

Alignment Document  
State of Idaho and Aventa Learning Geometry

**Geometry**  
2005-2007 Benchmark Blueprint

| Standards   | Goals                                       | Benchmarks  | Unit Name                            | Course Topic Description                                |
|---|---|---|--------------------------------------|---|
| <b>10.M.1</b> Number and Operation  | <b>10.M.1.1</b> Understand and use numbers. | <b>10.M.1.1.1</b> Apply properties of rational numbers.   | Connections From Algebra             | Properties of Equality                                  |
|   |   |   | Connections From Algebra             | The Commutative Properties                              |
|   |   |   | Connections From Algebra             | Absolute Value  |
|   |   |   | Reasoning and Introduction to Proof! | Using Algebraic Properties in Geometric Proofs          |
|   |   | <b>10.M.1.1.2</b> Use positive and negative numbers, absolute value, fractions, decimals, percentages, and scientific notation, including application in real-world situations. | Connections From Algebra             | Measuring Segments                                      |
|   |   |   | Connections From Algebra             | Absolute Value  |
|   |   |   | Connections From Algebra             | Measuring a the Length of a Segment Using a Number Line |
| <b>10.M.1.1.3</b> Apply properties of exponents.  |   |   |                                      |   |
| <b>10.M.1.1.4</b> Identify exact and approximate roots without simplification.              |   |   |                                      |   |
| <b>10.M.1.1.5</b> Solve problems using number theory concepts (factors, multiples, primes). |   |   |                                      |   |

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|  |  | <b>10.M.1.1.6</b> Use appropriate vocabulary. | Connections From Algebra | The Concept of "Variable" in Geometry |
|  |  |   | Connections From Algebra | Points                                |
|  |  |   | Connections From Algebra | Lines                                 |
|  |  |   | Connections From Algebra | Planes                                |
|  |  |   | Connections From Algebra | Line Segment                          |
|  |  |   | Connections From Algebra | Bisecting a Segment                   |
|  |  |   | Connections From Algebra | Rays and Angles                       |
|  |  |   | Connections From Algebra | How Angles Are Measured               |
|  |  |   | Connections From Algebra | Bisector of an Angle                  |
|  |  |   | Connections From Algebra | How to Classify Angles                |
|  |  |   | Connections From Algebra | Vertical Angles                       |
|  |  |   | Connections From Algebra | Adjacent Angles                       |
|  |  |   | Connections From         | Perpendicular-Bisector of a           |

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|  |  |  | Algebra                              | Segment   |
|  |  |  | Reasoning and Introduction to Proof! | Language of Reasoning                           |
|  |  |  | Reasoning and Introduction to Proof! | Inductive Reasoning                             |
|  |  |  | Reasoning and Introduction to Proof! | Recognizing Number Patterns By Inductive Method |
|  |  |  | Reasoning and Introduction to Proof! | Counterexamples                                 |
|  |  |  | Reasoning and Introduction to Proof! | Geometric Induction                             |
|  |  |  | Reasoning and Introduction to Proof! | Language of Reasoning                           |
|  |  |  | Reasoning and Introduction to Proof! | Negation of a Statement                         |
|  |  |  | Reasoning and Introduction to Proof! | Compound Statements                             |
|  |  |  | Reasoning and Introduction to Proof! | Postulates and Converses                        |
|  |  |  | Reasoning and Introduction to Proof! | Deductive Reasoning                             |
|  |  |  | Reasoning and Introduction to Proof! | Law of Detachment                               |
|  |  |  | Reasoning and Introduction to Proof! | Law of Syllogism                                |

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|  |  |  | Reasoning and Introduction to Proof!    | Inverse of a Conditional Statement                         |
|  |  |  | Reasoning and Introduction to Proof!    | Using Algebraic Properties in Geometric Proofs             |
|  |  |  | Parallel Lines and the Coordinate Plane | Overview   |
|  |  |  | Parallel Lines and the Coordinate Plane | Positions of Two Lines in a Plane                          |
|  |  |  | Parallel Lines and the Coordinate Plane | Angles Formed by Parallel Lines and their Transversals     |
|  |  |  | Parallel Lines and the Coordinate Plane | Two Perpendicular Number Lines                             |
|  |  |  | Parallel Lines and the Coordinate Plane | Properties of Points on a Coordinate Plane                 |
|  |  |  | Parallel Lines and the Coordinate Plane | Construction of a Line Parallel to an Axis Through a Point |
|  |  |  | Parallel Lines and the Coordinate Plane | Midpoint of a Segment                                      |
|  |  |  | Parallel Lines and the Coordinate Plane | Equations of Lines in the Coordinate Plane                 |

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|  |  |  | Plane  |   |
|  |  |  | Parallel Lines and the Coordinate Plane                  | Relationships Between Two Lines on a Plane                  |
|  |  |  | Special Triangles and Special Relationships in Triangles | Isosceles Triangles   |
|  |  |  | Special Triangles and Special Relationships in Triangles | Properties of Medians of Isosceles Triangle                 |
|  |  |  | Special Triangles and Special Relationships in Triangles | Properties of Altitudes of Isosceles Triangle               |
|  |  |  | Special Triangles and Special Relationships in Triangles | Properties of Angle Bisectors of Isosceles Triangle         |
|  |  |  | Special Triangles and Special Relationships in Triangles | Properties of Perpendicular Bisectors of Isosceles Triangle |
|  |  |  | Special Triangles and Special Relationships in Triangles | Equilateral or Equiangular Triangle                         |
|  |  |  | Special Triangles  | When Two Equilateral Triangles                              |

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|  |  |  | and Special Relationships in Triangles | Are Congruent?                    |
|  |  |  | Quadrilaterals and Polygons            | What are Quadrilaterals?          |
|  |  |  | Quadrilaterals and Polygons            | Classifications of Quadrilaterals |
|  |  |  | Quadrilaterals and Polygons            | A Square and Its Properties       |
|  |  |  | Quadrilaterals and Polygons            | Parallelograms                    |
|  |  |  | Quadrilaterals and Polygons            | A Rectangle and Its Properties    |
|  |  |  | Quadrilaterals and Polygons            | Rhombus and Its Properties        |
|  |  |  | Quadrilaterals and Polygons            | The Trapezoid                     |
|  |  |  | Quadrilaterals and Polygons            | What are Polygons?                |
|  |  |  | Quadrilaterals and Polygons            | Types of Polygons                 |
|  |  |  | Quadrilaterals and Polygons            | Angle Measures in Polygons        |
|  |  |  | Similarity                             | Ratios and Proportions            |
|  |  |  | Similarity                             | What are Similar Figures?         |

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|  |  |  | Similarity                      | When are two Triangles Similar             |
|  |  |  | Similarity                      | Similar Quadrilaterals                     |
|  |  |  | Similarity                      | Similar Polygons                           |
|  |  |  | Circles                         | What is a Circle?                          |
|  |  |  | Right Triangle and Trigonometry | Review of Pythagorean Theorem              |
|  |  |  | Right Triangle and Trigonometry | Indirect Measurement                       |
|  |  |  | Right Triangle and Trigonometry | Special Ratios in a Right Triangle         |
|  |  |  | Right Triangle and Trigonometry | Relationships Between Trigonometric Ratios |
|  |  |  | Right Triangle and Trigonometry | Special Segments in Triangles              |
|  |  |  | Right Triangle and Trigonometry | Law of Cosines                             |
|  |  |  | Perimeters and Areas            | Circumference of a Circle                  |
|  |  |  | Perimeters and Areas            | Area of a Circle                           |
|  |  |  | Perimeters and Areas            | Sector of a Circle and Its Area            |
|  | <b>10.M.1.2</b> Perform computations accurately. | <b>10.M.1.2.1</b> Use the order of operations and perform operations with rational | Connections From Algebra        | Properties of Equality                     |

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|  |  | numbers.  | Connections From Algebra        | The Commutative Properties             |
|  |  |   | Connections From Algebra        | Supplementary Angles                   |
|  |  |   | Connections From Algebra        | Complementary Angles                   |
|  |  |   | Connections From Algebra        | Right Angles and Perpendicular Lines   |
|  | <b>10.M.1.3</b> Estimate and judge reasonableness of results.              | <b>10.M.1.3.1</b> Apply number sense to everyday situations and judge reasonableness of results.  | Right Triangle and Trigonometry | Indirect Measurement                   |
|  |  | <b>10.M.1.3.2</b> Identify that error accumulates in a computation when there is rounding.  |                                 |  |
| <b>10.M.2</b> Concepts and Principles of Measurement | <b>10.M.2.1</b> Understand and use U.S. customary and metric measurements. | <b>10.M.2.1.1</b> Given the formulas, find the circumference, perimeter, or area of triangles, circles, and quadrilaterals, the volume of spheres, non-oblique prisms, cylinders, and cones, and the surface area of spheres, non-oblique prisms, cylinders, and right square-based pyramids. | Perimeters and Areas            | Area of a Triangle                     |
|  |  |   | Perimeters and Areas            | Area of Polygon                        |
|  |  |   | Perimeters and Areas            | Perimeters and Areas of Quadrilaterals |
|  |  |   | Perimeters and Areas            | Circumferences and Areas of Circles    |
|  |  |   | Perimeters and Areas            | Sector of a Circle and Its Area        |
|  |  | <b>10.M.2.1.2</b> Solve problems involving circumference, perimeter, or area of triangles, circles, and rectangles.   | Perimeters and Areas            | Area of a Triangle                     |
|  |  |   | Perimeters and Areas            | Area of Polygon                        |

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|  |   |   | Perimeters and Areas            | Perimeters and Areas of Quadrilaterals     |
|  |   |   | Perimeters and Areas            | Circumferences and Areas of Circles        |
|  |   |   | Perimeters and Areas            | Sector of a Circle and Its Area            |
|  | <b>10.M.2.2</b> Apply the concepts of rates, ratios, and proportions.           | <b>10.M.2.2.1</b> Use rates, ratios, proportions, map scales, and scale factors (one- and two-dimensional) in problem-solving situations. | Right Triangle and Trigonometry | Indirect Measurement                       |
|  |   |   | Right Triangle and Trigonometry | Special Ratios in a Right Triangle         |
|  |   |   | Right Triangle and Trigonometry | Relationships Between Trigonometric Ratios |
|  |   |   | Right Triangle and Trigonometry | Special Segments in Triangles              |
|  |   |   | Right Triangle and Trigonometry | Law of Cosines                             |
|  | <b>10.M.2.2.2</b> Apply concepts of rates and direct and indirect measurements. |   | Right Triangle and Trigonometry | Indirect Measurement                       |
|  |   |   | Right Triangle and Trigonometry | Special Ratios in a Right Triangle         |
|  |   |   | Right Triangle and Trigonometry | Relationships Between Trigonometric Ratios |
|  |   |   | Right Triangle and Trigonometry | Special Segments in Triangles              |
|  |   |   | Right Triangle and Trigonometry | Law of Cosines                             |

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|  |  | <b>10.M.2.2.3</b> Construct equivalent units, comparable units, and conversions.   |                                     |   |
|  | <b>10.M.2.3</b> Apply dimensional analysis.  | <b>10.M.2.3.1</b> Use customary and metric units and their relationship to one another and to real world applications involving length, area, capacity, weight, time, and temperature. | Parallel Lines and Coordinate Plane | Length of a Segment on a Coordinate Plane |
|  | <b>10.M.2.4</b> Apply appropriate techniques and tools to determine measurements.          | <b>10.M.2.4.1</b> Determine and use appropriate units.   |                                     |   |
|  |  | <b>10.M.2.4.2</b> Approximate error in measurement situations.   |                                     |   |
| <b>10.M.3</b> Concepts and Language of Algebra and Functions | <b>10.M.3.1</b> Use algebraic symbolism as a tool to represent mathematical relationships. | <b>10.M.3.1.1</b> Represent mathematical relationships using variables, expressions, linear equations and inequalities.  | Connections From Algebra            | The Concept of "Variable" in Geometry     |
|  |  |  | Parallel Lines and Coordinate Plane | The Distance Formula                      |
|  |  |  | Parallel Lines and Coordinate Plane | Midpoint of a Segment                     |
|  |  |  | Parallel Lines and Coordinate Plane | How to Write the Equation of a Line       |
|  |  |  | Equations of Circles                | Standard Equation of a Circle             |
|  | <b>10.M.3.2</b> Evaluate algebraic expressions.  | <b>10.M.3.2.1</b> Use appropriate procedures for manipulating and simplifying algebraic expressions involving variables, integers, and rational numbers.                               | Parallel Lines and Coordinate Plane | The Distance Formula                      |
|  |  |  | Parallel Lines and Coordinate Plane | Midpoint of a Segment                     |
|  |  |  | Parallel Lines and Coordinate Plane | How to Write the Equation of a Line       |
|  |  |  | Equations of Circles                | Standard Equation of a Circle             |
| <b>10.M.3.3</b> Solve algebraic equations                    | <b>10.M.3.3.1</b> Use appropriate procedures to  |  | Parallel Lines and                  | The Distance Formula                      |

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|   | and inequalities.   | solve multi-step, first-degree equations and inequalities; such as $3(2x - 5) = 5x + 7$ or $3(2x - 5) > 5x + 7$ .  | Coordinate Plane<br>Parallel Lines and Coordinate Plane<br>Parallel Lines and Coordinate Plane | Midpoint of a Segment<br>How to Write the Equation of a Line |
|   |   | <b>10.M.3.3.2</b> Differentiate between linear and non-linear equations and graphs.  |  |  |
|   | <b>10.M.3.4</b> Solve simple linear systems of equations.                 | <b>10.M.3.4.1</b> Use appropriate procedures to solve linear systems of equations involving two variables; such as $x + y = 7$ and $2x + 3y = 21$ .  |  |  |
|   | <b>10.M.3.5</b> Understand the concept of functions.                      | <b>10.M.3.5.1</b> Given graphs, charts, ordered pairs, mappings, or equations, determine whether a relation is a function.   |  |  |
|   |   | <b>10.M.3.5.2</b> Evaluate functions written in functional notation.   |  |  |
|   |   | <b>10.M.3.5.3</b> Given a function, identify domain and range.   |  |  |
|   | <b>10.M.3.6</b> Apply functions to a variety of problems.                 | <b>10.M.3.6.1</b> Model and solve real-world phenomena using multi-step, first degree, single variable equations and inequalities, linear equations, and two-variable linear systems of equations. |  |  |
|   |   | <b>10.M.3.6.2</b> Use graphs and sequences to represent and solve problems.  | Reasoning and Introduction to Proof!   | Recognizing Number Patterns By Inductive Method              |
| <b>10.M.4</b> Concepts and Principles of Geometry | <b>10.M.4.1</b> Apply concepts of size, shape, and spatial relationships. | <b>10.M.4.1.1</b> Recognize and apply congruency and similarity of two-dimensional figures.  | Reasoning and Introduction to Proof!<br>Triangles: Basic Closed Figures in Geometry            | Law of Syllogism<br>Congruence of Geometric Figures          |
|   |   |  | Triangles: Basic Closed Figures in   | When Two Triangles Are Congruent                             |

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|  |  |  | Geometry   |   |
|  |  |  | Triangles: Basic Closed Figures in Geometry              | Congruent Postulate 1 (SAS Postulate)         |
|  |  |  | Triangles: Basic Closed Figures in Geometry              | Postulate 2 (ASA Postulate)                   |
|  |  |  | Triangles: Basic Closed Figures in Geometry              | Postulate 3 (SSS Postulate)                   |
|  |  |  | Triangles: Basic Closed Figures in Geometry              | Postulate 4 (AAS Postulate)                   |
|  |  |  | Triangles: Basic Closed Figures in Geometry              | Postulate 5 (HL Postulate)                    |
|  |  |  | Special Triangles and Special Relationships in Triangles | When Two Equilateral Triangles Are Congruent? |
|  |  |  | Similarity   | Ratios and Proportions                        |
|  |  |  | Similarity   | What are Similar Figures?                     |
|  |  |  | Similarity   | When are two Triangles Similar?               |
|  |  |  | Similarity   | Similar Quadrilaterals                        |
|  |  |  | Similarity   | Similar Polygons                              |

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|  |  | <b>10.M.4.1.2</b> Recognize and use similarity as it relates to size variations in two- and three-dimensional objects.           | Reasoning and Introduction to Proof!   | Law of Syllogism   |
|  | <b>10.M.4.2</b> Apply the geometry of right triangles. | <b>10.M.4.2.1</b> Given the Pythagorean Theorem, calculate missing side lengths of right triangles without simplifying radicals. | Special Triangles and Special Relationships in Triangles<br><br>Special Triangles and Special Relationships in Triangles<br><br>Special Triangles and Special Relationships in Triangles<br><br>Quadrilaterals and Polygons                          | Right Triangles<br><br>Special Right Triangles<br><br>Pythagorean Theorem<br><br>Application of Pythagorean Theorem in Squares   |
|  | <b>10.M.4.3</b> Apply graphing in two dimensions.      | <b>10.M.4.3.1</b> Identify attributes of the Cartesian Coordinate System, such as quadrants, origin, and axes.                   | Connections From Algebra<br><br>Lines and Points in Coordinate Plane<br><br>Lines and Points in Coordinate Plane<br><br>Lines and Points in Coordinate Plane<br><br>Lines and Points in Coordinate Plane<br><br>Lines and Points in Coordinate Plane | Measuring Segments<br><br>Two Perpendicular Number Lines<br><br>Properties of Points on a Coordinate Plane<br><br>Length of a Segment on a Coordinate Plane<br><br>How to Display a Line on the Coordinate Plane<br><br>Equations of Lines in the Coordinate Plane |

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|  |   |   | Equations of Circles                 | Standard Equation of a Circle                   |
|  |   | <b>10.M.4.3.2</b> Graph scatter plots and identify informal trend lines (e.g., eyeball fit lines).            |                                      |   |
|  |   | <b>10.M.4.3.3</b> Identify positive and negative correlations.  |                                      |   |
|  | <b>10.M.4.4</b> Represent and graph linear relationships. | <b>10.M.4.4.1</b> Create graphs and equations for linear relationships.                                       |                                      |   |
|  |   | <b>10.M.4.4.2</b> Represent linear relationships using tables, graphs, and mathematical symbols.              |                                      |   |
|  |   | <b>10.M.4.4.3</b> Interpret attributes of linear relationships such as slope, rate of change, and intercepts. | Parallel Lines and Coordinate Plane  | Equations of Lines in the Coordinate Plane      |
|  | <b>10.M.4.5</b> Use reasoning skills.                     | <b>10.M.4.5.1</b> Use logic to make and evaluate mathematical arguments.                                      | Reasoning and Introduction to Proof! | Overview  |
|  |   |   | Reasoning and Introduction to Proof! | Inductive Reasoning                             |
|  |   |   | Reasoning and Introduction to Proof! | Recognizing Number Patterns By Inductive Method |
|  |   |   | Reasoning and Introduction to Proof! | Counterexamples                                 |
|  |   |   | Reasoning and Introduction to Proof! | Geometric Induction                             |
|  |   |   | Reasoning and Introduction to Proof! | Language of Reasoning                           |
|  |   |   | Reasoning and Introduction to Proof! | Negation of a Statement                         |

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|  |  |  | Reasoning and Introduction to Proof! | Compound Statements                                     |
|  |  |  | Reasoning and Introduction to Proof! | Postulates and Converses                                |
|  |  |  | Reasoning and Introduction to Proof! | Deductive Reasoning                                     |
|  |  |  | Reasoning and Introduction to Proof! | Law of Detachment                                       |
|  |  |  | Reasoning and Introduction to Proof! | Law of Syllogism  |
|  |  |  | Reasoning and Introduction to Proof! | Inverse of a Conditional Statement                      |
|  |  |  | Reasoning and Introduction to Proof! | Two Column Proof With Segments and Angles               |
|  |  |  | Parallel Lines and Coordinate Plane  | Overview  |
|  |  |  | Parallel Lines and Coordinate Plane  | Positions of Two Lines in a Plane                       |
|  |  |  | Parallel Lines and Coordinate Plane  | Postulates about Parallel Lines                         |
|  |  |  | Parallel Lines and Coordinate Plane  | Angles Formed by Parallel Lines and their Transversals  |
|  |  |  | Parallel Lines and Coordinate Plane  | Important Theorems About Parallel and Transversal Lines |
|  |  |  | Parallel Lines and                   | Length of a Segment on a                                |

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|  |  |  | Coordinate Plane                    | Coordinate Plane                           |
|  |  |  | Parallel Lines and Coordinate Plane | Relationships Between Two Lines on a Plane |
|  |  |  | Basic Closed Figures in Geometry    | Theorem 1                                  |
|  |  |  | Basic Closed Figures in Geometry    | Classification of Triangles                |
|  |  |  | Basic Closed Figures in Geometry    | Fundamental Principle of Triangles         |
|  |  |  | Basic Closed Figures in Geometry    | Congruence of Geometric Figures            |
|  |  |  | Basic Closed Figures in Geometry    | Congruent Postulate 1 (SAS Postulate)      |
|  |  |  | Basic Closed Figures in Geometry    | Postulate 2 (ASA Postulate)                |
|  |  |  | Basic Closed Figures in Geometry    | Postulate 3 (SSS Postulate)                |
|  |  |  | Basic Closed Figures in Geometry    | Postulate 4 (AAS Postulate)                |
|  |  |  | Basic Closed Figures in Geometry    | Postulate 5 (HL Postulate)                 |
|  |  |  | Basic Closed Figures in Geometry    | Property of Altitudes of Triangles         |
|  |  |  | Basic Closed Figures in Geometry    | Property of Medians of Triangles           |

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|  |  |  | Basic Closed Figures in Geometry                         | Property of Bisectors of Triangles                          |
|  |  |  | Special Triangles and Special Relationships in Triangles | Isosceles Triangle and its Parts                            |
|  |  |  | Special Triangles and Special Relationships in Triangles | Properties of Medians of Isosceles Triangle                 |
|  |  |  | Special Triangles and Special Relationships in Triangles | Properties of Altitudes of Isosceles Triangle               |
|  |  |  | Special Triangles and Special Relationships in Triangles | Properties of Angle Bisectors of Isosceles Triangle         |
|  |  |  | Special Triangles and Special Relationships in Triangles | Properties of Perpendicular Bisectors of Isosceles Triangle |
|  |  |  | Special Triangles and Special Relationships in Triangles | Equilateral or Equiangular Triangle                         |
|  |  |  | Special Triangles and Special Relationships in           | When Two Equilateral Triangles Are Congruent                |

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|  |  | <p>Triangles</p> <p>Special Triangles and Special Relationships in Triangles</p> <p>Special Triangles and Special Relationships in Triangles</p> <p>Special Triangles and Special Relationships in Triangles</p> <p>Special Triangles and Special Relationships in Triangles</p> <p>Special Triangles and Special Relationships in Triangles</p> <p>Special Triangles and Special Relationships in Triangles</p> <p>Special Triangles and Special Relationships in Triangles</p> <p>Special Triangles and Special Relationships in Triangles</p> | <p>Right Triangles</p> <p>Special Right Triangles</p> <p>Pythagorean Theorem</p> <p>Analyzing Distinct Sides and Angles in Triangles</p> <p>Exterior Angle Inequality</p> <p>Indirect Proof</p> <p>Shortest Distance Between a Point and a Line</p> |
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|  |  | Quadrilaterals and Polygons | A Square and Its Properties                       |
|  |  | Quadrilaterals and Polygons | Rectangles and Their Properties                   |
|  |  | Quadrilaterals and Polygons | Properties of Diagonals in Squares and Rectangles |
|  |  | Quadrilaterals and Polygons | What are Parallelograms?                          |
|  |  | Quadrilaterals and Polygons | Rhombus and Its Properties                        |
|  |  | Quadrilaterals and Polygons | The Trapezoid                                     |
|  |  | Quadrilaterals and Polygons | What are Polygons?                                |
|  |  | Quadrilaterals and Polygons | Types of Polygons                                 |
|  |  | Quadrilaterals and Polygons | Angle Measures in Polygons                        |
|  |  | Similarity                  | When are two Triangles Similar?                   |
|  |  | Similarity                  | Similar Quadrilaterals                            |
|  |  | Circles                     | Standard Equation of a Circle                     |
|  |  | Circles                     | Theorems About Chords and Tangents                |
|  |  | Circles                     |   |

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|  |   |  | <p>Circles</p> <p>Right Triangle and Trigonometry</p> <p>Right Triangle and Trigonometry</p> <p>Right Triangle and Trigonometry</p> <p>Right Triangle and Trigonometry</p> <p>Right Triangle and Trigonometry</p> <p>Right Triangle and Trigonometry</p> <p>Right Triangle and Trigonometry</p> | <p>Arcs and Special segments</p> <p>Special Angles in Circles</p> <p>Review of Pythagorean Theorem</p> <p>Indirect Measurement</p> <p>Special Ratios in a Right Triangle</p> <p>Relationships Between Trigonometric Ratios</p> <p>Special Segments in Triangles</p> <p>Law of Cosines</p> |
| <b>10.M.5</b> Data Analysis, Probability, and Statistics | <b>10.M.5.1</b> Represent data with a variety of formats. | <b>10.M.5.1.1</b> Analyze and interpret tables, charts, and graphs, including scatter plots, multiple broken line graphs, and box-and-whisker plots. | If-Then Statements, Converses, and Postulates   | Truth Tables  |
|  | <b>10.M.5.2</b> Collect, organize, and display data.      | <b>10.M.5.2.1</b> Collect, organize, and display data in tables, charts, and graphs.   |   |   |
|  | <b>10.M.5.3</b> Apply simple statistical measurements.    | <b>10.M.5.3.1</b> Interpret and use basic statistical concepts, including mean, median, mode, range, and distribution of data, including outliers.   |   |   |
|  |   | <b>10.M.5.3.2</b> Make predictions and draw conclusions based on statistical measures.   |   |   |
|  | <b>10.M.5.4</b> Understand basic concepts of probability. | <b>10.M.5.4.1</b> Find probabilities based on dependent, independent, and compound events.   |   |   |

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|  |  | <b>10.M.5.4.2</b> Contrast experimental and theoretical probability.  |  |  |
|  | <b>10.M.5.5</b> Make predictions or decisions based on data. | <b>10.M.5.5.1</b> Make predictions based on randomness, chance, equally likely events, and probability.   |  |  |
|  |  | <b>10.M.5.5.2</b> Use appropriate tools/technology to conduct simulations and employ graphical models to make predictions or decisions based on data. |  |  |
|  |  | <b>10.M.5.5.3</b> Design, conduct, and interpret results of statistical experiments.  |  |  |