

**GADSDEN CITY HIGH SCHOOL CURRICULUM GUIDE ESSENTIAL CONTENT AND SKILLS ALGEBRA 1 COS BLOCK**

TEXT: GLENCOE ALGEBRA 1

Date Taught	Objective	Standard	Text Section	Section Name	Additional Resources	Suggested Time Frame	Chapter Time Frame
	*Use the four step problem solving plan.		0-1	Plan for Problem Solving		1 day	6 days
	*Classify and use real numbers.		0-2	Real Numbers			
	*Add, subtract, multiply and divide real numbers.		0-3	Operations with Integers		1 day	
	*Compare and order, add and subtract rational numbers.		0-4	Adding and Subtracting Rational Numbers			
	*Multiply and divide rational numbers.		0-5	Multiplying and Dividing Rational Numbers			
	*Use and apply the percent proportion.		0-6	The Percent Proportion			
	*Find the perimeter of two dimensional figures.		0-7	Perimeter		1 day	
	*Find the area of two dimensional figures.		0-8	Area			
	*Find the volume of rectangular prisms and cylinders.		0-9	Volume			
	*Find the surface area of rectangular prisms and cylinders.		0-10	Surface Area			
	*Find the probability and odds of simple events.		0-11	Simple Probability and Odds		1 day	
	*Find measures of central tendency, variation,and position.		0-12	Measures of Center, Variation, and Position		1 day	
	*Represent sets of data using different visual displays.		0-13	Representing Data			
	Review and Assess					1 day	

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	*Write verbal expressions for algebraic expressions. *Write algebraic expressions for verbal expressions.	A.SSE.1a, A.SSE.2	1-1	Variables and Expressions		1 day	6 days
	*Evaluate numerical expressions by using the order of operations. *Evaluate algebraic expressions by using the order of operations.	A.SSE.1b, A.SSE.2	1-2	Order of Operations			
	*Recognize the properties of equality and identity. *Recognize the Commutative and Associative properties.	A.SSE.1b, A.SSE.2	1-3	Properties of Numbers		1 day	
	*Use the distributive property to evaluate expressions. *Use the distributive property to simplify expressions.	A.SSE.1a, A.SSE.2	1-4	The Distributive Property			
	*Solve equations with one variable. *Solve equations with two variables.	A.CED.1, A.REI.3	1-5	Equations		1 day	
	*Represent relations. *Interpret graphs of relations.	A.REI.10, F.IF.1	1-6	Relations			
	*Determine whether a relation is a function. *Find function values.	F.IF.1, F.IF.2	1-7	Functions		1 day	
	*Interpret intercepts and symmetry of graphs of functions. * Interpret positive, negative, increasing and decreasing behavior,extreme and end behavior of graphs of functions.	F.IF.4	1-8	Interpreting Graphs of Functions		1 day	
	Review and Assess					1 day	

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	*Translate sentences into equations. *Translate equations into sentences.	A.CED.1	2-1	Writing Equations		1 day	10 days
	*Solve equations by using addition and subtraction. *Solve equations by using multiplication and division.	A.REI.1, A.REI.3	2-2	Solving One-Step Equations		1 day	
	*Solve equations involving more than one operation. *Solve equations involving consecutive integers.	A.REI.1, A.REI.3	2-3	Solving Multi-Step Equations		1 day	
	*Solve equations with the variable on each side. *Solve equations involving grouping symbols.	A.REI.1, A.REI.3	2-4	Solving Equations with the Variable on Each Side		1 day	
	*Evaluate absolute value expressions. * Solve absolute value equations.	A.REI.1, A.REI.3	2-5	Solving Equations Involving Absolute Value		1 day	
	*Compare ratios. *Solve proportions.	A.REI.1, A.REI.3	2-6	Ratios and Proportions		1 day	
	*Find the percent of change. *Solve problems involving percent of change.	N.Q.1, A.REI.3	2-7	Percent of Change		1 day	
	*Solve equations for given variables. *Use formulas to solve real world problems.	A.CED.4, A.REI.3	2-8	Literal Equations and Dimensional Analysis		1 day	
	*Solve mixture problems. *Solve uniform motion problems.	A.REI.1, A.REI.3	2-9	Weighted Averages		1 day	
	Review and Assess					1 day	

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	*Identify linear equations, intercepts, and zeros. *Graph linear equations.	F.IF.4, F.IF.7a	3-1	Graphing Linear Equations		1 day	6 days
	*Solve linear equations by graphing. *Estimate solutions to a linear equation by graphing.	A.REI.10, F.IF.7a	3-2	Solving Linear Equations by Graphing		1 day	
	*Use rate of change to solve problem *Find the slope of a line.	F.IF.6, F.LE.1a	3-3	Rate of Change and Slope		1 day	
	*Write and graph direct variation equations. *Solve problems involving direct variation.	A.REI.10, F.IF.7a	3-4	Direct Variation		1 day	
	*Recognize arithmetic sequences. *Relate arithmetic sequences to linear functions.	F.BF.2, F.LE.2	3-5	Arithmetic Sequences as Linear Functions			
	*Write an equation for a proportional relationship. *Write an equation for a nonproportional relationship.	F.LE.1b, F.LE.2	3-6	Proportional and Non-Proportional Relationships		1 day	
	Review and Assess					1 day	

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	*Write and graph linear equations in slope-intercept form. *Model real world data with equations in slope-intercept form.	F.IF.7a, S.ID.7	4-1	Graphing Equations in Slope-Intercept Form		1 day	8 days
	*Write an equation of a line in slope-intercept form given the slope and one point. *Write an equation of a line in slope-intercept form given two points.	F.BF.1, F.LE.2	4-2	Writing Equations in Slope-Intercept Form		1 day	
	*Write equations of lines in point-slope form. *Write linear equations in different forms.	F.IF.2, F.LE.2	4-3	Writing Equations in Point-Slope Form		1 day	
	*Write an equation of the line that passes through a given point, parallel to a given line. *Write an equation of the line that passes through a given point, perpendicular to a given line.	F.LE.2, S.ID.7	4-4	Parallel and Perpendicular Lines		1 day	
	*Investigate relationships between quantities by using points on scatter plots. *Use lines of fit to make and evaluate predictions	S.ID.6a, S.ID.6c	4-5	Scatter Plots and Lines of Fit		1 day	
	*Write equations of best-fit lines using linear regression. *Write equations of median-fit lines.	S.ID.6, S.ID.8	4-6	Regression and Median-Fit Lines		1 day	
	*Find the inverse of a relation. *Find the inverse of a linear function.	A.CED.2, F.BF.4a	4-7	Inverse Linear Functions		1 day	
	Review and Assess					1 day	

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Date Taught	Objective	Standard	Text Section	Section Name	Additional Resources	Suggested Time Frame	Chapter Time Frame
	*Solve linear inequalities by using addition.    *Solve linear inequalities by using subtraction.	A.CED.1, A.REI.3	5-1	Solving Inequalities by Addition and Subtraction		1.5 days	6 days
	*Solve linear inequalities by using multiplication. *Solve linear inequalities by using division.	A.CED.1, A.REI.3	5-2	Solving Inequalities by Multiplication and Division			
	*Solve linear inequalities involving more than one operation.    *Solve linear inequalities by using the distributive property.	A.CED.1, A.REI.3	5-3	Solving Multi-Step Inequalities		1 day	
	*Solve compound inequalities containing "and," and graph the solution set.    *Solve compound inequalities containing the word "or," and graph the solution set.	A.CED.1, A.REI.3	5-4	Solving Compound Inequalities		1.5 days	
	*Solve and graph absolute value inequalities (<).    *Solve and graph absolute value inequalities (>).	A.CED.1, A.REI.3	5-5	Inequalities involving Absolute Value			
	*Graph linear inequalities on the coordinate plane. *Solve inequalities by graphing.	A.CED.3, A.REI.12	5-6	Graphing Inequalities in Two Variables		1 day	
	Review and Assess					1 day	

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	*Determine the number of solutions a system of linear equations has. *Solve systems of linear equations by graphing.	A.CED.3, A.REI.6	6-1	Graphing Systems of Equations		1 day	6 days
	*Solve systems of equations by using substitution.      *Solve real-world problems involving systems of equations by using substitution.	A.CED.3, A.REI.6	6-2	Substitution		.5 day	
	*Solve systems of equations by using elimination with addition. *Solve systems of equations by using elimination with subtraction.	A.CED.2, A.REI.6	6-3	Elimination Using Addition and Subtraction		1 day	
	*Solve systems of equations by using elimination with multiplication. *Solve real-world problems involving systems of equations.	A.REI.5, A.REI.6	6-4	Elimination Using Multiplication		.5 day	
	*Determine the best method for solving systems of equations.    *Apply systems of equations.	A.REI.6	6-5	Applying Systems of Linear Equations		1 day	
	*Solve systems of linear inequalities by graphing. *Apply systems of linear inequalities.	A.REI.12	6-6	Systems of Inequalities		1 day	
	Review and Assess					1 day	

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	*Multiply monomials using the properties of exponents. *Simplify expressions using the multiplication properties of exponents.	A.SSE.2, F.IF.8b	7.1	Multiplication Properties of Exponents		1 day	8 days
	*Divide monomials using the properties of exponents. *Simplify expressions containing negative and zero exponents.	A.SSE.2, F.IF.8b	7.2	Division Properties of Exponents		1 day	
	*Evaluate and rewrite expressions involving rational exponents. *Solve equations involving expressions with rational exponents.	N.RN.1, N.RN.2	7.3	Rational Exponents			
	*Express numbers in scientific notation. *Find products and quotients of numbers expressed in scientific notation.	A.SSE.2	7.4	Scientific Notation		.5 day	
	*Graph exponential functions. *Identify data that display exponential behavior.	F.IF.7e, F.BF.3, F.L3.2, A REI.11	7.5	Exponential Functions		1.5days	
	*Solve problems involving exponential growth. *Solve problems involving exponential decay.	F.IF.8b, F.LE.2, A.SSE.3c	7.6	Growth and Decay		1 day	
	*Identify and generate geometric sequences. *Relate geometric sequences to exponential functions.	F.BF.2, F.LE.1	7.7	Geometric Sequences as Exponential Functions		1 day	
	*Use a recursive formula to list terms in a sequence. *Write recursive formulas for arithmetic and geometric sequences.	F.IF.3, F.BF.2	7.8	Recursive Formulas		1 day	



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	Review and Assess					1 day	
Date Taught	Objective	Standard	Text Section	Section Name	Additional Resources	Suggested Time Frame	Chapter Time Frame
	*Write polynomials in standard form. *Add and subtract polynomials.	A.APR.1, A.223.1a	8.1	Adding and Subtracting Polynomials		1 day	9 days
	*Multiply a polynomial by a monomial. *Solve equations involving the products of monomials and polynomials.	A.APR.1	8.2	Multiplying a Polynomial by a Monomial		.5 day	
	*Multiply binomials by using the FOIL method. *Multiply polynomials by using the Distributive Property.	A.APR.1	8.3	Multiplying Polynomials		1.5 days	
	*Find squares of sums and differences. *Find the product of a sum and a difference.	A.APR.1	8.4	Special Products		1 day	
	*Using the Distributive Property to factor polynomials. *Solve equations of the form $ax^2 + bx = 0$ .	A.SSE.2, A.SSE.3e	8.5	Using the Distributive Property		1.5 days	
	*Factor trinomials of the form $x^2 + bx + c = 0$ *Solve equations of the form $x^2 + bx + c = 0$ .	A.SSE.2, A.SSE.3a, A.REI.4b	8.6	Solving $x^2 + bx + c = 0$			
	*Factor trinomials of the form $ax^2 + bx + c$ . *Solve equations of the form $ax^2 + bx + c = 0$ .	A.SSE.3a, A.REI.4b	8.7	Solving $ax^2 + bx + c = 0$		1 day	
	*Factor binomials that are the difference of squares. *Use the difference of squares to solve equations.	A.SSE.3a, A.REI.4b	8.8	Differences of Squares		1.5 days	
	*Factor perfect square trinomials. *Solve equations involving perfect squares.	A.SSE.3a, A.REI.1	8.9	Perfect Squares			

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	Review and Assess					1 day	
Date Taught	Objective	Standard	Text Section	Section Name	Additional Resources	Suggested Time Frame	Chapter Time Frame
	*Analyze the characteristics of graphs of quadratic functions. *Graph quadratic functions.	F.IF.4, F.IF.7a, F.IF.6	9.1	Graphing Quadratic Functions		1.5 days	9 days
	*Solve quadratic equations by graphing. *Estimate solutions of quadratic equations by graphing.	A.REI.4b, F.IF.7a	9.2	Solving Quadratic Equations by Graphing		1 day	
	*Apply translations to quadratic functions. *Apply dilations and reflections to quadratic functions.	F.IF.7a, F.BF.3, A.SSE.3b, A.REI.7	9.3	Transformations of Quadratic Functions		1.5 days	
	*Complete the square to write perfect square trinomials. *Solve quadratic equations by completing the square.	A.REI.4a,4b, F.IF.8a	9.4	Solving Quadratic Equations by Completing the Square		1 day	
	*Solve quadratic equations by using the Quadratic Formula. *Use the discriminant to determine the number of solutions of a quadratic equation.	A.REI.4a,4b	9.5(no complex solutions)	Solving Quadratic Equations by Using the Quadratic Formula		1 day	
	*Identify linear, quadratic, and exponential functions from given data. *Write equations that model data.	F.IF.6, F.L3.1, F.LE.2, S.ID.6a	9.6	Analyzing Functions with Successive Differences		1 day	
	*Identify and graph step functions. *Identify and graph absolute value and piecewise-defined functions.	F.IF.4, F.IF.7b	9.7	Special Functions		1 day	
	Review and Assess					1 day	

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	*Graph and analyze dilations of radical functions.    *Graph and analyze reflections and translations of radical functions.	F.BF.4a, F.IF.4, F.IF.7b	10.1	Square Root Functions		1 day	7 days
	*Simplify radical expressions by using the Product Property of Square Roots. *Simplify radical expressions by using the Quotient Property of Square Roots.	A.REI.4a, N.RN.3	10.2	Simplifying Radical Expressions		1 day	
	*Add and subtract radical expressions. *Multiply radical expressions.	N.RN.2	10.3	Operations with Radical Expressions		1 day	
	*Solve radical equations.        *Solve radical equations with extraneous solutions.	N.RN.2, A.CED.2	10.4	Radical Equations		1 day	
	*Solve problems by using the Pythagorean Theorem.        *Determine whether a triangle is a right triangle.		10.5	The Pythagorean Theorem		1 day	
	*Find trigonometric ratios of angles. *Use trigonometry to solve triangles.		10.6	Trigonometric Ratios		1 day	
	Review and Assess					1 day	

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	*Identify and use inverse variations. *Graph inverse variations.		11.1	Inverse Variation		1 day	8 days
	*Identify excluded values. *Identify and use asymptotes to graph rational functions.	A.CED.2	11.2	Rational Functions		1 day	
	*Identify values excluded from the domain of a rational expression. *Simplify rational expressions.		11.3	Simplifying Rational Expressions		.5 day	
	*Multiply rational expressions. *Divide rational expressions.		11.4	Multiplying and Dividing Rational Expressions		1 day	
	*Divide a polynomial by a monomial. *Divide a polynomial by a binomial.		11.5	Dividing Polynomials		.5 day	
	*Add and subtract rational expressions with like denominators. *Add and subtract rational expressions with unlike denominators.		11.6	Adding and Subtracting Rational Expressions		1 day	
	*Simplify mixed expressions. *Simplify complex fractions.		11.7	Mixed Expressions and Complex Fractions		1 day	
	*Solve rational equations. *Use rational equations to solve problems.	A.CED.2, A.REI.11	11.8	Rational Equations		1 day	
	Review and Assess					1 day	

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	*Classify and analyze samples. *Classify and analyze studies.		12.1	Samples and Studies		1 day	7 days
	*Identify sample statistics and population parameters. *Analyze data sets using statistics.	S.ID.2	12.2	Statistics and Parameters		1 day	
	*Describe the shape of a distribution. *Use the shapes of distributions to select appropriate statistics.	S.ID.2, S.ID.3	12.3	Distributions of Data			
	*Determine the effect that transformations of data have on measures of central tendence and variation. *Compare data using measures of central tendency and variation.	S.ID.2, S.ID.3	12.4	Comparing Sets of Data		.5 day	
	*Calculate experimental probabilities. *Design simulations and summarize data from simulations.		12.5	Simulation		1 day	
	*Use permutations. *Use combinations.		12.6	Permutations and Combinations		.5 day	
	*Find probabilities of independent and dependent events. *Find probabilities of mutually exclusive events.	S.ID.5, S.CP.2	12.7	Probability of Compound Events		1 day	
	*Find probabilities by using random variables. *Find the expected value of a probability distribution.	S.ID.2	12.8	Probability Distributions		1 day	
	Review and Assess					1 day	