



Alignment Document

State of Louisiana And Aventa Learning Geometry

Geometry 2005-2007 Benchmark Blueprint

State Standard Number	State Standard Area / Description	Unit Name	Course Topic Description
0	Number and Number Relations		
1	Simplify and determine the value of radical expressions		
2	Predict the effect of operations on real numbers (e.g., the quotient of a positive number divided by a positive number less than 1 is greater than the original dividend)		
3	Define sine, cosine, and tangent in ratio form and calculate them using technology	Right Triangles and Trigonometry	Special Ratios in a Right Triangle (excludes technology)
4	Use ratios and proportional reasoning to solve a variety of real-life problems including similar figures and scale drawings	Similarity	Ratios and Proportions
		Similarity	Similar Figures
		Similarity	Similar Quadrilaterals
0	Algebra		
5	Write the equation of a line of best fit for a set of 2-variable real-life data presented in table or scatter plot form, with or without technology		
6	Write the equation of a line parallel or perpendicular to a given line through a specific point	Parallel Lines and Coordinate Plane	Equations of Lines in Coordinate Plane
0	Measurement		
7	Find volume and surface area of pyramids, spheres, and cones		
8	Model and use trigonometric ratios to solve problems involving right triangles		



0	Geometry		
9	Construct 2- and 3-dimensional figures when given the name, description, or attributes, with and without technology		
10	Form and test conjectures concerning geometric relationships including lines, angles, and polygons (i.e., triangles, quadrilaterals, and n-gons), with and without technology	Language of Geometry	Points, Lines and Planes
		Language of Geometry	Measuring Segments
		Language of Geometry	Rays and Angles
		Language of Geometry	Classifying Angles
		Language of Geometry	Pairs of Angles
		Language of Geometry	Right Triangles and Perpendicular Lines
		Triangles: Basic Closed Figures in Geometry	Structure of Triangles
		Triangles: Basic Closed Figures in Geometry	Congruent Triangles and Congruence Tests
		Triangles: Basic Closed Figures in Geometry	Special Segments in Triangles
		Quadrilaterals and Polygons	Square and Rectangle
		Quadrilaterals and Polygons	Parallelograms
		Quadrilaterals and Polygons	The Rhombus and Trapezoid
		Quadrilaterals and Polygons	Polygons
		Special Triangles and Special Relationships in Triangles	Isosceles Triangles
		Special Triangles and Special Relationships in Triangles	Equilateral Triangles

		Special Triangles and Special Relationships in Triangles	Right Triangles and Pythagorean Theorem
		Special Triangles and Special Relationships in Triangles	Triangle Inequalities
		Parallel Lines and Coordinate Plane	Parallel Lines and Transversals
		Parallel Lines and Coordinate Plane	Distance and Midpoint Formulas
		Parallel Lines and Coordinate Plane	Equations of Lines
11	Determine angle measurements using the properties of parallel, perpendicular, and intersecting lines in a plane	Parallel Lines and Coordinate Plane	Lines and Points in a Plane
12	Apply the Pythagorean theorem in both abstract and real-life settings	Special Triangles and Special Relationships in Triangles	Right Triangles and Pythagorean Theorem
		Right Triangle and Trigonometry	Review of Pythagorean Theorem
13	Solve problems and determine measurements involving chords, radii, arcs, angles, secants, and tangents of a circle	Circles	Special Angles in Circles
		Circles	Arcs and Special segments
14	Develop and apply coordinate rules for translations and reflections of geometric figures		
15	Draw or use other methods, including technology, to illustrate dilations of geometric figures		
16	Represent and solve problems involving distance on a number line or in the plane	Connections From Algebra	Measuring Segments
		Parallel Lines and Coordinate Plane	Distance and Midpoint Formulas
17	Compare and contrast inductive and deductive reasoning approaches to justify conjectures and solve problems	Reasoning and Introduction to Proof	Reasoning and Introduction to Proof
		Reasoning and Introduction to Proof	Deductive Reasoning



18	Determine angle measures and side lengths of right and similar triangles using trigonometric ratios and properties of similarity, including congruence	Similarity	Similar Figures
		Similarity	Similar Quadrilaterals
		Triangles: Basic Closed Figures in Geometry	Basic Closed Figures in Geometry
		Triangles: Basic Closed Figures in Geometry	Congruent Triangles and Congruence Tests
		Right Triangle and Trigonometry	Review of Pythagorean Theorem
		Special Triangles and Special Relationships in Triangles	Right Triangles and Pythagorean Theorem
19	Develop formal and informal proofs (e.g., Pythagorean theorem, flow charts, paragraphs)	Reasoning and Introduction to Proof	Two Column Proof With Segments and Angles
		Special Triangles and Special Relationships in Triangles	Right Triangles and Pythagorean Theorem
0	Data Analysis, Probability, and Discrete Math		
20	Show or justify the correlation (match) between a linear or non-linear data set and a graph		
21	Determine the probability of conditional and multiple events, including mutually and nonmutually exclusive events		
22	Interpret and summarize a set of experimental data presented in a table, bar graph, line graph, scatter plot, matrix, or circle graph		
23	Draw and justify conclusions based on the use of logic (e.g., conditional statements, converse, inverse, contrapositive)	Reasoning and Introduction to Proof	Reasoning and Introduction to Proof
		Reasoning and Introduction to Proof	If-Then Statements, Converses, and Postulates
24	Use counting procedures and techniques to solve real-life problems		
25	Use discrete math to model real life situations (e.g., fair games, elections)		



0	Patterns, Relations, and Functions		
26	Generalize and represent patterns symbolically, with and without technology		
27	Translate among tabular, graphical, and symbolic representations of patterns in real-life situations, with and without technology		