



Giles County School System
Alg II Pacing
2026-2027 Pacing Guide

Algebra 2

Unit	Time Frame	Standard	1.1	1.2	1.3	1.4	1.5	1.6	1.7	% of Blueprint	CFA (Y or N)
Linear and Absolute Value Functions	1st/3rd Nine Weeks	A2.N.Q.A.1 Use units as a way to understand real-world problems.	●							24-26%	Y
		A2.N.Q.A.1.b Use appropriate quantities in formulas, converting units as necessary.	●								
		A2.N.Q.A.1.c Define and justify appropriate quantities within a context for the purpose of modeling.	●								
		A2.N.Q.A.1.d Choose an appropriate level of accuracy when reporting quantities.		●							
		A2.A.CED.A.2 Create equations in two variables to represent relationships between quantities and use them to solve problems in a real-world context. Graph equations with two variables on coordinate axes with labels and scales, and use the graphs to make predictions.					●	●			
		A2.F.IF.A.1 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship.						●	●		
		A2.F.IF.B.4 Graph functions expressed algebraically and show key features of the graph by hand and using technology.			●	●		●	●		
		A2.F.IF.B.6 Compare properties of functions represented algebraically, graphically, numerically in tables, or by verbal descriptions.					●	●	●		
		A2.F.IF.B.6.a Compare properties of two different functions. Functions may be of different types and/or represented in different ways.					●	●			
		A2.F.IF.B.6.b Compare properties of the same function on two different intervals on represented in two different ways.						●	●		
		A2.F.BF.B.3 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs.			●	●					
		A2.S.ID.B.4 Represent data from two quantitative variables on a scatter plot, and describe how the variables are related. Fit a function to the data; use functions fitted to data to solve problems in the context of the data.					●				



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Quadratic Functions	1st/3rd Nine Weeks						24-26%	Y		
		Standard		2.1	2.2	2.3	2.4	2.5		
		A2.A.SSE.A.1 Interpret expressions that represent a quantity in terms of its context.			●	●				
		A2.A.SSE.A.1.a Interpret parts of an expression, such as terms, factors, and coefficients.			●	●				
		A2.A.SSE.A.1.b Interpret complicated expressions by viewing one or more of their parts as a single entity.			●	●				
		A2.A.APR.A.2 Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.					●			
		A2.A.CED.A.1 Create equations and inequalities in one variable and use them to solve problems in a real-world context.					●			
		A2.A.CED.A.2 Create equations in two variables to represent relationships between quantities and use them to solve problems in a real-world context. Graph equations with two variables on coordinate axes with labels and scales, and use the graphs to make predictions.				●	●			
		A2.A.REI.A.1 Understand solving equations as a process of reasoning and explain the reasoning. Construct a viable argument to justify a solution method.					●			
		A2.A.REI.B.3 Write and solve a system of linear equations in a real-world context.						●		
		A2.A.REI.B.4 Solve a system consisting of a linear equation and a quadratic equation in two variables algebraically, graphically, and using technology.						●		
		A2.F.IF.A.1 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship.			●					
		A2.F.IF.A.2 Calculate and interpret the average rate of change of a function (presented algebraically or as a table) over a specified interval. Estimate and interpret the rate of change from a graph.				●				
		A2.F.IF.A.3 Understand geometric formulas as functions.		●						
		A2.F.IF.B.4 Graph functions expressed algebraically and show key features of the graph by hand and using technology.		●	●					
		A2.F.IF.B.5 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.					●			
		A2.F.IF.B.5.a Rewrite quadratic functions to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a real-world context.			●		●			
		A2.F.IF.B.6 Compare properties of functions represented algebraically, graphically, numerically in tables, or by verbal descriptions.			●					
		A2.F.IF.B.6.a Compare properties of two different functions. Functions may be of different types and/or represented in different ways.			●					
		A2.F.IF.B.6.b Compare properties of the same function on two different intervals or represented in two different ways.				●				
		A2.F.BF.B.3 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs.		●						
		A2.S.ID.B.4 Represent data from two quantitative variables on a scatter plot, and describe how the variables are related. Fit a function to the data; use functions fitted to data to solve problems in the context of the data.				●				



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Cubic Functions	1st/3rd Nine Weeks	<table><tr><th>Standard</th><th>3.1</th><th>3.2</th><th>3.3</th><th>3.4</th><th>3.5</th><th>3.6</th><th>3.7</th><th>3.8</th></tr><tr><td>A2.N.Q.A.1 Use units as a way to understand real-world problems.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.N.Q.A.1.c Define and justify appropriate quantities within a context for the purpose of modeling.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.N.Q.A.1.d Choose an appropriate level of accuracy when reporting quantities.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.A.SSE.A.1 Interpret expressions that represent a quantity in terms of its context.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.A.SSE.A.1.a Interpret parts of an expression, such as terms, factors, and coefficients.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.A.SSE.A.1.b Interpret complicated expressions by viewing one or more of their parts as a single entity.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.A.APR.A.1 Know and apply the Factor Theorem: For a polynomial $p(x)$ and a number a, $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$.</td><td></td><td>▲</td><td>▲</td><td>●</td><td>●</td><td></td><td></td><td></td></tr><tr><td>A2.A.APR.A.2 Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.</td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td></tr><tr><td>A2.A.CED.A.1 Create equations and inequalities in one variable and use them to solve problems in a real-world context.</td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td></tr><tr><td>A2.A.CED.A.2 Create equations in two variables to represent relationships between quantities and use them to solve problems in a real-world context. 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Rational Exponents and Rational Functions	1st/3rd Nine Weeks	<table><tr><th>Standard</th><th>4.1</th><th>4.2</th><th>4.3</th><th>4.4</th><th>4.5</th><th>4.6</th><th>4.7</th></tr><tr><td>A2.N.RN.A.1 Extend the properties of integer exponents to rational exponents.</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>A2.N.RN.A.1.a Develop the meaning of rational exponents by applying the properties of integer exponents.</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>A2.N.RN.A.1.b Explain why $x^{1/n}$ can be written as the nth root of x.</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>A2.N.RN.A.1.c Rewrite expressions involving radicals and rational exponents using the properties of exponents.</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>A2.A.CED.A.3 Rearrange formulas to isolate a quantity of interest using algebraic reasoning.</td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.A.REI.A.1 Understand solving equations as a process of reasoning and explain the reasoning. 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Exponential and Logarithmic Functions	1st/3rd Nine Weeks	<table><tr><th>Standard</th><th>5.1</th><th>5.2</th><th>5.3</th><th>5.4</th><th>5.5</th><th>5.6</th><th>5.7</th></tr><tr><td>A2.N.Q.A.1 Use units as a way to understand real-world problems.</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.N.Q.A.1.a Choose and interpret the scale and the origin in graphs and data displays.</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>A2.N.Q.A.1.b Use appropriate quantities in formulas, converting units as necessary.</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.N.Q.A.1.c Define and justify appropriate quantities within a context for the purpose of modeling.</td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.N.Q.A.1.d Choose an appropriate level of accuracy when reporting quantities.</td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.A.SSE.A.1 Interpret expressions that represent a quantity in terms of its context.</td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.A.SSE.A.1.a Interpret parts of an expression, such as terms, factors, and coefficients.</td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.A.SSE.A.1.b Interpret complicated expressions by viewing one or more of their parts as a single entity.</td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.A.CED.A.2 Create equations in two variables to represent relationships between quantities and use them to solve problems in a real-world context. Graph equations with two variables on coordinate axes with labels and scales, and use the graphs to make predictions.</td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr><tr><td>A2.A.REI.A.1 Understand solving equations as a process of reasoning and explain the reasoning. Construct a viable argument to justify a solution method.</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td></tr><tr><td>A2.F.IF.B.4 Graph functions expressed algebraically and show key features of the graph by hand and using technology.</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td></tr><tr><td>A2.F.IF.B.5.b Know and use the properties of exponents to interpret expressions for exponential functions in terms of a real-world context.</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>A2.F.IF.B.6 Compare properties of functions represented algebraically, graphically, numerically in tables, or by verbal descriptions.</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>A2.F.IF.B.6.a Compare properties of two different functions. Functions may be of different types and/or represented in different ways.</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>A2.F.BF.B.3 Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs.</td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td></tr><tr><td>A2.F.BF.B.4 Find the inverse of a function.</td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td></tr><tr><td>A2.F.LE.A.1 Know the relationship between exponential functions and logarithmic functions.</td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td></tr><tr><td>A2.F.LE.A.1.a Solve exponential equations using a variety of strategies, including logarithms.</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td></tr><tr><td>A2.F.LE.A.1.b Understand that a logarithm is the solution to $ab^{ct} = d$, where a, b, c, and d are numbers.</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td></tr><tr><td>A2.F.LE.A.1.c Evaluate logarithms using technology.</td><td></td><td></td><td>●</td><td></td><td></td><td>●</td><td></td></tr><tr><td>A2.F.LE.A.2 Know that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or cubically.</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>A2.S.ID.B.4 Represent data from two quantitative variables on a scatter plot, and describe how the variables are related. Fit a function to the data; use functions fitted to data to solve problems in the context of the data.</td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td></tr></table>	Standard	5.1	5.2	5.3	5.4	5.5	5.6	5.7	A2.N.Q.A.1 Use units as a way to understand real-world problems.	●						●	A2.N.Q.A.1.a Choose and interpret the scale and the origin in graphs and data displays.	●							A2.N.Q.A.1.b Use appropriate quantities in formulas, converting units as necessary.	●						●	A2.N.Q.A.1.c Define and justify appropriate quantities within a context for the purpose of modeling.							●	A2.N.Q.A.1.d Choose an appropriate level of accuracy when reporting quantities.							●	A2.A.SSE.A.1 Interpret expressions that represent a quantity in terms of its context.							●	A2.A.SSE.A.1.a Interpret parts of an expression, such as terms, factors, and coefficients.							●	A2.A.SSE.A.1.b Interpret complicated expressions by viewing one or more of their parts as a single entity.							●	A2.A.CED.A.2 Create equations in two variables to represent relationships between quantities and use them to solve problems in a real-world context. Graph equations with two variables on coordinate axes with labels and scales, and use the graphs to make predictions.							●	A2.A.REI.A.1 Understand solving equations as a process of reasoning and explain the reasoning. Construct a viable argument to justify a solution method.						●		A2.F.IF.B.4 Graph functions expressed algebraically and show key features of the graph by hand and using technology.	●	●	●	●				A2.F.IF.B.5.b Know and use the properties of exponents to interpret expressions for exponential functions in terms of a real-world context.	●							A2.F.IF.B.6 Compare properties of functions represented algebraically, graphically, numerically in tables, or by verbal descriptions.		●						A2.F.IF.B.6.a Compare properties of two different functions. 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Probability	2nd/4th Nine Weeks	<table><tr><th>Standard</th><th>6.1</th><th>6.2</th><th>6.3</th><th>6.4</th><th>6.5</th><th>6.6</th><th>6.7</th></tr><tr><td>A2.S.ID.A.2 Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages using the Empirical Rule.</td><td></td><td></td><td></td><td></td><td>▲</td><td></td><td></td></tr><tr><td>A2.S.CP.A.1 Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. Categorize events as independent or dependent.</td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td></tr><tr><td>A2.S.CP.B.2 Apply statistical counting techniques.</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td></tr><tr><td>A2.S.CP.B.2.a Use the Fundamental Counting Principle to compute probabilities of compound events and solve problems.</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td></tr><tr><td>A2.S.CP.B.2.b Use permutations and combinations to compute probabilities of compound events and solve problems.</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td></tr><tr><td>A2.S.CP.B.3 Use the Law of Large Numbers to assess the validity of a statistical claim.</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>A2.S.CP.C.4 Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A and interpret the answer in terms of the given context.</td><td>▲</td><td>▲</td><td>●</td><td></td><td></td><td></td><td></td></tr></table>	Standard	6.1	6.2	6.3	6.4	6.5	6.6	6.7	A2.S.ID.A.2 Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages using the Empirical Rule.					▲			A2.S.CP.A.1 Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. Categorize events as independent or dependent.				●				A2.S.CP.B.2 Apply statistical counting techniques.						●		A2.S.CP.B.2.a Use the Fundamental Counting Principle to compute probabilities of compound events and solve problems.						●		A2.S.CP.B.2.b Use permutations and combinations to compute probabilities of compound events and solve problems.						●	●	A2.S.CP.B.3 Use the Law of Large Numbers to assess the validity of a statistical claim.	●							A2.S.CP.C.4 Find the conditional probability of A given B as the fraction of B 's outcomes that also belong to A and interpret the answer in terms of the given context.	▲	▲	●					33-38%	Y
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More Data Analysis	2nd/4th Nine Weeks	<table><tr><th>Standard</th><th>8.1</th><th>8.2</th><th>8.3</th><th>8.4</th></tr><tr><td>A2.S.ID.A.2 Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages using the Empirical Rule.</td><td>●</td><td></td><td></td><td></td></tr><tr><td>A2.S.ID.A.3 Compute, interpret, and compare z-scores for normally distributed data in a real-world context.</td><td>●</td><td></td><td></td><td></td></tr><tr><td>A2.S.IC.A.1 Recognize the purposes of and differences among sample surveys, experiments, and observational studies.</td><td></td><td></td><td>●</td><td>●</td></tr><tr><td>A2.S.IC.A.2 Identify potential sources of bias in statistical studies.</td><td></td><td></td><td>●</td><td></td></tr><tr><td>A2.S.IC.A.3 Distinguish between a statistic and a parameter; Evaluate reports based on data and recognize when poor conclusions are drawn from well-collected data.</td><td></td><td>●</td><td></td><td>●</td></tr></table>	Standard	8.1	8.2	8.3	8.4	A2.S.ID.A.2 Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages using the Empirical Rule.	●				A2.S.ID.A.3 Compute, interpret, and compare z-scores for normally distributed data in a real-world context.	●				A2.S.IC.A.1 Recognize the purposes of and differences among sample surveys, experiments, and observational studies.			●	●	A2.S.IC.A.2 Identify potential sources of bias in statistical studies.			●		A2.S.IC.A.3 Distinguish between a statistic and a parameter; Evaluate reports based on data and recognize when poor conclusions are drawn from well-collected data.		●		●	24-26%	N						
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Sequences	2nd/4th Nine Weeks	<table><tr><th>Standard</th><th>9.1</th><th>9.2</th><th>9.3</th><th>9.4</th></tr><tr><td>A2.F.BF.A.2 Define sequences as functions, including recursive definitions, whose domain is a subset of the integers. Write explicit and recursive formulas for arithmetic and geometric sequences in context and connect them to linear and exponential functions.</td><td>●</td><td>●</td><td>●</td><td>●</td></tr></table>	Standard	9.1	9.2	9.3	9.4	A2.F.BF.A.2 Define sequences as functions, including recursive definitions, whose domain is a subset of the integers. Write explicit and recursive formulas for arithmetic and geometric sequences in context and connect them to linear and exponential functions.	●	●	●	●	11-15%	N																										
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Matrices	2nd/4th Nine Weeks	<table><tr><th>Standard</th><th>10.1</th><th>10.2</th><th>10.3</th></tr><tr><td>A2.N.M.A.1 Use matrices to represent data in a real-world context. Interpret rows, columns, and dimensions of matrices in terms of the context.</td><td>●</td><td>●</td><td></td></tr><tr><td>A2.N.M.A.2 Perform operations on matrices in a real-world context.</td><td>●</td><td>●</td><td></td></tr><tr><td>A2.N.M.A.2.a Multiply a matrix by a scalar to produce a new matrix.</td><td>●</td><td></td><td></td></tr><tr><td>A2.N.M.A.2.b Add and/or subtract matrices by hand and using technology.</td><td>●</td><td>●</td><td></td></tr><tr><td>A2.N.M.A.2.c Multiply matrices of appropriate dimensions, by hand in simple cases and using technology for more complicated cases.</td><td></td><td>●</td><td></td></tr><tr><td>A2.N.M.A.2.d Describe the roles that zero matrices and identity matrices play in matrix addition and multiplication, recognizing that they are similar to the roles of 0 and 1 in the real number system.</td><td>●</td><td>●</td><td></td></tr><tr><td>A2.N.M.A.3 Create and use augmented matrices to solve systems of linear equations in real-world contexts, by hand and using technology.</td><td></td><td></td><td>●</td></tr><tr><td>A2.A.REI.B.3 Write and solve a system of linear equations in a real-world context.</td><td></td><td></td><td>●</td></tr></table>	Standard	10.1	10.2	10.3	A2.N.M.A.1 Use matrices to represent data in a real-world context. Interpret rows, columns, and dimensions of matrices in terms of the context.	●	●		A2.N.M.A.2 Perform operations on matrices in a real-world context.	●	●		A2.N.M.A.2.a Multiply a matrix by a scalar to produce a new matrix.	●			A2.N.M.A.2.b Add and/or subtract matrices by hand and using technology.	●	●		A2.N.M.A.2.c Multiply matrices of appropriate dimensions, by hand in simple cases and using technology for more complicated cases.		●		A2.N.M.A.2.d Describe the roles that zero matrices and identity matrices play in matrix addition and multiplication, recognizing that they are similar to the roles of 0 and 1 in the real number system.	●	●		A2.N.M.A.3 Create and use augmented matrices to solve systems of linear equations in real-world contexts, by hand and using technology.			●	A2.A.REI.B.3 Write and solve a system of linear equations in a real-world context.			●	24-26%	N
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Anticipated CFA and Benchmark Dates:

1st SEMESTER

CFA 1- Aug. 21st

CFA 2- Sept. 3rd

CFA 3- Sept. 18th

CFA 5- Oct. 2nd

CFA 6- Oct. 21st

CFA 7/8- Oct. 29th

CFA 9/10- Nov. 9th

Benchmark- Nov. 10th

EOC Reviews: Nov. 11th-20th

EOC State Test: Nov 30th - Dec 17th

2nd SEMESTER

CFA 1- Jan. 26th

CFA 2- Feb. 5th

CFA 3- Feb. 22nd

CFA 5- Mar. 9th

CFA 6- Mar. 18th

CFA 7/8- Apr. 5th

CFA 9/10- Apr. 13th

Benchmark- Apr. 14th

EOC Reviews: Apr. 15th-16th

EOC State Test: Apr. 19th - May 6th