Algebra 1 Curriculum

Revised 12/06/2013

	Course Preview Incidentals, Books, Seating Charts, Class Rules and Procedures Duration: 1 Day

Unit 1 Pre-Algebra, Relationships between Quantities

Estimated Time Frame for Units	Big Ideas	Essential Questions	Concepts	Competencies	Lessons Objectives and Suggested Resources	Vocabulary	Standards
Unit 1 **13 Days**	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	Analysis of one and two variable (univariate and bivariate) data	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Variables and expressions Resources: Glencoe Algebra 1 Section 1-1 (pgs 5- 9) Pearson Algebra 1 Section 1-1 (pgs 4-9) Objectives: SWBA to write verbal expressions for algebraic expressions. SWBA to write algebraic expressions for verbal expressions. SWBA to write algebraic expressions from real world problems.	Algebraic Expression Variable Term Factor Product Power Exponent Base	2.5.A1.B-Use symbols, mathematical terminology, standard notation, mathematical rules, graphing, and other types of mathematical representations to communicate observations, predictions, concepts, procedures, generalizations, ideas, and results.

					Duration: 2 days		
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Order of Operations and Evaluating Expressions Resources: Glencoe-Algebra 1 Section 1-2 (pgs 10- 15) Pearson Algebra 1 Section 1-2 (pgs 10-15) Objectives: SWBA to evaluate numerical expressions using the order of operations. SWBA to evaluate algebraic expressions using the order of operations. SWBA to write and evaluate an expression from real world problems. Duration: 2 Days	Evaluate Order of operations	A1.1.1.3-Use exponents, roots, and/or absolute values to solve problems. A1.1.1.3.1-Simplify/evaluate expressions involving properties/laws of exponents, roots, and/or absolute values to solve problems. Note: Exponents should be integers from -10 to 10. A1.1.1.4-Use estimation strategies in problem solving situations. A1.1.1.4.1-Use estimation to solve problems 2.1.A1.C-Use ratio and proportion to model relationships between quantities. 2.4.A1.B-Use if - ¦then format to describe properties and theorems in algebra.
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Real Numbers Resources: Glencoe Algebra1 Section 0-2 (pgs P7-P10) Pearson Algebra 1 Section 1-3 (pgs 16-22) Objectives: SWBA to classify real numbers. SWBA to graph real numbers.	Positive Number Negative number Natural number Whole number Integer Rational number Square root Principle square root Perfect square	Assessment Anchor: A1.1.1Operations with Real Numbers and Expressions. Anchor Descriptor: A1.1.1.1 Represent and/or use numbers in equivalent forms (e.g., integers,fractions, decimals, percents, square roots, and exponents). A1.1.1.4 Use estimation strategies in problem solving situations.

					SWBA to write repeating decimals as fractions. SWBA to simplify square roots. SWBA to estimate square roots. Duration: 1 Day	Irrational number Real Number Graph coordinate	Eligible Content: A1.1.1.1.1 Compare and/or order any real numbers (rational and irrational may be mixed). A1.1.1.1.2 Simplify square roots A1.1.1.4.1 Use estimation strategies to solve problems.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Properties of Real Numbers Resources: Glencoe-Algebra 1 Section 1-3 (pgs 16- 22) Pearson Algebra 1 Section 1-4 (pgs 23-28) Objectives: SWBA to recognize and use the Properties of Equality. SWBA to recognize and use the Properties of Addition. SWBA to recognize and use the Properties of Multiplication. Duration: 2 Days	Equivalent expressions Additive identity Multiplicative identity Multiplicative inverse Reciprocal	A1.1.1.3-Use exponents, roots, and/or absolute values to solve problems. A1.1.1.3.1-Simplify/evaluate expressions involving properties/laws of exponents, roots, and/or absolute values to solve problems. Note: Exponents should be integers from -10 to 10. A1.1.1.4-Use estimation strategies in problem solving situations. A1.1.1.4.1-Use estimation to solve problems 2.1.A1.C-Use ratio and proportion to model relationships between quantities. 2.4.A1.B-Use if - ¦then format to describe properties and theorems in algebra.
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables,	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world	Adding and Subtracting Rational Numbers Resource: Glencoe Algebra1 Section 0-4 (pgs P13-P16)		Standard: 2.2.A1.C Evaluate numerical expressions that include the four basic operations and operations of powers and roots, reciprocals, opposites, and absolute value Assessment Anchor:

	structures in many equivalent forms.	graphs, and equations.		problems.	Pearson Algebra 1 Section 1-5 (pgs 30-36) Objectives: SWBA to add and subtract rational numbers with like and unlike denominators. SWBA to compare and order rational numbers from least to greatest. Duration:1 Day		A1.1.1 Operations with Real Numbers and Expressions. Anchor Descriptor: A1.1.1.1 Represent and/or use numbers in equivalent forms (e.g., integers, fractions, decimals, percents, square roots, and exponents). Eligible Content: A1.1.1.1.1 Compare and/or order any real numbers (rational and irrational may be mixed).
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Multiplying and Dividing Rational Numbers Resource:GlencoeAlgebra1 Section 0-5 (pgs P13-P16) Pearson Algebra 1 Section 1-6 (pgs 38-44) Objectives: SWBA to name the reciprocal (multiplicative inverse) of fractions and mixed numbers. SWBA to multiply and divide rational numbers. Duration: 1 Day	Multiplicative inverse reciprocals	Standard: 2.2.A1.C Evaluate numerical expressions that include the four basic operations and operations of powers and roots, reciprocals, opposites, and absolute value Assessment Anchor: A1.1.1 Operations with Real Numbers and Expressions. Anchor Descriptor: A1.1.1.1 Represent and/or use numbers in equivalent forms (e.g., integers, fractions, decimals, percents, square roots, and exponents). Eligible Content: A1.1.1.1.1 Compare and/or order any real numbers (rational and irrational may be mixed).

	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	The Distributive Property Resources: Glencoe-Algebra 1 Section 1-4 (pgs 23- 30) Pearson Algebra 1 Section 1-7 (pgs 46-52) Objectives: SWBA to use the Distributive Property to evaluate expressions. SWBA to use the Distributive Property to simplify expressions (combine like terms) SWBA to use the Distributive Property solve real world problems. Duration 2 Days	Like terms Simplest form Coefficient	2.4.A1.B-Use if - ¦then format to describe properties and theorems in algebra.
	Review Unit 1 Pre-Algebra Relationships Between Quantities Duration: 1 Day						
Unit 1 **13 Days**	Common Assessment Unit 1 Pre-Algebra Relationships Between Quantities Duration: 1 Day						
Unit 2 Linear Equations							
Estimated Time Frame for Units	**Big Ideas**	**Essential Questions**	**Concepts**	**Competencies**	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards**
Unit 2	Relations and functions are	How do you write, solve,	Functions and	Use algebraic properties and	Writing Equations Resources:	Formula	2.8.A1.E-Use combinations of symbols and numbers to create

19 Days	mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	graph, and interpret linear equations and inequalities to model relationships between quantities?	multiple representations	processes in mathematical situations and apply them to solve real world problems. Represent functions (linear and non-linear) in multiple ways, including tables, algebraic rules, graphs, and contextual situations and make connections among these representations. Choose the appropriate functional representation to model a real world situation and solve problems relating to that situation. Write, solve, graph, and	Glencoe-Algebra 1 Section 2-1 (pgs 75- 81) Pearson-Algebra 1 Section 1-8 (pgs 53-58) Objectives: SWBA to translate sentences into equations. SWBA to translate equations into sentences. Duration: 2 Days		expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional relationships that model problem situations. A1.1.2.1-Write, solve, and/or graph linear equations using various methods. A1.1.2.1.1-Write, solve, and/or apply a linear equation (including problem situations

				interpret linear equations and inequalities to model relationships between quantities.			
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Functions and multiple representations	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems. Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities.	Solving Equations using Addition and Subtraction (One Step Equations) Resources: Glencoe-Algebra 1 Section 2-2 (pgs 83- 89) Pearson-Algebra 1 Section 2-1 (pgs 81-87) Objectives: SWBA to solve one-step equations using addition and subtraction. SWBA to solve one-step equations using multiplication and division. Duration: 2 Days	Solve an equation Equivalent equations	A1.1.2 Linear Equations A1.1.2.1 Write, solve and/or graph linear equations and inequalities using various methods. A1.1.2.1.1 Write and/or apply a linear equation (including problem solving situations) A1.1.2.1.2 Use and/or identify an algebraic property to justify any step in an equation solving process (linear equations only). A1.1.2.1.3 Interpret solutions to problems in the context of the problem situation(linear equations only) 2.1.A1.F-Extend the concept and use of inverse operations to determine unknown quantities in linear and polynomial equations.
	There are some mathematical relationships that are always true and these relationships	How do you write, solve, graph, and interpret linear equations and	Functions and multiple representations	Use algebraic properties and processes in mathematical situations and	Solving Equations using Multiplication and Division (One Step Equations) Resources:	Solve an equation Equivalent	A1.1.2 Linear Equations A1.1.2.1 Write, solve and/or graph linear equations and inequalities using various methods. A1.1.2.1.1 Write and/or apply a

	are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	inequalities to model relationships between quantities?		apply them to solve real world problems. Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities.	Glencoe-Algebra 1 Section 2-2 (pgs 83- 89) Pearson-Algebra 1 Section 2-1 (pgs 81-87) Objectives: SWBA to solve one-step equations using addition and subtraction. SWBA to solve one-step equations using multiplication and division. Duration: 2 Days	equations	linear equation (including problem solving situations) A1.1.2.1.2 Use and/or identify an algebraic property to justify any step in an equation solving process (linear equations only). A1.1.2.1.3 Interpret solutions to problems in the context of the problem situation(linear equations only) 2.1.A1.F-Extend the concept and use of inverse operations to determine unknown quantities in linear and polynomial equations.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Linear relationships: Equation and inequalities in one and two variables	Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities.	Solving Multi-Step Equations Resources: Glencoe-Algebra 1 Section 2-3 (pgs 83- 89) Pearson-Algebra 1 Section 2-2, 2-3 (pgs.88-100) Objectives: SWBA to solve equations involving more than one step. SWBA to solve equations involving consecutive integers. Duration: 3 Days	Multi-step equation Consecutive integers Number theory	2.8.A1.E-Use combinations of symbols and numbers to create expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional relationships that model problem situations. A1.1.2.1-Write, solve, and/or graph linear equations using various methods. A1.1.2.1.1-Write, solve, and/or apply a linear equation (including problem situations). 2.1.A1.F A1.1.2.1.2-Use and/or identify an algebraic property to justify any step in an equation solving process. Note: Linear equations only. A1.1.2.1.3-Interpret solutions to problems in the context of the

							problem situation. Note: Linear equations only. 2.1.A1.F-Extend the concept and use of inverse operations to determine unknown quantities in linear and polynomial equations.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Linear relationships: Equation and inequalities in one and two variables	Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities.	Solving Equations with Variables on Each Side Resources: Glencoe-Algebra 1 Section 2-4 (pgs 91- 96) Pearson-Algebra 1 Section 2-4 (pgs 102-108) Objectives: SWBA to solve equations with the variable on each side. SWBA to solve equations involving grouping symbols. Duration: 4 Days	Identify	2.8.A1.E-Use combinations of symbols and numbers to create expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional relationships that model problem situations. A1.1.2.1-Write, solve, and/or graph linear equations using various methods. A1.1.2.1.1-Write, solve, and/or apply a linear equation (including problem situations). 2.1.A1.F A1.1.2.1.2-Use and/or identify an algebraic property to justify any step in an equation solving process. Note: Linear equations only. A1.1.2.1.3-Interpret solutions to problems in the context of the problem situation. Note: Linear equations only. 2.1.A1.F-Extend the concept and use of inverse operations to determine unknown quantities in linear and polynomial equations.
	There are some mathematical	How do you write, solve,	Linear relationship	Write, solve, graph, and	Ratios and Proportions	Ratio	2.8.A1.E-Use combinations of symbols and numbers to create

	relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	graph, and interpret linear equations and inequalities to model relationships between quantities?	s: Equation and inequalities in one and two variables	interpret linear equations and inequalities to model relationships between quantities.	Resources: Glencoe-Algebra 1 Section 2-6 (pgs 111- 117) Pearson-Algebra 1 Section 2-7 (pgs 124-129) Objectives: SWBA to compare ratios. SWBA to solve and apply proportions. Duration: 2 Days	Proportion means extremes rate unit rate scale scale model	expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional relationships that model problem situations. A1.1.2.1-Write, solve, and/or graph linear equations using various methods. A1.1.2.1.1-Write, solve, and/or apply a linear equation (including problem situations). A1.1.2.1.2-Use and/or identify an algebraic property to justify any step in an equation solving process. Note: Linear equations only. A1.1.2.1.3-Interpret solutions to problems in the context of the problem situation. Note: Linear equations only. 2.1.A1.F-Extend the concept and use of inverse operations to determine unknown quantities in linear and polynomial equations.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Linear relationships: Equation and inequalities in one and two variables	Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities.	Literal Equations, Formulas and Dimensional Analysis Resources: Glencoe-Algebra 1 Section 2-8 (pgs 127-131) Pearson-Algebra 1 Section 2-5 (pgs 53-58) Objectives: SWBA to solve equations for	Literal Equation Dimensional analysis Unit analysis	2.8.A1.E-Use combinations of symbols and numbers to create expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional relationships that model problem situations. A1.1.2.1-Write, solve, and/or graph linear equations using various methods. A1.1.2.1.1-Write, solve, and/or apply a linear equation (including problem

					given variables. SWBA to use formulas to solve real world problems. Duration: 3 Days		situations). 2.1.A1.F A1.1.2.1.2-Use and/or identify an algebraic property to justify any step in an equation solving process. Note: Linear equations only. A1.1.2.1.3-Interpret solutions to problems in the context of the problem situation. Note: Linear equations only. 2.1.A1.F-Extend the concept and use of inverse operations to determine unknown quantities in linear and polynomial equations.
	Review Unit 2 Linear Equations Duration: 1 Day						
Unit 2 **19 Days**	Common Assessment Unit 2 Linear Equations Duration: 1 Day						
Unit 3 Linear Inequalities							
Estimated Time Frame for Units	**Big Ideas**	**Essential Questions**	**Concepts**	**Competencies**	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards**
Unit 5 **17 Days**	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Functions and multiple representations	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Writing Inequalities Resources: Pearson-Algebra 1 Section 3-1 (pgs) Objectives: SWBA to translate sentences into equations. SWBA to translate equations into sentences.	Formula	2.8.A1.E-Use combinations of symbols and numbers to create expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional relationships that model problem situations. A1.1.2.1-Write, solve, and/or graph linear equations using various

				Represent functions (linear and non-linear) in multiple ways, including tables, algebraic rules, graphs, and contextual situations and make connections among these representations. Choose the appropriate functional representation to model a real world situation and solve problems relating to that situation. Write, solve, graph, and interpret linear equations and inequalities to model relationships between	Duration: 1 Day		methods. A1.1.2.1.1-Write, solve, and/or apply a linear equation (including problem situations

				quantities.			
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Functions and multiple representations	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems. Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities.	Solving Inequalities by using Addition and Subtraction Resources: Glencoe-Algebra 1 Section 5-1 (pgs 283-287) Pearson-Algebra 1 Section 3-1 (pgs164-170) Section 3-2 (pgs. 171-177) Objectives: SWBA to write, graph, and identify solutions to inequalities. SWBA to solve linear inequalities using addition. And Subtraction. Duration:1 Day	Set-builder notation	2.1.A1.F-Extend the concept and use of inverse operations to determine unknown quantities in linear and polynomial equations. A1.1.3.1-Write, solve, and/or graph linear inequalities using various methods. A1.1.3.1.2-Identify or graph the solution set to a linear inequality on a number line. A1.1.3.1.3-Interpret solutions to problems in the context of the problem situation. Note: Limit to linear inequalities.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Functions and multiple representations	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems. Write, solve, graph, and	Solving Inequalities by using Multiplication and Division Resources: Glencoe-Algebra 1 Section 5-2 (pgs 290-295) Pearson-Algebra 1 Section 3-3 (pgs 178-183) Objectives:		2.1.A1.F-Extend the concept and use of inverse operations to determine unknown quantities in linear and polynomial equations. A1.1.3.1-Write, solve, and/or graph linear inequalities using various methods. A1.1.3.1.2-Identify or graph the solution set to a linear inequality on a number line. A1.1.3.1.3-Interpret solutions to problems in the context of the

	and inequalities.			interpret linear equations and inequalities to model relationships between quantities.	SWBA to solve linear inequalities using multiplication. SWBA to solve linear inequalities using division. Duration: 2 Days		problem situation. Note: Limit to linear inequalities.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Linear relationships: Equation and inequalities in one and two variables	Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities.	Solving Multi-Step Inequalities Resources: Glencoe Algebra 1 Section 5-3 (pgs 296-301) Objectives: SWBA to solve linear inequalities involving more than one operation. SWBA to solve linear inequalities involving the Distributive Property. Duration: 2 Days		2.1.A1.F-Extend the concept and use of inverse operations to determine unknown quantities in linear and polynomial equations. A1.1.3.1-Write, solve, and/or graph linear inequalities using various methods. A1.1.3.1.2-Identify or graph the solution set to a linear inequality on a number line.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Linear relationships: Equation and inequalities in one and two variables	Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities.	Solving Compound Inequalities Resources: Glencoe-Algebra 1 Section 5-4 (pgs 304-309) Pearson-Algebra 1 Section 3-6 (pgs 200-206) Objectives: SWBA to solve compound	Compound inequality Intersection Union	2.1.A1.F-Extend the concept and use of inverse operations to determine unknown quantities in linear and polynomial equations. 2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.3.1-Write, solve, and/or graph linear inequalities using various methods.

	solving equations and inequalities.				inequalities containing the word (and) and graph their solution set. SWBA to solve compound inequalities containing the word (or) and graph their solution set. Duration: 4 Days		A1.1.3.1.1-Write or solve compound inequalities and/or graph their solution sets on a number line (may include absolute value inequalities). A1.1.3.1.2-Identify or graph the solution set to a linear inequality on a number line. A1.1.3.1.3-Interpret solutions to problems in the context of the problem situation. Note: Limit to linear inequalities.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Linear relationships: Equation and inequalities in one and two variables	Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities.	Solving Equations and inequalities involving Absolute Values Resources: Glencoe-Algebra 1 Section 2-5 (pgs 91- 96) Section 5-5 (pgs 310-314) Pearson-Algebra 1 Section 3-7 (pgs 207-213) Objectives: SWBA to evaluate absolute value expressions SWBA to solve absolute value equations. SWBA to solve and graph absolute value inequalities that contain the less than symbol (<). SWBA to solve and graph absolute value inequalities that contain the greater than symbol (>).	Absolute Value	2.2.A1.C-Evaluate numerical expressions that include the four basic operations and operations of powers and roots, reciprocals, opposites, and absolute values. 2.8.A1.E-Use combinations of symbols and numbers to create expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional relationships that model problem situations. 2.1.A1.F-Extend the concept and use of inverse operations to determine unknown quantities in linear and polynomial equations. 2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.3-Use exponents, roots, and/or absolute values to solve problems. A1.1.1.3.1-Simplify/evaluate expressions involving

					Duration:4 Days		properties/laws of exponents, roots, and/or absolute values to solve problems. Note: Exponents should be integers from -10 to 10. A1.1.2.1-Write, solve, and/or graph linear equations using various methods. A1.1.2.1.1-Write, solve, and/or apply a linear equation (including problem situations). A1.1.2.1.2-Use and/or identify an algebraic property to justify any step in an equation solving process. Note: Linear equations only. A1.1.2.1.3-Interpret solutions to problems in the context of the problem situation. Note: Linear equations only. A1.1.3.1.1-Write or solve compound inequalities and/or graph their solution sets on a number line (may include absolute value inequalities). A1.1.3.1.2-Identify or graph the solution set to a linear inequality on a number line. A1.1.3.1.3-Interpret solutions to problems in the context of the problem situation. Note: Limit to linear inequalities.
	Review Unit 3 Common Assessment Linear Inequalities Duration: 1 Day						

Unit 3 17 Days	Unit 3 Common Assessment Linear Inequalities Duration: 1 Day						
Unit 4 Linear Functions							
Estimated Time Frame for Units	**Big Ideas**	**Essential Questions**	**Concepts**	**Competencies**	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards**
Unit 4 **16 Days**	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	How do you decide which functional representation to choose when modeling a real world situation, how would you explain your solution to the problem?	Functions and multiple representations	Represent functions (linear and non-linear) in multiple ways, including tables, algebraic rules, graphs, and contextual situations and make connections among these representations Choose the appropriate functional representation to model a real world situation and solve problems	Linear Functions Resources: Glencoe-Algebra 1 Section 1-7 (pgs 45- 52) Pearson-Algebra 1 Section 4-3 (pgs 246-251) Section 4-6 (pgs. 268-273) Objectives: SWBA to determine whether a relation is a function. SWBA to find function values SWBA to identify and represent patterns that describe nonlinear functions. Duration: 2 Days	Function Discrete function Continuous function Vertical line test Nonlinear function	2.8.A1.C-Identify and represent patterns algebraically and/or graphically. A1.2.1.1-Analyze and/or use patterns or relations. A1.2.1.1.1-Analyze a set of data for the existence of a pattern and represent the pattern algebraically and/or graphically. A1.2.1.1.2-Determine whether a relation is a function, given a set of points or a graph. A1.2.1.1.3-Identify the domain or range of a relation (may be presented as ordered pairs, a graph, or a table). A1.2.1.2-Interpret and/or use linear functions and their equations, graphs, or tables. A1.2.1.2.1-Create, interpret, and/or use the equation, graph, or table of a linear function. A1.2.1.2.2-Translate from one representation of a linear function to another (i.e., graph, table, and equation).

				relating to that situation.			
	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Functions and multiple representations	Represent functions (linear and non-linear) in multiple ways, including tables, algebraic rules, graphs, and contextual situations and make connections among these representations.	Nonlinear Functions Resources: Glencoe-Algebra 1 Section 1-6 (pgs 38- 44) Objectives: SWBA to determine whether a relation is a function. SWBA to Find Domain and range and use function notation. SWBA to represent functions as ordered pairs, tables, graphs and mappings. SWBA to interpret graphs of relations. Duration: 2 Days	Coordinate System Coordinate plane x-and y-axes origin ordered pair x and y coordinates relation domain range independent variable dependent variable Function Notation Vertical Line Test	2.8.A1.C-Identify and represent patterns algebraically and/or graphically. A1.2.1.1-Analyze and/or use patterns or relations. A1.2.1.1.1-Analyze a set of data for the existence of a pattern and represent the pattern algebraically and/or graphically. A1.2.1.1.3-Identify the domain or range of a relation (may be presented as ordered pairs, a graph, or a table).
	Relations and functions are mathematical relationships that can be represented	How do you write, solve, graph, and interpret linear equations and	Functions and multiple representations	Relations and functions are mathematical relationships that can be	Graphing a Function Rule Resources: Pearson-Algebra 1 Section 4-4 (pgs 253-259)	Continuous graph Discrete graph	2.8.A1.C-Identify and represent patterns algebraically and/or graphically. 2.8.A1.D-Demonstrate an understanding and apply properties

	and analyzed using words, tables, graphs, and equations.	inequalities to model relationships between quantities?		represented and analyzed using words, tables, graphs, and equations.	Duration: 4 Days		of functions (domain, range) and characteristics of linear functions. A1.2.1.2-Interpret and/or use linear functions and their equations, graphs, or tables. A1.2.1.2.1-Create, interpret, and/or use the equation, graph, or table of a linear function. A1.2.1.2.2-Translate from one representation of a linear function to another (i.e., graph, table, and equation).
	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Functions and multiple representations	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	Relations & Functions Resources: Pearson-Algebra 1 Section 4-6 (pgs 286-273) Duration: 2 Days	Relation Domain Range Vertical line test Function notation	2.8.A1.C-Identify and represent patterns algebraically and/or graphically. 2.8.A1.D-Demonstrate an understanding and apply properties of functions (domain, range) and characteristics of linear functions. A1.2.1.2-Interpret and/or use linear functions and their equations, graphs, or tables. A1.2.1.2.1-Create, interpret, and/or use the equation, graph, or table of a linear function. A1.2.1.2.2-Translate from one representation of a linear function to another (i.e., graph, table, and equation).
	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between	Functions and multiple representations	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs,	Writing a Function Rule Resources: Pearson-Algebra 1 Section 4-5 (pgs 262-267) Duration: 2 Days	Function rule	2.8.A1.C-Identify and represent patterns algebraically and/or graphically. 2.8.A1.D-Demonstrate an understanding and apply properties of functions (domain, range) and characteristics of linear functions. A1.2.1.2-Interpret and/or use linear functions and their equations,

		quantities?		and equations.			graphs, or tables. A1.2.1.2.1-Create, interpret, and/or use the equation, graph, or table of a linear function. A1.2.1.2.2-Translate from one representation of a linear function to another (i.e., graph, table, and equation).
	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Functions and multiple representations Linear relationships: Equation and inequalities in one and two variables Algebraic properties and processes	Represent functions (linear and non-linear) in multiple ways, including tables, algebraic rules, graphs, and contextual situations and make connections among these representations. Choose the appropriate functional representation to model a real world situation and solve problems relating to that situation. Write, solve, graph, and interpret	Arithmetic Sequences as linear Functions Resources: Glencoe Algebra 1 Section 3-5 (pages 187-193) Pearson-Algebra 1 Section 4-7 (pgs 274-281) Section 4-3 (pgs. 246-251) Objectives: SWBA to recognize arithmetic sequences. SWBA to relate arithmetic sequences to linear functions. SWBA to identify and extend patterns in sequence Duration:2 Days	Sequence Terms Arithmetic sequence Common Difference	2.8.A1.C-Identify and represent patterns algebraically and/or graphically. 2.8.A1.D-Demonstrate an understanding and apply properties of functions (domain, range) and characteristics of linear functions. A1.2.1.2-Interpret and/or use linear functions and their equations, graphs, or tables. A1.2.1.2.1-Create, interpret, and/or use the equation, graph, or table of a linear function. A1.2.1.2.2-Translate from one representation of a linear function to another (i.e., graph, table, and equation).

				linear equations and inequalities to model relationships between quantities.			
	Review Unit 4 Linear Functions Duration: 1 Day						
Unit 4 16 Days	Common Assessment Unit 4 Linear Functions Duration: 1 Day						
Unit 5 Equations of Linear Functions							
Estimated Time Frame for Units	**Big Ideas**	**Essential Questions**	**Concepts**	**Competencies**	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards**
Unit 5 **21 Days**	Degree and direction of linear association between two variables is measurable	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Analysis of one and two variable (univariate and bivariate) data Algebraic	Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities.	Rate of Change and Slope Resources: Glencoe-Algebra 1 Section 3-3 (pgs 170 - 178) Pearson-Algebra 1 Section 5-1 (pgs 294-300) Objectives:	Rate of Change Slope	2.8.A1.D-Demonstrate an understanding and apply properties of functions (domain, range) and characteristics of linear functions. 2.11.A1.B-Describe rates of change as modeled by linear equations. A1.2.2.1-Describe, compute, and/or use the rate of change (slope) of a line. A1.2.2.1.1-Identify, describe, and/or

			properties and processes		SWBA to find slope. SWBA to find rates of change from tables. SWBA to use rate of change to solve problems. Duration: 2 Days		use constant rates of change. A1.2.2.1.2-Apply the concept of linear rate of change (slope) to solve problems.
	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	How do you decide which functional representation to choose when modeling a real world situation, how would you explain your solution to the problem?	Functions and multiple representations Linear relationships: Equation and inequalities in one and two variables	Represent functions (linear and non-linear) in multiple ways, including tables, algebraic rules, graphs, and contextual situations and make connections among these representation. Choose the appropriate functional representation to model a real world situation and solve problems relating to that situation.	Graphing Equations in Slope-Intercept Form. Resources: Glencoe-Algebra 1 Section 4-1 (pgs 214-221) Pearson-Algebra 1 Section 5-3 (pgs 308-314) Objectives: SWBA to write and graph equations in slope intercept form. SWBA to model real world data with equations in slope intercept form. Duration: 4 Days	Slope-intercept form	2.8.A1.C-Identify and represent patterns algebraically and/or graphically. 2.8.A1.D-Demonstrate an understanding and apply properties of functions (domain, range) and characteristics of linear functions. 2.11.A1.B-Describe rates of change as modeled by linear equations. A1.2.1.2-Interpret and/or use linear functions and their equations, graphs, or tables. A1.2.1.2.1-Create, interpret, and/or use the equation, graph, or table of a linear function. A1.2.2.1-Describe, compute, and/or use the rate of change (slope) of a line. A1.2.2.1.1-Identify, describe, and/or use constant rates of change. A1.2.2.1.2-Apply the concept of linear rate of change (slope) to solve problems. A1.2.2.1.3-Write or identify a linear equation when given: the graph of the line, two points on the line, or the slope and a point on the line. Note: Linear equation may be in point-slope, standard, and/or slope-intercept form. A1.2.2.1.4-Determine the slope

							and/or y-intercept represented by a linear equation or graph.

	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Functions and multiple representations	Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities	Writing Equations in Slope-Intercept and Point –Slope Form Resources: Glencoe-Algebra 1 Section 4-2 and 4-3 (pgs 224-236) Pearson-Algebra 1 Section 5-3 (pgs 308-314) Section 5-4 (pgs 315- 320) Objectives: SWBA to write an equation of a line in slope-intercept form given a slope and one point. SWBA to write an equation in slope-intercept form given two points. SWBA to write equations of lines in point-slope form. SWBA to write linear equations in different forms. Duration: 5 Days	Linear extrapolation Point–Slope form	2.8.A1.C-Identify and represent patterns algebraically and/or graphically. 2.8.A1.D-Demonstrate an understanding and apply properties of functions (domain, range) and characteristics of linear functions. 2.11.A1.B-Describe rates of change as modeled by linear equations. A1.2.1.2-Interpret and/or use linear functions and their equations, graphs, or tables. A1.2.1.2.1-Create, interpret, and/or use the equation, graph, or table of a linear function. A1.2.1.2.2-Translate from one representation of a linear function to another (i.e., graph, table, and equation). A1.2.2.1-Describe, compute, and/or use the rate of change (slope) of a line. A1.2.2.1.1-Identify, describe, and/or use constant rates of change. A1.2.2.1.2-Apply the concept of linear rate of change (slope) to solve problems. A1.2.2.1.3-Write or identify a linear equation when given: the graph of the line, two points on the line, or the slope and a point on the line. Note: Linear equation may be in point-slope, standard, and/or slope-intercept form. A1.2.2.1.4-Determine the slope and/or y-intercept represented by a linear equation or graph.

	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Linear relationships: Equation and inequalities in one and two variables	Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities.	Graphing Inequalities in Two Variables Resources: Glencoe-Algebra 1 Section 5-6 (pgs 315-320) Pearson-Algebra 1 Section 6-5 (pgs394-399) Objectives: SWBA to graph linear inequalities on a coordinate plane. SWBA to solve inequalities by graphing. SWBA to use linear inequalities when modeling real-world situations. Duration: 2 Days	Boundary Half-plane Closed half-plane Open half-plane	2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. 2.8.A1.E-Use combinations of symbols and numbers to create expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional relationships that model problem situations. A1.1.3.2-Write, solve, and/or graph systems of linear inequalities using various methods. A1.1.3.2.1-Write and/or solve a system of linear inequalities using graphing. Note: Limit systems to two linear inequalities. A1.1.3.2.2-Interpret solutions to problems in the context of the problem situation. Note: Limit systems to two linear inequalities.
	Relations and functions are mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	How do you write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Linear relationships: Equation and inequalities in one and two variables	Write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities	Parallel and Perpendicular Lines Resources: Glencoe-Algebra 1 Section 4-4 (pgs 237-243) Pearson-Algebra 1 Section 5-6 (pgs 330-335) Objectives: SWBA to determine whether lines are parallel perpendicular or neither. SWBA to write an equation of	Parallel lines Perpendicular lines	2.8.A1.C-Identify and represent patterns algebraically and/or graphically. 2.8.A1.D-Demonstrate an understanding and apply properties of functions (domain, range) and characteristics of linear functions. 2.9.A1.A-Use algebraic techniques to determine if two lines are parallel and / or perpendicular. 2.9.A1.C-Use techniques from coordinate geometry to establish properties of lines and 2-dimensional shapes and solids. 2.11.A1.B-Describe rates of change

					a line that passes through a given point and parallel to given line. SWBA to write an equation of a line that passes through a given point and is perpendicular to a given line. Duration: 2 Days		as modeled by linear equations. A1.2.1.2-Interpret and/or use linear functions and their equations, graphs, or tables. A1.2.1.2.1-Create, interpret, and/or use the equation, graph, or table of a linear function. A1.2.1.2.2-Translate from one representation of a linear function to another (i.e., graph, table, and equation). A1.2.2.1-Describe, compute, and/or use the rate of change (slope) of a line. A1.2.2.1.1-Identify, describe, and/or use constant rates of change. A1.2.2.1.2-Apply the concept of linear rate of change (slope) to solve problems. A1.2.2.1.3-Write or identify a linear equation when given: the graph of the line, two points on the line, or the slope and a point on the line. Note: Linear equation may be in point-slope, standard, and/or slope-intercept form. A1.2.2.1.4-Determine the slope and/or y-intercept represented by a linear equation or graph.
	Degree and direction of linear association between two variables is measurable	How can we use univariate and bivariate data to analyze relationships and make predictions?	Analysis of one and two variable (univariate and bivariate) data	Display, analyze, and make predictions using univariate and bivariate data.	Scatter Plots and Lines of Fit (Trend Lines) Resources: Glencoe-Algebra 1 Section 4-5 (pgs 245-251) Pearson-Algebra 1	Bivariate data Scatter plot Line of fit Linear	2.6.A1.C-Select or calculate the appropriate measure of central tendency, calculate and apply the interquartile range for one-variable data, and construct a line of best fit and calculate its equation for two-variable data. 2.6.A1.E-Make predictions based on

					Section 5-7 (pgs 336-343) Objectives: SWBA to write an equation of a trend line and a line of best fit. SWBA to investigate relationships between quantities by points on a scatter plot. SWBA to use lines of fit to make and evaluate predictions. Duration: 4 Days	interpolation	lines of best fit or draw conclusions on the value of a variable in a population based on the results of a sample. 2.11.A1.B-Describe rates of change as modeled by linear equations. A1.2.2.2-Analyze and/or interpret data on a scatter plot. A1.2.2.2.1-Draw, identify, find, and/or write an equation for a line of best fit for a scatter plot. A1.2.3.2-Use data displays in problem solving settings and/or to make predictions. A1.2.3.2.2-Analyze data, make predictions, and/or answer questions based on displayed data (box-and-whisker plots, stem-and-leaf plots, scatter plots, measures of central tendency, or other representations). A1.2.3.2.3-Make predictions using the equations or graphs of best-fit lines of scatter plots.
	Review Unit 5 Common Assessment Equations of Linear Functions Duration:1 Day						
Unit 5 21 Days	Unit 5 Common Assessment Equations of Linear Functions Duration: 1 Day						
Unit 6 Systems of Linear Equations and Inequalities							

Estimated Time Frame for Units	Big Ideas	Essential Questions	Concepts	Competencies	Lessons Objectives and Suggested Resources	Vocabulary	Standards
Unit 6 **12 Days**	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How do you write, solve, and interpret systems of two linear equations and inequalities using graphing and algebraic techniques?	Linear system of equations and inequalities	Write, solve, and interpret systems of two linear equations and inequalities using graphing and algebraic techniques	Graphing Systems of Equations Resources: Glencoe Algebra 1 Section 6-1 (pgs 333-339) Pearson-Algebra 1 Section 6-1 (pgs 364-369) Objectives: SWBA to determine the number of solutions a system of linear equations has. SWBA to solve systems of linear equations by graphing. Duration: 1 Day	System of equations Consistent Independent Dependent Inconsistent	2.8.A1.E-Use combinations of symbols and numbers to create expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional relationships that model problem situations. 2.8.A1.F-Interpret the results of solving equations, inequalities, systems of equations, and systems of inequalities in the context of the situation that motivated the model. A1.1.2.2-Write, solve, and/or graph systems of linear equations using various methods. A1.1.2.2.1-Write and/or solve a system of linear equations (including problem situations) using graphing, substitution, and/or elimination. Note: Limit systems to two linear equations. A1.1.2.2.2-Interpret solutions to problems in the context of the problem situation. Note: Limit systems to two linear equations.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are	How do you write, solve, and interpret systems of two linear equations and inequalities using graphing and algebraic	Linear system of equations and inequalities	Write, solve, and interpret systems of two linear equations and inequalities using graphing and algebraic	Solving Systems using Substitution. Resources: Glencoe-Algebra 1 Section 6-2 (pgs 342-347) Pearson-Algebra 1 Section 6-2 (pgs 372-384)	Substitution	2.8.A1.E-Use combinations of symbols and numbers to create expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional relationships that model problem situations.

	useful for writing equivalent forms of expressions and solving equations and inequalities.	techniques?		techniques	Objectives: SWBA to solve systems of equations by substitution. SWBA to solve real world-problems involving systems of equations by using substitution. Duration: 2 Days		2.8.A1.F-Interpret the results of solving equations, inequalities, systems of equations, and systems of inequalities in the context of the situation that motivated the model. A1.1.2.2-Write, solve, and/or graph systems of linear equations using various methods. A1.1.2.2.1-Write and/or solve a system of linear equations (including problem situations) using graphing, substitution, and/or elimination. Note: Limit systems to two linear equations. A1.1.2.2.2-Interpret solutions to problems in the context of the problem situation. Note: Limit systems to two linear equations.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How do you write, solve, and interpret systems of two linear equations and inequalities using graphing and algebraic techniques?	Linear system of equations and inequalities	Write, solve, and interpret systems of two linear equations and inequalities using graphing and algebraic techniques	Elimination using Addition and Subtraction Resources: Glencoe-Algebra 1 Section 6-3 (pgs 348-354) Pearson-Algebra 1 Section 6-3 (pgs 378-384) Objectives: SWBA to solve systems of equations elimination with addition. SWBA to solve systems of equations by elimination with subtraction. Duration:2 Days	Elimination	2.8.A1.E-Use combinations of symbols and numbers to create expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional relationships that model problem situations. 2.8.A1.F-Interpret the results of solving equations, inequalities, systems of equations, and systems of inequalities in the context of the situation that motivated the model. A1.1.2.2-Write, solve, and/or graph systems of linear equations using various methods. A1.1.2.2.1-Write and/or solve a system of linear equations (including problem situations) using graphing, substitution, and/or elimination.

							Note: Limit systems to two linear equations. A1.1.2.2.2-Interpret solutions to problems in the context of the problem situation. Note: Limit systems to two linear equations.
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How do you write, solve, and interpret systems of two linear equations and inequalities using graphing and algebraic techniques?	Linear system of equations and inequalities	Write, solve, and interpret systems of two linear equations and inequalities using graphing and algebraic techniques	Elimination using Multiplication Resources: Glencoe-Algebra 1 Section 6-4 (pgs 355-360) Pearson-Algebra 1 Section 6-3 (pgs 378-384) Objectives: SWBA to solve systems of equations by elimination with multiplication. SWBA to solve real world-problems involving systems of equations. Duration: 3 Days	Elimination	2.8.A1.E-Use combinations of symbols and numbers to create expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional relationships that model problem situations. 2.8.A1.F-Interpret the results of solving equations, inequalities, systems of equations, and systems of inequalities in the context of the situation that motivated the model. A1.1.2.2-Write, solve, and/or graph systems of linear equations using various methods. A1.1.2.2.1-Write and/or solve a system of linear equations (including problem situations) using graphing, substitution, and/or elimination. Note: Limit systems to two linear equations. A1.1.2.2.2-Interpret solutions to problems in the context of the problem situation. Note: Limit systems to two linear equations.
	Relations and functions are mathematical relationships that can be represented and analyzed using	How do you write, solve, and interpret systems of two linear equations and inequalities	Linear system of equations and inequalities	Write, solve, and interpret systems of two linear equations and inequalities	Systems of Inequalities Resources: Glencoe-Algebra 1 Section 6-8 (pgs 383-386) Pearson-Algebra 1	Systems of inequalities	2.8.A1.E-Use combinations of symbols and numbers to create expressions, equations, and inequalities in two or more variables, systems of equations, and inequalities, and functional

	words, tables, graphs, and equations.	using graphing and algebraic techniques?		using graphing and algebraic techniques	Section 6-6 (pgs 400-405) Objectives: SWBA to graph systems of linear inequalities. SWBA to solve systems of linear inequalities by graphing. SWBA to model real-world situations using systems of linear inequalities. Duration: 2 Days		relationships that model problem situations. 2.8.A1.F-Interpret the results of solving equations, inequalities, systems of equations, and systems of inequalities in the context of the situation that motivated the model. A1.1.3.2-Write, solve, and/or graph systems of linear inequalities using various methods. A1.1.3.2.1-Write and/or solve a system of linear inequalities using graphing. Note: Limit systems to two linear inequalities. A1.1.3.2.2-Interpret solutions to problems in the context of the problem situation. Note: Limit systems to two linear inequalities.
	Review Common Assessment Unit 6 Systems of Equations and Inequalities						
Unit 6 12 Days	Test Common Assessment Unit 6 Systems of Equations and Inequalities						
Unit 7 Exponents and Polynomials							
Estimated Time Frame for Units	**Big Ideas**	**Essential Questions**	**Concepts**	**Competencies**	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards**
Unit 7	There are some mathematical	How can we show that	Algebraic properties	Use algebraic properties and	Adding and Subtracting Polynomials	Polynomials	2.8.A1.B-Evaluate and simplify not understood algebraic expressions

18 Days	relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	and processes	processes in mathematical situations and apply them to solve real world problems.	Resources: Glencoe-Algebra 1 Section 8-1 (pgs 468 -471) Pearson-Algebra 1 Section 8-1 (pgs 486-491) Objectives: SWBA to classify polynomials SWBA to add polynomials. SWBA to subtract polynomials. Duration: 2 Days		and solve and graph linear equations and inequalities. A1.1.1.5-Simplify expressions involving polynomials. A1.1.1.5.1-Add, subtract, and/or multiply polynomial expressions (express answers in simplest form). Note: Nothing larger than a binomial multiplied by a trinomial.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Zero and Negative Exponents Resources: Pearson-Algebra 1 Section 7-1 (pg. 418-423) Duration: 2 Days		2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.5-Simplify expressions involving polynomials. A1.1.1.5.1-Add, subtract, and/or multiply polynomial expressions (express answers in simplest form). Note: Nothing larger than a binomial multiplied by a trinomial.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use	Functions and multiple representations	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Multiplying Monomials Resources: Glencoe-Algebra 1 Section 7-1 (pgs 400-407) Pearson-Algebra 1 Section 7-1 (pgs 418-423) Section 7-2(pgs.425-431) Section 7-3 (pgs. 433-438)	Monomial constant	2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.3-Use exponents, roots, and/or absolute values to solve problems. A1.1.1.3.1-Simplify/evaluate expressions involving properties/laws of exponents, roots,

	expressions and solving equations and inequalities.	algebraic properties and processes to solve problems?			Objectives: SWBA to simplify expressions involving zero and negative exponents. SWBA to multiply monomials. SWBA to simplify expressions involving monomials Duration: 3 Days		and/or absolute values to solve problems. Note: Exponents should be integers from -10 to 10.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Dividing Monomials Resources: Glencoe-Algebra 1 Section 7-2(pgs 408 -415) **Selected Examples from 7-3** Pearson-Algebra 1 Section 7-4(pgs 439-452) Objectives: SWBA to find the quotient of two monomials. SWBA to simplify expressions containing negative and zero exponents. Duration: 3 Days	Zero exponents Negative exponent Order of magnitude	2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.3-Use exponents, roots, and/or absolute values to solve problems. A1.1.1.3.1-Simplify/evaluate expressions involving properties/laws of exponents, roots, and/or absolute values to solve problems. Note: Exponents should be integers from -10 to 10.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Multiply a Polynomial by a Monomial Resources: Glencoe-Algebra 1 Section 8-2 (pgs 472 -479) Pearson-Algebra 1 Section 8-2 (pgs 492-496) Section 8-3 (pgs.498-503)	Monomial	2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.5-Simplify expressions involving polynomials. A1.1.1.5.1-Add, subtract, and/or multiply polynomial expressions (express answers in simplest form). Note: Nothing larger than a binomial

	expressions and solving equations and inequalities.	algebraic properties and processes to solve problems?			Objectives: SWBA to multiply a polynomial by a monomial. SWBA to solve equations involving the products of monomials and polynomials. Duration: 2 Days		multiplied by a trinomial.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Multiply Polynomials Resources: Glencoe Algebra 1 Section 8-3 (pgs 480 -485) Pearson-Algebra 1 Section 8-3 (pgs 498-503) Objectives: SWBA to multiply a polynomial by using the Distributive Property. SWBA to multiply binomials by using the F.O.I.L. method. Duration: 2 Days	FOIL method Quadratic expression	2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.5-Simplify expressions involving polynomials. A1.1.1.5.1-Add, subtract, and/or multiply polynomial expressions (express answers in simplest form). Note: Nothing larger than a binomial multiplied by a trinomial.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Special Products Resources: Glencoe-Algebra 1 Section 8-4 (pgs 487 -491) Pearson-Algebra 1 Section 8-4 (pgs 504-509) Objectives: SWBA to find the squares of	FOIL method	2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.5-Simplify expressions involving polynomials. A1.1.1.5.1-Add, subtract, and/or multiply polynomial expressions (express answers in simplest form). Note: Nothing larger than a binomial

	expressions and solving equations and inequalities.	algebraic properties and processes to solve problems?			sums and differences. SWBA to find the product of a sum and a difference Duration: 2 Days		multiplied by a trinomial.
	Review Common Assessment Unit 7 Exponents, Exponential Functions and Polynomials						
Unit 7 18 Days	Test Common Assessment Unit 7 Exponents, Exponential Functions and Polynomials						
Unit 8 Factoring							
Estimated Time Frame for Units	**Big Ideas**	**Essential Questions**	**Concepts**	**Competencies**	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards**
Unit 8 20 Days	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Factoring and Quadratic Equations Resources GlencoeAlgebra 1 (old) Section 9-1 Glencoe-Algebra 1(2010) Section 8-1(pgs 471 -474) Section 8-2 (pgs.476-482) Pearson-Algebra 1 Section 8-2 (pgs 492-496) Objectives: SWBA to factor monomials. SWBA to find the greatest common factor of monomials. SWBA to find the Least	Factored form Greatest common factor Least Common Multiple	2.1.A1.E-Apply the concepts of prime and composite monomials to determine GCFs (Greatest Common Factor) and LCMs (Least Common Multiple) of monomials. 2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.2-Apply number theory concepts to show relationships between real numbers in problem solving settings. A1.1.1.2.1-Find the Greatest Common Factor (GCF) and/or the Least Common Multiple (LCM) for

					common Multiple. Duration: 3 Days		sets of monomials.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Using the Distributive Property Resources: Glencoe-Algebra 1 Section 8-2 (pgs 476 -482) Pearson-Algebra 1 Section 8-8 (pgs 529-533) Objectives: SWBA to use the Distributive Property to factor polynomials. SWBA to solve equations of the form ax^2+bx=0. Duration: 2 Days	Factoring Factoring by grouping Zero Product Property	2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.5-Simplify expressions involving polynomials. A1.1.1.5.1-Add, subtract, and/or multiply polynomial expressions (express answers in simplest form). Note: Nothing larger than a binomial multiplied by a trinomial.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Quadratic Equations x^2 +bx +c =0 & Simplifying Rational Expressions Resources: Glencoe-Algebra 2010 Section 8-3 (pgs 485 -491) Glencoe Algebra 1 (2012) Section 8-6 (pgs. 503-509) Section 11-1 Pearson-Algebra 1 Section 8-5 (pgs 512-517)	Quadratic equation	2.1.A1.E-Apply the concepts of prime and composite monomials to determine GCFs (Greatest Common Factor) and LCMs (Least Common Multiple) of monomials. 2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.2-Apply number theory concepts to show relationships between real numbers in problemsolving settings. A1.1.1.2.1-Find the Greatest Common Factor (GCF) and/or the Least Common Multiple (LCM) for

					Objectives: SWBA to factor trinomials of the form x^2 +bx +c SWBA to solve equations of the form x^2 +bx +c =0. Duration : 3 Days		sets of monomials. A1.1.1.5-Simplify expressions involving polynomials. A1.1.1.5.1-Add, subtract, and/or multiply polynomial expressions (express answers in simplest form). Note: Nothing larger than a binomial multiplied by a trinomial.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Quadratic Equations ax^2 +bx +c =0 & Simplifying Rational Expressions Resources: Pearson-Algebra 1 Section 8-6 (pgs 518-522) Section 11-1 Objectives: SWBA to factor trinomials of the form ax^2 +bx +c SWBA to solve equations of the form a x^2 +bx +c =0. Duration: 3 Days	Quadratic equation	2.1.A1.E-Apply the concepts of prime and composite monomials to determine GCFs (Greatest Common Factor) and LCMs (Least Common Multiple) of monomials. 2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.2-Apply number theory concepts to show relationships between real numbers in problemsolving settings. A1.1.1.2.1-Find the Greatest Common Factor (GCF) and/or the Least Common Multiple (LCM) for sets of monomials. A1.1.1.5-Simplify expressions involving polynomials. A1.1.1.5.1-Add, subtract, and/or multiply polynomial expressions (express answers in simplest form). Note: Nothing larger than a binomial multiplied by a trinomial.
	There are some mathematical relationships that are always true and	How can we show that algebraic properties and	Algebraic properties and processes	Use algebraic properties and processes in mathematical	Quadratic Equations: Difference of Two Squares Resources: Glencoe-Algebra 1 2010	Difference of two squares	2.1.A1.E-Apply the concepts of prime and composite monomials to determine GCFs (Greatest Common Factor) and LCMs (Least Common

	these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?		situations and apply them to solve real world problems.	Section 8-5(pgs 499 -504) Glencoe Algebra 1 2012 Section 8-8 (pgs. 516-521) Pearson-Algebra 1 Section 8-7 (pgs 523-528) Objectives: SWBA to factor binomials that are the difference of two squares. SWBA to use the difference of two squares to solve equations. Duration: 2 Days		Multiple) of monomials. 2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.2-Apply number theory concepts to show relationships between real numbers in problemsolving settings. A1.1.1.2.1-Find the Greatest Common Factor (GCF) and/or the Least Common Multiple (LCM) for sets of monomials. A1.1.1.5-Simplify expressions involving polynomials. A1.1.1.5.1-Add, subtract, and/or multiply polynomial expressions (express answers in simplest form). Note: Nothing larger than a binomial multiplied by a trinomial.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Quadratic Equations: Perfect Squares Resources: Glencoe-Algebra 1 2010 Section 8-6 (pgs 505 -512) Glencoe Algebra 1 2012 Section 8-9 (pgs. 522-5290 Pearson-Algebra 1 Section 8-7 (pgs 523-528) Objectives: SWBA to factor perfect square trinomials. SWBA to solve equations involving perfect square trinomials.	Factoring Factoring by grouping Zero Product Property	2.1.A1.E-Apply the concepts of prime and composite monomials to determine GCFs (Greatest Common Factor) and LCMs (Least Common Multiple) of monomials. 2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.2-Apply number theory concepts to show relationships between real numbers in problem solving settings. A1.1.1.2.1-Find the Greatest Common Factor (GCF) and/or the Least Common Multiple (LCM) for sets of monomials. A1.1.1.5-Simplify expressions

					Duration:2 Days		involving polynomials. A1.1.1.5.1-Add, subtract, and/or multiply polynomial expressions (express answers in simplest form). Note: Nothing larger than a binomial multiplied by a trinomial.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Simplifying Rational Expressions Resources: Glencoe-Algebra 1 (2010) Section 11-3(pgs 684 -635) Glencoe Algebra 1 (2012) Section 11-3 (pgs. 690-696) Pearson-Algebra 1 Section 11-1 Objectives: SWBA to identify values excluded from the domain of a rational expression. SWBA to simplify rational expressions. Duration:3 Days	Rational expression	2.1.A1.B-Use factoring to create equivalent forms of polynomials. 2.8.A1.B-Evaluate and simplify not understood algebraic expressions and solve and graph linear equations and inequalities. A1.1.1.5-Simplify expressions involving polynomials. A1.1.1.5.3-Simplify/reduce a rational algebraic expression.
	Review Common Assessment Unit 8 Factoring Duration: 1 Day						
Unit 8 20 Days	Test Common Assessment Unit 8 Factoring Duration: 1 Day						

Unit 9 Simplifying Radical Expressions

Estimated Time Frame for Units	Big Ideas	Essential Questions	Concepts	Competencies	Lessons Objectives and Suggested Resources	Vocabulary	Standards
Unit 9 **12 Days**	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Rational Exponents Resources: Glencoe-Algebra 1 2010 Section 10-2 Extend (Pg618) Glencoe Algebra 1 2012 Section 7-3 (pgs. 408-413) Pearson-Algebra 1 Section 7-5 (pgs 448-452) Objectives: SWBA to simplify radical expressions by using rational exponents. Duration: 3 Days	Rational Exponents	2.1.A1.A-Model and compare values of irrational numbers. 2.2.A1.C-Evaluate numerical expressions that include the four basic operations and operations of powers and roots, reciprocals, opposites, and absolute values. A1.1.1.1-Represent and/or use numbers in equivalent forms (e.g., integers, fractions, decimals, percents, square roots, and exponents). A1.1.1.1.2-Simplify square roots.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Simplifying Radical Expressions Resources: Glencoe-Algebra 1 (20100 Section 10-2 (pgs 612 -617) Glencoe Algebra 1 (2012) Section 10-2 (pgs. 628-6330 Pearson Algebra 1	Radical Expressions Rationalizing the Denominator Conjugate	2.1.A1.A-Model and compare values of irrational numbers. 2.2.A1.C-Evaluate numerical expressions that include the four basic operations and operations of powers and roots, reciprocals, opposites, and absolute values. A1.1.1.1-Represent and/or use numbers in equivalent forms (e.g., integers, fractions, decimals,

	expressions and solving equations and inequalities.	algebraic properties and processes to solve problems?			Section 10-2 (pgs. 619- 625) Objectives: SWBA to simplify radical expressions by using the Quotient Property of Square Roots. Duration: 3 Days		percents, square roots, and exponents). A1.1.1.1.2-Simplify square roots.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can we show that algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and processes to solve problems?	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world problems.	Operations with Radical Expressions Resources: Glencoe Algebra 1 (2010) Section 10-3 (pgs 619 -623) Glencoe Algebra 1 (2012) Section 10-3 (pgs. 635-639) Pearson-Algebra 1 Section 10-3 (pgs 626-631) Objectives*:* SWBA to add and subtract radical expressions. SWBA to multiply radical expressions. Duration: 4 Days	Radical Expressions	2.1.A1.A Model and compare values of irrational numbers. 2.2.A1.C Evaluate numerical expressions that include the four basic operations and operations of powers and roots, reciprocals, opposites, and absolute value. A1.1.1 Operations with Real Numbers and Expressions. A1.1.1.1 Represent and/or use numbers in equivalent forms (e.g., integers, fractions, decimals, percents, square roots, and exponents). A1.1.1.1.2 Simplify square roots.

	Review Common Assessment Unit 9 Simplifying Radical Expressions Duration: 1 Day						
Unit 9 12 Days	Test Common Assessment Unit 9 Simplifying Radical Expressions Duration: 1 Day						
Unit 10 Data Analysis							
Estimated Time Frame for Units	**Big Ideas**	**Essential Questions**	**Concepts**	**Competencies**	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards**
Unit 10 **10 days**	Bivariate data can be modeled with mathematical functions that approximate the data well and help us make predictions based on the data.	How can we use univariate and bivariate data to analyze relationships and make predictions?	Analysis of one and two variable (univariate and bivariate) data	Display, analyze, and make predictions using univariate and bivariate data.	Simple Probability and Odds Resources: Glencoe-Algebra 1 Section 0-11 (pgs P33-P36) Pearson-Algebra 1 Section 12-7 (pgs 769-774) Objectives: SWBA to find the probability and odds of simple events. SWBA to find theoretical and experimental probability. Duration: 1 Day	Probability Sample space Equally likely Tree diagram Odds Complements	2.6.A1.A-Design and conduct an experiment using random sampling. A1.2.3.2-Use data displays in problem solving settings and/or to make predictions. A1.2.3.2.1-Estimate or calculate to make predictions based on a circle, line, bar graph, measures of central tendency, or other representations. A1.2.3.2.2-Analyze data, make predictions, and/or answer questions based on displayed data (box-and-whisker plots, stem-and-leaf plots, scatter plots, measures of central tendency, or other representations).
	Bivariate data can be modeled with mathematical functions that approximate the	How can we use univariate and bivariate data to analyze relationships	Analysis of one and two variable (univariate	Display, analyze, and make predictions using	Mean, Median, Mode, Range and Quartiles Resources: Glencoe-Algebra 1	Measures of central tendency Mean	2.6.A1.C Select or calculate the appropriate measure of central tendency, Calculate and apply interquartile range for one variable data, and

	data well and help us make predictions based on the data.	and make predictions?	and bivariate) data	univariate and bivariate data.	Section 0-12 (pgs P37-P39) Pearson-Algebra 1 Section 12-3 (pgs 738-744) Objectives: SWBA to calculate the measure of central tendency of a set of data. Duration: 1 Day	Median Mode Measures of variation Range Quartiles Lower quartile Upper quartile Measures of dispursion Outlier	construct a line A1.2.3 Data Analysis A1.2.3.1 Use measures of dispersion to describe a set of data. A1.2.3.2 Use data displays in problem solving settings and/or to make predictions. A1.2.3.3 Apply probability to practical situations. A1.2.3.1.1 Calculate and/or interpret the range, quartiles and interquartile range of data A1.2.3.2.2 Analyze data, make predictions, and/or answer questions based on displayed data (box and whisker plots, stem and leaf plots, scatter plots, measures of central tendency, or other representations). A1.2.3.3.1 Find probabilities for compound events (e.g. find probability of red and blue, find probability of red or blue) and represent as a fraction, decimal or percent.
	Bivariate data can be modeled with mathematical functions that approximate the data well and help us make predictions based on the data.	How can we use univariate and bivariate data to analyze relationships and make predictions?	Analysis of one and two variable (univariate and bivariate) data	Display, analyze, and make predictions using univariate and bivariate data.	Representing Data Resources: Glencoe-Algebra 1 Section 0-13 (pgs P41-P43) Pearson-Algebra 1 Section 12-2 (pgs 732-737) Objectives:	Frequency table Bar graph Histogram Line Graph Stem and leaf	2.6.A1.A-Design and conduct an experiment using random sampling. A1.2.3.2-Use data displays in problem solving settings and/or to make predictions. A1.2.3.2.1-Estimate or calculate to make predictions based on a circle, line, bar graph, measures of central tendency, or other representations. A1.2.3.2.2-Analyze data, make predictions, and/or answer

					SWBA to represent data using different visual displays, including histograms and frequency tables. Duration: 1 Day	Plot Circle graph Box and whisker plot interquartile range Outliers	questions based on displayed data (box-and-whisker plots, stem-and-leaf plots, scatter plots, measures of central tendency, or other representations).
	Bivariate data can be modeled with mathematical functions that approximate the data well and help us make predictions based on the data.	How can we use univariate and bivariate data to analyze relationships and make predictions?	Analysis of one and two variable (univariate and bivariate) data	Display, analyze, and make predictions using univariate and bivariate data.	Representing Data Resources: Pearson Algebra 1 Section 12-4 (pgs.746-751) Objectives: SWBA to make and interpret data using box-and- whisker plots. SWBA to find quartiles and percentiles. Duration: 1 Day	Quartile Interquartile Range Box-and-whisker plot Percentile Percentile Rank	2.6.A1.A-Design and conduct an experiment using random sampling. A1.2.3.2-Use data displays in problem solving settings and/or to make predictions. A1.2.3.2.1-Estimate or calculate to make predictions based on a circle, line, bar graph, measures of central tendency, or other representations. A1.2.3.2.2-Analyze data, make predictions, and/or answer questions based on displayed data (box-and-whisker plots, stem-and-leaf plots, scatter plots, measures of central tendency, or other representations).
	Bivariate data can be modeled with mathematical functions that approximate the data well and help us make predictions based on the data.	How can we use univariate and bivariate data to analyze relationships and make predictions?	Analysis of one and two variable (univariate and bivariate) data	Display, analyze, and make predictions using univariate and bivariate data.	Permutation and Combinations Resources: Glencoe-Algebra 1 (2010) Section 12-4 (pgs 764-770) Glencoe Algebra 1 (2012) Section 12-6 (pgs.786-792)		2.7.A1.A-Calculate probabilities for independent, dependent, or compound events. A1.2.3.2-Use data displays in problem solving settings and/or to make predictions. A1.2.3.2.1-Estimate or calculate to make predictions based on a circle,

					Pearson Algebra 1 Section 12-6 (pgs. 762-768) Objectives: SWBA to use permutations. SWBA to use combinations. Duration: 2 Days		line, bar graph, measures of central tendency, or other representations. A1.2.3.3-Apply probability to practical situations. A1.2.3.3.1-Find probabilities for compound events (e.g., find probability of red and blue, find probability of red or blue) and represent as a fraction, decimal, or percent.
	Bivariate data can be modeled with mathematical functions that approximate the data well and help us make predictions based on the data.	How can we use univariate and bivariate data to analyze relationships and make predictions?	Analysis of one and two variable (univariate and bivariate) data	Display, analyze, and make predictions using univariate and bivariate data.	Probability of Compound Events Resources: Glencoe-Algebra 1 (2010) Section 12-5 (pgs 771-778) Glencoe Algebra 1 Section 12-7 (pgs.793-800) *Objectives:* SWBA to find probabilities of independent and dependent events. SWBA to find probabilities of mutually exclusive events Duration: 2 Days	Compound event Independent events Dependent events Mutually exclusive events	2.7.A1.A Calculate probabilities for independent, dependent, or compound events. A1.2.3 Data Analysis A1.2.3.3 Apply probability to practical situations. A1.2.3.3.1 Find probabilities for compound events (e.g. find probability of red and blue, find probability of red or blue) and represent as a fraction, decimal or percent.
	Review Common Assessment Unit 10 Data Analysis Duration:1 Day						
Unit 10 10 Days	Test Common Assessment Unit 10 Data Analysis Duration: 1 Day						

Unit 11 Preparing for Geometry							
Estimated Time Frame for Units	**Big Ideas**	**Essential Questions**	**Concepts**	**Competencies**	**Lessons Objectives and Suggested Resources**	**Vocabulary**	**Standards**
Unit 11 **15 days**	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can you use coordinates and algebraic techniques to represent interpret, and verify geometric relationships?	Concept: Analytic Geometry	Competencies: Use coordinates and algebraic techniques to interpret, represent, and verify geometric relationships	Points, Lines and Planes Resource: Glencoe Geometry (2010) Section 1-1 (pgs 5- 12) Objectives: SWBA to identify and model points, lines and planes. SWBA to identify intersecting lines and planes. Duration: 2 Days	Undefined term Point Line Plane Collinear Coplanar Intersection Definition Defined term Space	G.2.1.2-Solve problems using analytic geometry. G.2.1.2.1-Calculate the distance and/or midpoint between two points on a number line or on a coordinate plane.
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and	How can you use coordinates and algebraic techniques to represent interpret, and verify geometric relationships?	Concept: Analytic Geometry	Competencies: Use coordinates and algebraic techniques to interpret, represent, and verify	Linear Measure Resource: Glencoe Geometry (2010) Section 1-2 (pgs 14- 21) Objectives: SWBA to measure segments. SWBA to calculate with	Line segment Betweenness of points Between Congruent	G.2.1.2-Solve problems using analytic geometry. G.2.1.2.1-Calculate the distance and/or midpoint between two points on a number line or on a coordinate plane.

	structures in many equivalent forms.			geometric relationships	measures. Duration: 2 Days	segments Construction	
	Numbers, measures, expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	How can you use coordinates and algebraic techniques to represent interpret, and verify geometric relationships?	Analytic Geometry	Use coordinates and algebraic techniques to interpret, represent, and verify geometric relationships	Distance and Midpoint – Resource: Glencoe Geometry (2010) Section 1-3 (pgs 25- 35) – Objectives: SWBA to find the distance between two points. SWBA to find the midpoint of a segment. Duration: 2 Days	Distance Midpoint Segment bisector	G.1.2.1-Recognize and/or apply properties of angles, polygons, and polyhedra. G.1.2.1.2-Identify and/or use properties of quadrilaterals.
	Spatial reasoning and visualization are ways to orient thinking about the physical world.	How can you explain the relationship between congruence and similarity in both 2- and 3-dimensional figures?	2- and 3-dimensional figures	Define, describe, and analyze 2- and 3-dimensional figures, their properties and relationships, including how a change in one measurement will affect other measurements of that figure.	Angle Measure Resource: Glencoe Geometry (2010) Section 1-4 pgs 36 - 44) Objectives: -SWBA to measure and classify angles- SWBA to identify and use congruent angles and the bisector of an angle. Duration: 2 days	Angle Side Vertex Interior Exterior Degree Right angle Acute angle Obtuse angle Angle bisector	G.2.2.1-Use and/or compare measurements of angles. G.2.2.1.1-Use properties of angles formed by intersecting lines to find the measures of missing angles.

	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can you use coordinates and algebraic techniques to represent, interpret, and verify geometric relationships?	2- and 3-dimensional figures	Use concepts of congruence and similarity to relate and compare 2- and 3-dimensional figures, including trigonometric ratios.	Pythagorean Theorem and its Converse- Suggested Text-Glencoe Geometry (2010) Section 8-2 (pgs 541 - 551) Objectives: SWBA to use the Pythagorean Theorem. - SWBA to use the Converse of the Pythagorean Theorem. Duration 2 Days	Pythagorean triple	G.2.1.1-Solve problems involving right triangles. G.2.1.1.1-Use the Pythagorean theorem to write and/or solve problems involving right triangles.
	There are some mathematical relationships that are always true and these relationships are used as the rules of arithmetic and algebra and are useful for writing equivalent forms of expressions and solving equations and inequalities.	How can you use coordinates and algebraic techniques to represent, interpret, and verify geometric relationships?	Trigonometric Ratios	Use concepts of congruence and similarity to relate and compare 2- and 3-dimensional figures, including trigonometric ratios.	Special Right Triangle- Suggested Text-Glencoe Geometry (2010) Section 8-3 (pgs 552 - 560)- Objectives: SWBA to use the properties of 45-45-90 triangle. - SWBA to use the properties of 30-60-90 triangle. Duration:3 Days	Special Right Triangles	G.2.1.1-Solve problems involving right triangles. G.2.1.1.2-Use trigonometric ratios to write and/or solve problems involving right triangles.
	Review Common Assessment Unit 11 Preparing for Geometry Duration: 1 Day						
Unit 11 15 days	Common Assessment Unit 11 Preparing for Geometry Duration: 1 Day						

1.	**Make Ups, Collect Books and Materials**
During the course of the year, we will have at least 6 days scheduled for the use of the Classroom Diagnostic Tool for this course. Since these dates have not been scheduled, there may need to be adjustment to the day to day schedule when these testing dates are schedules in. Also, there needs to be 4 days build in for the PSSA or Keystone Exams. These 10 days will need to be distributed throughout the year thus totaling 180 instructional days.	