geometry Geometry Verify and apply theorems involving similarity as they relate to plane figures.
  - CC.2.3.HS.A.3: Geometry Geometry Verify and apply geometric theorems as they relate to geometric figures.
- **CONGRUENCE OF OTHER POLYGONS**
  - CC.2.3.HS.A.2: Geometry Geometry Apply rigid transformations to determine and explain congruence.
  - CC.2.3.HS.A.1: Geometry Geometry Use geometric figures and their properties to represent transformations in the plane.
- **SIMILARITY OF OTHER POLYGONS**
  - CC.2.3.HS.A.6: Geometry Geometry Verify and apply theorems involving similarity as they relate to plane figures.
  - CC.2.3.HS.A.5: Geometry Geometry Create justifications based on transformations to establish similarity of plane figures.

Unit 5: Triangles

- **TRIANGLE ANGLE THEOREMS**
  - CC.2.3.HS.A.3: Geometry Geometry Verify and apply geometric theorems as they relate to geometric figures.
  - CC.2.3.HS.A.14: Geometry Geometry Apply geometric concepts to model and solve real world problems.
  - CC.2.3.HS.A.5: Geometry Geometry Create justifications based on transformations to establish similarity of plane figures.
- **TRIANGLE BISECTORS**
  - CC.2.3.HS.A.3: Geometry Geometry Verify and apply geometric theorems as they relate to geometric figures.
- **MEDIANS AND ALTITUDES OF TRIANGLES**
  - CC.2.3.HS.A.3: Geometry Geometry Verify and apply geometric theorems as they relate to geometric figures.

Unit 6: Quadrilaterals and Constructions

- **PARALLELOGRAMS AND RECTANGLES**
  - CC.2.3.HS.A.3: Geometry Geometry Verify and apply geometric theorems as they relate to geometric figures.

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- **SQUARES AND RHOMBI**
  - CC.2.3.HS.A.3: Geometry Geometry Verify and apply geometric theorems as they relate to geometric figures.
- **CONSTRUCTIONS**
  - CC.2.3.HS.A.4: Geometry Geometry Apply the concept of congruence to create geometric constructions.

Unit 7: Triangles and Trigonometry

- **PYTHAGOREAN THEOREM**
  - CC.2.3.HS.A.3: Geometry Geometry Verify and apply geometric theorems as they relate to geometric figures.
  - CC.2.3.HS.A.5: Geometry Geometry Create justifications based on transformations to establish similarity of plane figures.
- **TRIGONOMETRIC RATIOS**
  - CC.2.2.HS.C.9: Algebraic Concepts Functions Prove the Pythagorean identity and use it to calculate trigonometric ratios.
  - CC.2.3.HS.A.7: Geometry Geometry Apply trigonometric ratios to solve problems involving right triangles.
  - CC.2.2.HS.C.8: Algebraic Concepts Functions Choose trigonometric functions to model periodic phenomena and describe the properties of the graphs.
- **LAWS OF SINE AND COSINE**
  - CC.2.2.HS.C.9: Algebraic Concepts Functions Prove the Pythagorean identity and use it to calculate trigonometric ratios.
  - CC.2.3.HS.A.7: Geometry Geometry Apply trigonometric ratios to solve problems involving right triangles.
  - CC.2.3.HS.A.14: Geometry Geometry Apply geometric concepts to model and solve real world problems.
- **RADIANS AND THE UNIT CIRCLE**
  - CC.2.2.HS.C.7: Algebraic Concepts Functions Apply radian measure of an angle and the unit circle to analyze the trigonometric functions.
  - CC.2.3.HS.A.9: Geometry Geometry Extend the concept of similarity to determine arc lengths and areas of sectors of circles.
  - CC.2.3.HS.A.7: Geometry Geometry Apply trigonometric ratios to solve problems involving right triangles.

Unit 8: Circles

- **CIRCLE BASICS**

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- CC.2.3.HS.A.8: Geometry Geometry Apply geometric theorems to verify properties of circles.

- **CENTRAL ANGLES, INSCRIBED ANGLES, AND CHORDS**
  - CC.2.3.HS.A.8: Geometry Geometry Apply geometric theorems to verify properties of circles.
  - CC.2.3.HS.A.9: Geometry Geometry Extend the concept of similarity to determine arc lengths and areas of sectors of circles.
- **SECANTS, ANGLES, AND INTERCEPTED ARCS**
  - CC.2.3.HS.A.8: Geometry Geometry Apply geometric theorems to verify properties of circles.
  - CC.2.3.HS.A.9: Geometry Geometry Extend the concept of similarity to determine arc lengths and areas of sectors of circles.
- **TANGENTS, ANGLES, AND INTERCEPTED ARCS**
  - CC.2.3.HS.A.8: Geometry Geometry Apply geometric theorems to verify properties of circles.
  - CC.2.3.HS.A.9: Geometry Geometry Extend the concept of similarity to determine arc lengths and areas of sectors of circles.

Unit 9: Properties of Circles

- **CONGRUENT AND SIMILAR CIRCLES**
  - CC.2.3.HS.A.2: Geometry Geometry Apply rigid transformations to determine and explain congruence.
  - CC.2.3.HS.A.8: Geometry Geometry Apply geometric theorems to verify properties of circles.
  - CC.2.3.HS.A.6: Geometry Geometry Verify and apply theorems involving similarity as they relate to plane figures.
  - CC.2.3.HS.A.5: Geometry Geometry Create justifications based on transformations to establish similarity of plane figures.
- **CIRCUMFERENCE AND ARC LENGTH**
  - CC.2.3.HS.A.8: Geometry Geometry Apply geometric theorems to verify properties of circles.
  - CC.2.3.HS.A.9: Geometry Geometry Extend the concept of similarity to determine arc lengths and areas of sectors of circles.
- **AREA OF CIRCLES AND SECTORS**
  - CC.2.3.HS.A.8: Geometry Geometry Apply geometric theorems to verify properties of circles.
  - CC.2.3.HS.A.9: Geometry Geometry Extend the concept of similarity to determine arc lengths and areas of sectors of circles.

Unit 10: Conic Sections

- **CIRCLES**
  - CC.2.3.HS.A.8: Geometry Geometry Apply geometric theorems to verify properties of circles.
  - CC.2.3.HS.A.10: Geometry Geometry Translate between the geometric description and the equation for a conic section.

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- **PARABOLAS**
  - CC.2.3.HS.A.10: Geometry Geometry Translate between the geometric description and the equation for a conic section.
  - CC.2.2.HS.D.7: Algebraic Concepts Algebra Create and graph equations or inequalities to describe numbers or relationships.
- **ELLIPSES**
  - CC.2.3.HS.A.10: Geometry Geometry Translate between the geometric description and the equation for a conic section.
  - CC.2.2.HS.D.7: Algebraic Concepts Algebra Create and graph equations or inequalities to describe numbers or relationships.
  - CC.2.2.HS.D.10: Algebraic Concepts Algebra Represent, solve, and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically.
- **HYPERBOLAS**
  - CC.2.3.HS.A.10: Geometry Geometry Translate between the geometric description and the equation for a conic section.
  - CC.2.2.HS.D.7: Algebraic Concepts Algebra Create and graph equations or inequalities to describe numbers or relationships.
  - CC.2.2.HS.D.10: Algebraic Concepts Algebra Represent, solve, and interpret equations/inequalities and systems of equations/inequalities algebraically and graphically.

Unit 11: Surface Area

- **SURFACE AREA AND VOLUME OF SPHERES**
  - CC.2.3.HS.A.12: Geometry Geometry Explain volume formulas and use them to solve problems.
  - CC.2.3.HS.A.14: Geometry Geometry Apply geometric concepts to model and solve real world problems.
- **SURFACE AREA OF COMPOSITE SOLIDS**
  - CC.2.3.HS.A.14: Geometry Geometry Apply geometric concepts to model and solve real world problems.
- **SURFACE AREA OF SIMILAR SOLIDS**
  - CC.2.3.HS.A.14: Geometry Geometry Apply geometric concepts to model and solve real world problems.

Unit 12: Volume

- **CONVERTING BETWEEN TWO-DIMENSIONAL FIGURES AND THREE-DIMENSIONAL SOLIDS**
  - CC.2.3.HS.A.13: Geometry Geometry Analyze relationships between two-dimensional and three-dimensional objects.
- **VOLUME OF PRISMS AND PYRAMIDS**

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- CC.2.3.HS.A.12: Geometry Geometry Explain volume formulas and use them to solve problems.

- **VOLUME OF CYLINDERS AND CONES**
  - CC.2.3.HS.A.12: Geometry Geometry Explain volume formulas and use them to solve problems.
- **MODELING SITUATIONS WITH GEOMETRY**
  - CC.2.3.HS.A.14: Geometry Geometry Apply geometric concepts to model and solve real world problems.
  - CC.2.3.HS.A.12: Geometry Geometry Explain volume formulas and use them to solve problems.

Unit 13: Volume of Composite and Similar Shapes

- **VOLUME OF COMPOSITE SOLIDS**
  - CC.2.3.HS.A.12: Geometry Geometry Explain volume formulas and use them to solve problems.
- **VOLUME OF SIMILAR SOLIDS**
  - CC.2.3.HS.A.12: Geometry Geometry Explain volume formulas and use them to solve problems.

Unit 14: Basic Probability Concepts

- **COMBINATIONS AND PERMUTATIONS**
  - CC.2.4.HS.B.6: Measurement, Data, and Probability Statistics and Probability Use the concepts of independence and conditional probability to interpret data.
  - CC.2.4.HS.B.7: Measurement, Data, and Probability Statistics and Probability Apply the rules of probability to compute probabilities of compound events in a uniform probability model.
- **INTRODUCTION TO PROBABILITY**
  - CC.2.4.HS.B.6: Measurement, Data, and Probability Statistics and Probability Use the concepts of independence and conditional probability to interpret data.

Unit 15: Advanced Probability Concepts

- **ANALYZING DECISIONS IN PROBABILITY**
  - CC.2.4.HS.B.6: Measurement, Data, and Probability Statistics and Probability Use the concepts of independence and conditional probability to interpret data.
  - CC.2.4.HS.B.7: Measurement, Data, and Probability Statistics and Probability Apply the rules of probability to compute probabilities of compound events in a uniform probability model.
- **CONDITIONAL PROBABILITY**
  - CC.2.4.HS.B.6: Measurement, Data, and Probability Statistics and Probability Use the concepts of independence and conditional probability to interpret data.
  - CC.2.4.HS.B.1: Measurement, Data, and Probability Statistics and Probability Summarize, represent, and interpret data on a single count or measurement variable.
  - CC.2.4.HS.B.2: Measurement, Data, and Probability Statistics and Probability Summarize, represent, and interpret data on two categorical and quantitative variables.

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- **GEOMETRIC PROBABILITIES**
  - CC.2.4.HS.B.7: Measurement, Data, and Probability Statistics and Probability Apply the rules of probability to compute probabilities of compound events in a uniform probability model.
  - CC.2.3.HS.A.9: Geometry Geometry Extend the concept of similarity to determine arc lengths and areas of sectors of circles.

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