

The College Board's *Teacher Implementation Guide* is designed to help teachers and curriculum specialists understand the reasoning and goals behind the redesign of the SAT and provide practical, actionable, classroom-related information to help teachers work with students to prepare for SAT. An excerpt outlining the structure and content of the redesigned SAT is below.

To view the complete *Teacher Implementation Guide*, please visit: <https://collegereadiness.collegeboard.org/pdf/redesigned-sat-k12-teacher-implementation-guide.pdf>

To view the full *Test Specifications*, please visit: <https://collegereadiness.collegeboard.org/pdf/test-specifications-redesigned-sat-1.pdf>

SAT READING TEST CONTENT SPECIFICATIONS

	Number	Percentage of Test
Time Allotted	65 minutes	
Passage Word Count	3,250 words total from 4 single passages and 1 pair; 500–750 words per passage or paired set	
Total Questions	52 questions	100%
Multiple Choice (4 options)		100%
Passage Based		100%
Contribution of Items to Subscores and Scores		
Words in Context (Across Reading and Writing and Language Tests)	10 questions (2 questions per passage/pair)	19%
Command of Evidence (Across Reading and Writing and Language Tests)	10 questions (2 questions per passage/pair)	19%
Analysis in History/Social Studies (Across Math, Reading, and Writing and Language Tests)	21 questions (all history/social studies questions)	40%
Analysis in Science (Across Math, Reading, and Writing and Language Tests)	21 questions (all science questions)	40%
Passage Contents		
U.S. and World Literature	1 passage; 10 questions	20%
History/Social Studies	2 passages, or 1 passage and 1 pair; 10–11 questions each	40%
Science	2 passages, or 1 passage and 1 pair; 10–11 questions each	40%
Graphics		
	1–2 graphics in 1 History/Social Studies passage and in 1 Science passage	
Text and Graphical Complexity		
Text Complexity	A specified range from grades 9–10 to postsecondary entry across 4 passages and 1 pair	
Graphical Data Representations (tables, graphs, charts, etc.)	Somewhat challenging to challenging (moderate to moderately high data density, few to several variables, moderately challenging to moderately complex interactions)	

SAT READING DOMAIN

Content Dimension	Description
Text Complexity	The passages/pair on the SAT Reading Test represent a specified range of text complexities from grades 9–10 to postsecondary entry.
Information and Ideas	These questions focus on the informational content of text.
Reading closely	These questions focus on the explicit and implicit meaning of text and on extrapolating beyond the information and ideas in a text.
Determining explicit meanings	The student will identify information and ideas explicitly stated in text.
Determining implicit meanings	The student will draw reasonable inferences and logical conclusions from text.
Using analogical reasoning	The student will extrapolate in a reasonable way from the information and ideas in a text or apply information and ideas in a text to a new, analogous situation.
Citing textual evidence	The student will cite the textual evidence that best supports a given claim or point.
Determining central ideas and themes	The student will identify explicitly stated central ideas or themes in text and determine implicit central ideas or themes from text.
Summarizing	The student will identify a reasonable summary of a text or of key information and ideas in text.
Understanding relationships	The student will identify explicitly stated relationships or determine implicit relationships between and among individuals, events, or ideas (e.g., cause-effect, comparison-contrast, sequence).
Interpreting words and phrases in context	The student will determine the meaning of words and phrases in context.
Rhetoric	These questions focus on the rhetorical analysis of text.
Analyzing word choice	The student will determine how the selection of specific words and phrases or how the use of patterns of words and phrases shapes meaning and tone in text.
Analyzing text structure	These questions focus on the overall structure of a text and on the relationship between a particular part of a text and the whole text.
Analyzing overall text structure	The student will describe the overall structure of a text.
Analyzing part–whole relationships	The student will analyze the relationship between a particular part of a text (e.g., a sentence) and the whole text.
Analyzing point of view	The student will determine the point of view or perspective from which a text is related or the influence this point of view or perspective has on content and style.
Analyzing purpose	The student will determine the main or most likely purpose of a text or of a particular part of a text (typically, one or more paragraphs).

SAT READING DOMAIN

Content Dimension	Description
Analyzing arguments	These questions focus on analyzing arguments for their content and structure.
Analyzing claims and counterclaims	The student will identify claims and counterclaims explicitly stated in text or determine implicit claims and counterclaims from text.
Assessing reasoning	The student will assess an author's reasoning for soundness.
Analyzing evidence	The student will assess how an author uses or fails to use evidence to support a claim or counterclaim.
Synthesis	These questions focus on synthesizing multiple sources of information.
Analyzing multiple texts	The student will synthesize information and ideas from paired texts. (Note: All of the skills listed above may be tested with either single or paired passages.)
Analyzing quantitative information	The student will analyze information presented quantitatively in such forms as graphs, tables, and charts and/or relate that information to information presented in text.

SAT WRITING AND LANGUAGE TEST CONTENT SPECIFICATIONS

	Number	Percentage of Test
Time Allotted	35 minutes	
Passage Word Count	1700 words total from 4 passages; 400–450 words per passage	
Total Questions	44 questions	100%
Multiple Choice (4 options)		100%
Passage Based		100%
Contribution of Items to Subscores and Scores		
Expression of Ideas	24 questions	55%
Standard English Conventions	20 questions	45%
Words in Context (Across Reading and Writing and Language Tests)	8 questions (2 questions per passage)	18%
Command of Evidence (Across Reading and Writing and Language Tests)	8 questions (2 questions per passage)	18%
Analysis in History/Social Studies (Across Math, Reading, and Writing and Language Tests)	6 questions (all Expression of Ideas questions in history/social studies)	14%
Analysis in Science (Across Math, Reading, and Writing and Language Tests)	6 questions (all Expression of Ideas questions in science)	14%
Passage Contents		
Careers	1 passage; 11 questions	25%
History/Social Studies	1 passage; 11 questions	25%
Humanities	1 passage; 11 questions	25%
Science	1 passage; 11 questions	25%
Graphics		
	1 or more graphics in 1 or more sets of questions	
Text Types		
Argument	1–2 passages	25%–50%
Informative/Explanatory Text	1–2 passages	25%–50%
Nonfiction Narrative	1 passage	25%
Text and Graphical Complexity		
Text Complexity	A specified range from grades 9–10 to postsecondary entry across 4 passages	
Graphical Data Representations (tables, charts, graphs, etc.)	Basic to somewhat challenging (low to moderate data density, few variables, simple to moderately challenging interactions)	

SAT WRITING AND LANGUAGE DOMAIN

Content Dimension	Description
Text Complexity	The passages on the SAT Writing and Language Test represent a specified range of text complexities from grades 9–10 to postsecondary entry.
Expression of Ideas	These questions focus on revision of text for topic development, accuracy (consistency between text and graphic[s]), logic, cohesion, and rhetorically effective use of language.
Development	These questions focus on revising text in relation to rhetorical purpose. (Prior knowledge of the topic is not assessed, though consistency of the material within a passage may be.)
Proposition	The student will add, revise, or retain central ideas, main claims, counterclaims, topic sentences, and the like to structure text and convey arguments, information, and ideas clearly and effectively.
Support	The student will add, revise, or retain information and ideas (e.g., details, facts, statistics) intended to support claims or points in text.
Focus	The student will add, revise, retain, or delete information and ideas in text for the sake of relevance to topic and purpose.
Quantitative information	The student will relate information presented quantitatively in such forms as graphs, charts, and tables to information presented in text.
Organization	These questions focus on revision of text to improve the logic and cohesion of text at the sentence, paragraph, and whole-text levels.
Logical sequence	The student will revise text as needed to ensure that information and ideas are presented in the most logical order.
Introductions, conclusions, and transitions	The student will revise text as needed to improve the beginning or ending of a text or paragraph to ensure that transition words, phrases, or sentences are used effectively to connect information and ideas.
Effective language use	These questions focus on revision of text to improve the use of language to accomplish particular rhetorical purposes.
Precision	The student will revise text as needed to improve the exactness or content appropriateness of word choice.
Concision	The student will revise text as needed to improve the economy of word choice (i.e., to eliminate wordiness and redundancy).
Style and tone	The student will revise text as necessary to ensure consistency of style and tone within a text or to improve the match of style and tone to purpose.
Syntax	The student will use various sentence structures to accomplish needed rhetorical purposes.
Standard English Conventions	These questions focus on editing text to ensure conformity to the conventions of Standard Written English sentence structure, usage, and punctuation.
Sentence structure	These questions focus on editing text to correct problems in sentence formation and inappropriate shifts in construction within and between sentences.
Sentence formation	These questions focus on editing text to correct problems with forming grammatically complete and standard sentences.
Sentence boundaries	The student will recognize and correct grammatically incomplete sentences (e.g., rhetorically inappropriate fragments and run-ons).
Subordination and coordination	The student will recognize and correct problems in coordination and subordination in sentences.
Parallel structure	The student will recognize and correct problems in parallel structure in sentences.

SAT WRITING AND LANGUAGE DOMAIN

Content Dimension	Description
Modifier placement	The student will recognize and correct problems in modifier placement (e.g., misplaced or dangling modifiers).
Inappropriate shifts in construction	These questions focus on editing text to correct inappropriate shifts in verb tense, voice, and mood and pronoun person and number.
Verb tense, mood, and voice	The student will recognize and correct inappropriate shifts in verb tense, voice, and mood within and between sentences.
Pronoun person and number	The student will recognize and correct inappropriate shifts in pronoun person and number within and between sentences.
Conventions of Usage	These questions focus on editing text to ensure conformity to the conventions of Standard Written English usage.
Pronouns	These questions focus on the proper use of pronouns.
Pronoun clarity	The student will recognize and correct pronouns with unclear or ambiguous antecedents.
Possessive determiners	The student will recognize and correct cases in which possessive determiners (<i>its, your, their</i>), contractions (<i>it's, you're, they're</i>), and adverbs (<i>there</i>) are confused with each other.
Agreement	These questions focus on ensuring grammatical agreement.
Pronoun-antecedent agreement	The student will recognize and correct lack of agreement between pronoun and antecedent.
Subject-verb agreement	The student will recognize and correct lack of agreement between subject and verb.
Noun agreement	The student will recognize and correct lack of agreement between nouns.
Frequently confused words	The student will recognize and correct instances in which a word or phrase is confused with another (e.g., <i>accept/except, allusion/illusion</i>).
Logical comparison	The student will recognize and correct cases in which unlike terms are compared.
Conventional expression	The student will recognize and correct cases in which a given expression is inconsistent with Standard Written English.
Conventions of Punctuation	These questions focus on editing text to ensure conformity to the conventions of Standard Written English punctuation.
End-of-sentence punctuation	The student will recognize and correct inappropriate uses of ending punctuation in cases in which the context makes the intent clear.
Within-sentence punctuation	The student will correctly use and recognize and correct inappropriate uses of colons, semicolons, and dashes to indicate sharp breaks in thought within sentences.
Possessive nouns and pronouns	The student will recognize and correct inappropriate uses of possessive nouns and pronouns as well as differentiate between possessive and plural forms.
Items in a series	The student will correctly use and recognize and correct inappropriate uses of punctuation (commas and sometimes semicolons) to separate items in a series.
Nonrestrictive and parenthetical elements	The student will correctly use punctuation (commas, parentheses, dashes) to set off nonrestrictive and parenthetical sentence elements as well as recognize and correct cases in which restrictive or essential sentence elements are inappropriately set off with punctuation.
Unnecessary punctuation	The student will recognize and correct cases in which unnecessary punctuation appears in a sentence.

SAT MATH TEST CONTENT SPECIFICATIONS

Time Allotted	80 minutes	
Calculator Portion	55 minutes	
No-Calculator Portion	25 minutes	
	Number	Percentage of test
Total Items	58 questions	100%
Multiple Choice (MC, 4 options)	45 questions	78%
Student-Produced Response (SPR — grid-in)	13 questions	22%
Contribution of Items to Subscores		
Heart of Algebra	19 questions	33%
Analyzing and fluently solving linear equations and systems of linear equations		
Creating linear equations and inequalities to represent relationships between quantities and to solve problems		
Understanding and using the relationship between linear equations and inequalities and their graphs to solve problems		
Problem Solving and Data Analysis	17 questions	29%
Creating and analyzing relationships using ratios, proportional relationships, percentages, and units		
Representing and analyzing quantitative data		
Finding and applying probabilities in context		
Passport to Advanced Math	16 questions	28%
Identifying and creating equivalent algebraic expressions		
Creating, analyzing, and fluently solving quadratic and other nonlinear equations		
Creating, using, and graphing exponential, quadratic, and other nonlinear functions		
Additional Topics in Math	6 questions	10%
Solving problems related to area and volume calculations in context		
Applying definitions and theorems related to lines, angles, triangles, and circles		
Working with right triangles, the unit circle, and trigonometric functions		

SAT HEART OF ALGEBRA DOMAIN

Content Dimension	Description
Linear equations in one variable	<ol style="list-style-type: none"> 1. Create and use linear equations in one variable to solve problems in a variety of contexts. 2. Create a linear equation in one variable, and when in context interpret solutions in terms of the context. 3. Solve a linear equation in one variable making strategic use of algebraic structure. 4. For a linear equation in one variable, <ol style="list-style-type: none"> a. interpret a constant, variable, factor, or term in a context; b. determine the conditions under which the equation has no solution, a unique solution, or infinitely many solutions. 5. Fluently solve a linear equation in one variable.
Linear functions	<p>Algebraically, a linear function can be defined by a linear expression in one variable or by a linear equation in two variables. In the first case, the variable is the input and the value of the expression is the output. In the second case, one of the variables is designated as the input and determines a unique value of the other variable, which is the output.</p> <ol style="list-style-type: none"> 1. Create and use linear functions to solve problems in a variety of contexts. 2. Create a linear function to model a relationship between two quantities. 3. For a linear function that represents a context, <ol style="list-style-type: none"> a. interpret the meaning of an input/output pair, constant, variable, factor, or term based on the context, including situations where seeing structure provides an advantage; b. given an input value, find and/or interpret the output value using the given representation; c. given an output value, find and/or interpret the input value using the given representation if it exists. 4. Make connections between verbal, tabular, algebraic, and graphical representations of a linear function, by <ol style="list-style-type: none"> a. deriving one representation from the other; b. identifying features of one representation given another representation; and c. determining how a graph is affected by a change to its equation. 5. Write the rule for a linear function given two input/output pairs or one input/output pair and the rate of change.

SAT HEART OF ALGEBRA DOMAIN

Content Dimension	Description
Linear equations in two variables	<p>A linear equation in two variables can be used to represent a constraint or condition on two variable quantities in situations where neither of the variables is regarded as an input or an output. A linear equation can also be used to represent a straight line in the coordinate plane.</p> <ol style="list-style-type: none"> 1. Create and use a linear equation in two variables to solve problems in a variety of contexts. 2. Create a linear equation in two variables to model a constraint or condition on two quantities. 3. For a linear equation in two variables that represents a context, <ol style="list-style-type: none"> a. interpret a solution, constant, variable, factor, or term based on the context, including situations where seeing structure provides an advantage; b. given a value of one quantity in the relationship, find a value of the other, if it exists. 4. Make connections between tabular, algebraic, and graphical representations of a linear equation in two variables by <ol style="list-style-type: none"> a. deriving one representation from the other; b. identifying features of one representation given the other representation; c. determining how a graph is affected by a change to its equation. 5. Write an equation for a line given two points on the line, one point and the slope of the line, or one point and a parallel or perpendicular line.
Systems of two linear equations in two variables	<ol style="list-style-type: none"> 1. Create and use a system of two linear equations in two variables to solve problems in a variety of contexts. 2. Create a system of linear equations in two variables and, when in context, interpret solutions in terms of the context. 3. Make connections between tabular, algebraic, and graphical representations of the system by deriving one representation from the other. 4. Solve a system of two linear equations in two variables, making strategic use of algebraic structure. 5. For a system of linear equations in two variables, <ol style="list-style-type: none"> a. interpret a solution, constant, variable, factor, or term based on the context, including situations where seeing structure provides an advantage; b. determine the conditions under which the system has no solution, a unique solution, or infinitely many solutions. 6. Fluently solve a system of linear equations in two variables.
Linear inequalities in one or two variables	<ol style="list-style-type: none"> 1. Create and use linear inequalities in one or two variables to solve problems in a variety of contexts. 2. Create linear inequalities in one or two variables and, when in context, interpret the solutions in terms of the context. 3. For linear inequalities in one or two variables, interpret a constant, variable, factor, or term, including situations where seeing structure provides an advantage. 4. Make connections between tabular, algebraic, and graphical representations of linear inequalities in one or two variables by deriving one from the other. 5. Given a linear inequality or system of linear inequalities, interpret a point in the solution set.

SAT PROBLEM SOLVING AND DATA ANALYSIS DOMAIN

Content Dimension	Description
Ratios, rates, proportional relationships, and units	<p>Items will require students to solve problems by using a proportional relationship between quantities, calculating or using a ratio or rate, and/or using units, derived units, and unit conversion.</p> <ol style="list-style-type: none"> 1. Apply proportional relationships, ratios, rates, and units in a wide variety of contexts. Examples include, but are not limited to, scale drawings and problems in the natural and social sciences. 2. Solve problems involving <ol style="list-style-type: none"> a. derived units, including those that arise from products (e.g., kilowatt-hours) and quotients (e.g., population per square kilometer); b. unit conversion, including currency exchange and conversion between different measurement systems. 3. Understand and use the fact that when two quantities are in a proportional relationship, if one changes by a scale factor, then the other also changes by the same scale factor.
Percentages	<ol style="list-style-type: none"> 1. Use percentages to solve problems in a variety of contexts. Examples include, but are not limited to, discounts, interest, taxes, tips, and percentage increases and decreases for many different quantities. 2. Understand and use the relationship between percentage change and growth factor (5% and 1.05, for example); include percentages greater than or equal to 100%.
One-variable data: Distributions and measures of center and spread	<ol style="list-style-type: none"> 1. Choose an appropriate graphical representation for a given data set. 2. Interpret information from a given representation of data in context. 3. Analyze and interpret numerical data distributions represented with frequency tables, histograms, dot plots, and boxplots. 4. For quantitative variables, calculate, compare, and interpret mean, median, and range. Interpret (but don't calculate) standard deviation. 5. Compare distributions using measures of center and spread, including distributions with different means and the same standard deviations and ones with the same mean and different standard deviations. 6. Understand and describe the effect of outliers on mean and median. 7. Given an appropriate data set, calculate the mean.

SAT PROBLEM SOLVING AND DATA ANALYSIS DOMAIN

Content Dimension	Description
Two-variable data: Models and scatterplots	<ol style="list-style-type: none"> Using a model that fits the data in a scatterplot, compare values predicted by the model to values given in the data set. Interpret the slope and intercepts of the line of best fit in context. Given a relationship between two quantities, read and interpret graphs and tables modeling the relationship. Analyze and interpret data represented in a scatterplot or line graph; fit linear, quadratic, and exponential models. Select a graph that represents a context, identify a value on a graph, or interpret information on the graph. For a given function type (linear, quadratic, exponential), choose the function of that type that best fits given data. Compare linear and exponential growth. Estimate the line of best fit for a given scatterplot; use the line to make predictions.
Probability and conditional probability	<p>Use one- and two-way tables, tree diagrams, area models, and other representations to find relative frequency, probabilities, and conditional probabilities.</p> <ol style="list-style-type: none"> Compute and interpret probability and conditional probability in simple contexts. Understand formulas for probability, and conditional probability in terms of frequency.
Inference from sample statistics and margin of error	<ol style="list-style-type: none"> Use sample mean and sample proportion to estimate population mean and population proportion. Utilize, but do not calculate, margin of error. Interpret margin of error; understand that a larger sample size generally leads to a smaller margin of error.
Evaluating statistical claims: Observational studies and experiments	<ol style="list-style-type: none"> With random samples, describe which population the results can be extended to. Given a description of a study with or without random assignment, determine whether there is evidence for a causal relationship. Understand why random assignment provides evidence for a causal relationship. Understand why a result can be extended only to the population from which the sample was selected.

SAT PASSPORT TO ADVANCED MATH DOMAIN

Content Dimension	Description
Equivalent expressions	<ol style="list-style-type: none"> 1. Make strategic use of algebraic structure and the properties of operations to identify and create equivalent expressions, including <ol style="list-style-type: none"> a. rewriting simple rational expressions; b. rewriting expressions with rational exponents and radicals; c. factoring polynomials. 2. Fluently add, subtract, and multiply polynomials.
Nonlinear equations in one variable and systems of equations in two variables	<ol style="list-style-type: none"> 1. Make strategic use of algebraic structure, the properties of operations, and reasoning about equality to <ol style="list-style-type: none"> a. solve quadratic equations in one variable presented in a wide variety of forms; determine the conditions under which a quadratic equation has no real solutions, 1 real solution, or 2 real solutions; b. solve simple rational and radical equations in one variable; c. identify when the procedures used to solve a simple rational or radical equation in one variable lead to an equation with solutions that do not satisfy the original equation (extraneous solutions); d. solve polynomial equations in one variable that are written in factored form; e. solve linear absolute value equations in one variable; f. solve systems of linear and nonlinear equations in two variables, including relating the solutions to the graphs of the equations in the system. 2. Given a nonlinear equation in one variable that represents a context, interpret a solution, constant, variable, factor, or term based on the context, including situations where seeing structure provides an advantage. 3. Given an equation or formula in two or more variables that represents a context, view it as an equation in a single variable of interest where the other variables are parameters and solve for the variable of interest. 4. Fluently solve quadratic equations in one variable, written as a quadratic expression in standard form equal to zero, where using the quadratic formula or completing the square is the most efficient method for solving the equation.

SAT PASSPORT TO ADVANCED MATH DOMAIN

Content Dimension	Description
Nonlinear functions	<ol style="list-style-type: none"> 1. Create and use quadratic or exponential functions to solve problems in a variety of contexts. 2. For a quadratic or exponential function, <ol style="list-style-type: none"> a. identify or create an appropriate function to model a relationship between quantities; b. use function notation to represent and interpret input/output pairs in terms of a context and points on the graph; c. for a function that represents a context, interpret the meaning of an input/output pair, constant, variable, factor, or term based on the context, including situations where seeing structure provides an advantage; d. determine the most suitable form of the expression representing the output of the function to display key features of the context, including <ol style="list-style-type: none"> i. selecting the form of a quadratic that displays the initial value, the zeros, or the extreme value; ii. selecting the form of an exponential that displays the initial value, the end behavior (for exponential decay), or the doubling or halving time; e. make connections between tabular, algebraic, and graphical representations of the function, by <ol style="list-style-type: none"> i. given one representation, selecting another representation; ii. identifying features of one representation given the another representation, including maximum and minimum values of the function; iii. determining how a graph is affected by a change to its equation, including a vertical shift or scaling of the graph. 3. For a factorable or factored polynomial or simple rational function, <ol style="list-style-type: none"> a. use function notation to represent and interpret input/output pairs in terms of a context and points on the graph; b. understand and use the fact that for the graph of $y = f(x)$, the solutions to $f(x) = 0$ correspond to x-intercepts of the graph and $f(0)$ corresponds to the y-intercept of the graph; interpret these key features in terms of a context; c. identify the graph given an algebraic representation of the function and an algebraic representation given the graph (with or without a context).

SAT ADDITIONAL TOPICS IN MATH DOMAIN

Content Dimension	Description
Area and volume	<ol style="list-style-type: none"> Solve real-world and mathematical problems about a geometric figure or an object that can be modeled by a geometric figure using given information such as length, area, surface area, or volume. Apply knowledge that changing by a scale factor of k changes all lengths by a factor of k, changes all areas by a factor of k^2, and changes all volumes by a factor of k^3. Demonstrate procedural fluency by selecting the correct area or volume formula and correctly calculating a specified value.
Lines, angles, and triangles	<ol style="list-style-type: none"> Use concepts and theorems relating to congruence and similarity of triangles to solve problems. Determine which statements may be required to prove certain relationships or to satisfy a given theorem. Apply knowledge that changing by a scale factor of k changes all lengths by a factor of k, but angle measures remain unchanged. Know and directly apply relevant theorems such as <ol style="list-style-type: none"> the vertical angle theorem; triangle similarity and congruence criteria; triangle angle sum theorem; the relationship of angles formed when a transversal cuts parallel lines.
Right triangles and trigonometry	<ol style="list-style-type: none"> Solve problems in a variety of contexts using <ol style="list-style-type: none"> the Pythagorean theorem; right triangle trigonometry; the properties of special right triangles. Use similarity to calculate values of sine, cosine, and tangent. Understand that when given one side length and one acute angle measure in a right triangle, the remaining values can be determined. Solve problems using the relationship between sine and cosine of complementary angles. Fluently apply properties of special right triangles to determine side-lengths and calculate trigonometric ratios of 30, 45, and 60 degrees.

SAT ADDITIONAL TOPICS IN MATH DOMAIN

Content Dimension	Description
Circles	<ol style="list-style-type: none">1. Use definitions, properties, and theorems relating to circles and parts of circles, such as radii, diameters, tangents, angles, arcs, arc lengths, and sector areas, to solve problems.2. Solve problems using<ol style="list-style-type: none">a. radian measure;b. trigonometric ratios in the unit circle.3. Create an equation to represent a circle in the xy-plane.4. Describe how<ol style="list-style-type: none">a. a change to the equation representing a circle in the xy-plane affects the graph of the circle;b. a change in the graph of the circle affects the equation of the circle.5. Understand that the ordered pairs that satisfy an equation of the form $(x - h)^2 + (y - k)^2 = r^2$ form a circle when plotted in the xy-plane.6. Convert between angle measures in degrees and radians.7. Complete the square in an equation representing a circle to determine properties of the circle when it is graphed in the xy-plane, and use the distance formula in problems related to circles.
Complex numbers	<ol style="list-style-type: none">1. Apply knowledge and understanding of the complex number system to add, subtract, multiply, and divide with complex numbers and solve problems.