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	Numbers, measures,	Relations and functions are	Analysis of one and	Use algebraic properties and	Variables and expressions Resources:	Algebraic	2.5.A1.B-Use symbols, mathematical terminology, standard notation,
13 Days	expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	mathematical relationships that can be represented and analyzed using words, tables, graphs, and equations.	two variable (univariate and bivariate) data	processes in mathematical situations and apply them to solve real world problems.	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. SWBA to write algebraic expressions.	Expression Variable Term Factor Product Power Exponent Base	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.	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.	Duration: 2 Days 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.

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.	SWBA to write repeating decimals as fractions. SWBA to simplify square roots. SWBA to estimate square roots. Duration: 1 Day 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	Irrational number Real Number Graph coordinate Equivalent expressions Additive identity Multiplicative identity Multiplicative inverse Reciprocal	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. 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
Numbers,	Relations and	Algebraic	Use algebraic	Adding and Subtracting		algebra. Standard:
measures,	functions and	properties	properties and	Rational Numbers		2.2.A1.C Evaluate numerical
expressions,	mathematical	and	processes in			expressions that include the four
equations, and	relationships	processes	mathematical	Resource:		basic operations and operations of
inequalities can	that can be	p. 0000000	situations and	Glencoe Algebra1		powers and roots, reciprocals,
represent	represented and		apply them to	Section 0-4		opposites, and absolute value
mathematical	analyzed using		solve real	(pgs P13-P16)		opposites, and absolute value
situations and	words, tables,		world	(MP2 1 13-1 10)		Assessment Anchor:

structures in many equivalent forms. graphs, and equivalent forms. problems. problems. Pearson Algebra 1 Section 1-5 (pgs 30-36) Numbers and Expressions.	
equivalent forms. equations. Section 1-5 (pgs 50-56) Numbers and Expressions.	
Objectives: Anchor Descriptor:	
A1.1.1.1 Represent and/or use	
SWBA to add and subtract numbers in equivalent forms (e.g	σ
rational numbers with like and integers, fractions, decimals,	ر.5
unlike denominators. percents, square roots, and	
SWBA to compare and order exponents).	
rational numbers from least	
to greatest. Eligible Content:	
A1.1.1.1 Compare and/or orde	er
Duration:1 Day any real numbers (rational and	
irrational may be mixed).	
Numbers, Relations and Algebraic Use algebraic Multiplying and Dividing Multiplicative Standard:	
measures, functions are properties properties and Rational Numbers inverse 2.2.A1.C Evaluate numerical	
expressions, mathematical and processes in expressions that include the four	
equations, and relationships processes mathematical Resource:GlencoeAlgebra1 reciprocals basic operations and operations	of
inequalities can that can be situations and Section 0-5 powers and roots, reciprocals,	
represent represented and apply them to (pgs P13-P16) opposites, and absolute value	
mathematical analyzed using solve real	
situations and words, tables, world Pearson Algebra 1 Assessment Anchor:	
structures in many graphs, and problems. Section 1-6 (pgs 38-44) A1.1.1 Operations with Real	
equivalent forms. equations. Numbers and Expressions.	
Objectives:	
Anchor Descriptor:	
SWBA to name the reciprocal A1.1.1.1 Represent and/or use	
(multiplicative inverse) of numbers in equivalent forms (e.g	z.,
fractions and mixed numbers. integers, fractions, decimals,	
SWBA to multiply and divide percents, square roots, and	
rational numbers. exponents).	
Duration: 1 Day Eligible Content:	
A1.1.1.1 Compare and/or order	er
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 Re	lationships Betwe	en Quantities Duration: 1 Day		
Unit 1 13 Days		Common Assessm	ent Unit 1 Pre-	Algebra Relations	hips Between Quantities Duratio	n: 1 Day	
			Unit 2 L	inear 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	graph, and	multiple	processes in	Glencoe-Algebra 1	expressions, equations, and
15 Days	relationships that	interpret linear	representati	mathematical	Section 2-1 (pgs 75- 81)	inequalities in two or more variables,
	can be represented	equations and	ons	situations and	Section 2-1 (pgs 75-81)	systems of equations, and
	and analyzed using	inequalities to	0113	apply them to	Pearson-Algebra 1	inequalities, and functional
	words, tables,	model		solve real	Section 1-8 (pgs 53-58)	relationships that model problem
		relationships		world	3ection 1-6 (pgs 33-36)	situations.
	graphs, and	•			Ohioatiwas	
	equations.	between		problems.	Objectives:	A1.1.2.1-Write, solve, and/or graph
		quantities?			SWBA to translate sentences	linear equations using various
				Represent	into equations.	methods.
				functions	SWBA to translate equations	A1.1.2.1.1-Write, solve, and/or apply
				(linear and	into sentences.	a linear equation (including problem
				non-linear) in		situations
				multiple ways,	Duration: 2 Days	
				including		
				tables,		
				algebraic		
				rules, graphs,		
				and contextual		
				situations and		
				make		
				connections		
				among these		
				representation		
				s. 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 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 representati ons	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 representati ons	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.	between		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.	equations and inequalities to model relationships between	Linear relationship s: 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

There are som mathematical relationships t are always true these relations are used as the rules of arithm and algebra ar useful for writi equivalent for expressions an solving equalitie and inequalities.	write, solve, graph, and interpret linear equations and inequalities to model relationships between quantities?	Linear relationship s: 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	Identify	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. 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
				the variable on each side.		A1.1.2.1.2-Use and/or identify an
				SWBA to solve equations involving grouping symbols.		algebraic property to justify any step in an equation solving process. Note:
				Duration: 4 Days		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 som mathematical	e 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 relationship s: 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 Lir	near 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 representati ons	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	methods.
functions Duration: 1 Day	A1.1.2.1.1-Write, solve, and/or apply
(linear and	a linear equation (including problem
non-linear) in	situations
multiple ways,	
including	
tables,	
algebraic	
rules, graphs,	
and contextual	
situations and	
make	
connections	
among these	
representation	
s. 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	

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

	William 2 Common Association	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.
Kevie	w Unit 3 Common Asses	sment 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
for Units 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 representati ons	Represent functions (linear and non-linear) in multiple ways, including tables, algebraic rules, graphs, and contextual situations and make connections among these representation s Choose the appropriate functional representation to model a real world situation and solve	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

Relations and functions are mathematical relationships tha can be represent		Functions and multiple representati ons	relating to that situation. Represent functions (linear and non-linear) in multiple ways,	Nonlinear Functions Resources: Glencoe-Algebra 1 Section 1-6 (pgs 38- 44)	Coordinate System Coordinate plane	2.8.A1.C-Identify and represent patterns algebraically and/or graphically. A1.2.1.1-Analyze and/or use patterns or relations.
and analyzed usi words, tables, graphs, and equations.	inequalities to model relationships between quantities?		including tables, algebraic rules, graphs, and contextual situations and	Objectives: SWBA to determine whether a relation is a function.	x-and y-axes origin ordered pair	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
			make connections among these representation s.	SWBA to Find Domain and range and use function notation. SWBA to represent functions as ordered pairs, tables, graphs and mappings.	x and y coordinates relation domain	presented as ordered pairs, a graph, or a table).
				SWBA to interpret graphs of relations.	range	
				Duration: 2 Days	independent variable	
					dependent variable Function	
					Notation Vertical Line Test	
Relations and functions are mathematical	How do you write, solve, graph, and	Functions and multiple	Relations and functions are mathematical	Graphing a Function Rule Resources:	Continuous graph	2.8.A1.C-Identify and represent patterns algebraically and/or graphically.
relationships tha can be represent	•	representati ons	relationships that can be	Pearson-Algebra 1 Section 4-4 (pgs 253-259)	Discrete graph	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 representati ons	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 representati ons	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.
	quantities:		and equations.			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
5.1					_	equation).
Relations and	How do you	Functions	Represent	Arithmetic Sequences as	Sequence	2.8.A1.C-Identify and represent
functions are	write, solve,	and	functions	linear Functions		patterns algebraically and/or
mathematical	graph, and	multiple	(linear and	Resources:	Terms	graphically.
relationships that	interpret linear	representati	non-linear) in			2.8.A1.D-Demonstrate an
can be represented	equations and	ons	multiple ways,	Glencoe Algebra 1	Arithmetic	understanding and apply properties
and analyzed using	inequalities to		including	Section 3-5 (pages 187-193)	sequence	of functions (domain, range) and
words, tables,	model	Linear	tables,			characteristics of linear functions.
graphs, and	relationships	relationship	algebraic	Pearson-Algebra 1	Common	A1.2.1.2-Interpret and/or use linear
equations.	between	s: Equation	rules, graphs,	Section 4-7 (pgs 274-281)	Difference	functions and their equations,
	quantities?	and	and contextual	Section 4-3 (pgs. 246-251)		graphs, or tables.
		inequalities	situations and			A1.2.1.2.1-Create, interpret, and/or
		in one and	make	Objectives:		use the equation, graph, or table of a
		two	connections			linear function.
		variables	among these	SWBA to recognize arithmetic		A1.2.1.2.2-Translate from one
			representation	sequences.		representation of a linear function to
		Algebraic	s. Choose the			another (i.e., graph, table, and
		properties	appropriate	SWBA to relate arithmetic		equation).
		and	functional	sequences to linear functions.		
		processes	representation			
		processes	to model a	SWBA to identify and extend		
			real world	patterns in sequence		
			situation and			
			solve	Duration:2 Days		
			problems			
			relating to that			
			situation.			
			Write, solve,			
			graph, and			
			interpret			

				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	Degree and direction of linear	How do you write, solve,	Analysis of one and	Write, solve, graph, and	Rate of Change and Slope Resources:	Rate of Change	2.8.A1.D-Demonstrate an understanding and apply properties					

			properties and processes		SWBA to find slope. SWBA to find rates of change from tables.		use constant rates of change. A1.2.2.1.2-Apply the concept of linear rate of change (slope) to solve
					SWBA to use rate of change to solve problems. Duration: 2 Days		problems.
func math relat can I and word grap	ctions are thematical ationships that be represented analyzed using rds, tables, phs, and ations.	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 representati ons Linear relationship s: 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.

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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	How do you	Linear	Write, solve,	Graphing Inequalities in Two	Boundary	2.8.A1.B-Evaluate and simplify not
	•			Variables	Boundary	• •
functions are	write, solve,	relationship	graph, and			understood algebraic expressions
mathematical	graph, and	s: Equation	interpret	Resources:	Half-plane	and solve and graph linear equations
relationships that	interpret linear	and	linear	Glencoe-Algebra 1		and inequalities.
can be represented	equations and	inequalities	equations and	Section 5-6 (pgs 315-320)	Closed half-	2.8.A1.E-Use combinations of
and analyzed using	inequalities to	in one and	inequalities to		plane	symbols and numbers to create
words, tables,	model	two	model	Pearson-Algebra 1		expressions, equations, and
graphs, and	relationships	variables	relationships	Section 6-5 (pgs394-399)	Open half-plane	inequalities in two or more variables,
equations.	between		between		Open nan plane	systems of equations, and
	quantities?		quantities.	Objectives:		inequalities, and functional
				SWBA to graph linear		relationships that model problem
				inequalities on a coordinate		situations.
				plane.		A1.1.3.2-Write, solve, and/or graph
				SWBA to solve inequalities by		systems of linear inequalities using
				graphing.		various methods.
				SWBA to use linear		A1.1.3.2.1-Write and/or solve a
				inequalities when modeling		system of linear inequalities using
				real-world situations.		graphing. Note: Limit systems to two
						linear inequalities.
				Duration: 2 Days		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	How do you	Linear	Write, solve,	Parallel and Perpendicular	Parallel lines	2.8.A1.C-Identify and represent
functions are	write, solve,	relationship	graph, and	Lines		patterns algebraically and/or
mathematical	graph, and	s: Equation	interpret	Resources:	Perpendicular	graphically.
relationships that	interpret linear	and	linear	Glencoe-Algebra 1	lines	2.8.A1.D-Demonstrate an
can be represented	equations and	inequalities	equations and	Section 4-4 (pgs 237-243)	illies	understanding and apply properties
and analyzed using	inequalities to	in one and	inequalities to	3cction 4 4 (pg3 237 243)		of functions (domain, range) and
words, tables,	model	two	model	Pearson-Algebra 1		characteristics of linear functions.
graphs, and	relationships	variables	relationships	Section 5-6 (pgs 330-335)		2.9.A1.A-Use algebraic techniques to
equations.	between	variables	between	3ection 3-0 (pgs 330-333)		determine if two lines are parallel
equations.				Objectives		and / or perpendicular.
	quantities?		quantities	Objectives:		
				CMDA to determine whather		2.9.A1.C-Use techniques from
				SWBA to determine whether		coordinate geometry to establish
				lines are parallel		properties of lines and 2-
				perpendicular or neither.		dimensional shapes and solids.
				SWBA to write an equation of		2.11.A1.B-Describe rates of change

				Divides	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.
direct association	ction of linear ciation	How can we use univariate and bivariate data to analyze	Analysis of one and two variable	Display, analyze, and make predictions	Scatter Plots and Lines of Fit (Trend Lines) Resources:	Bivariate data Scatter plot	2.6.A1.C-Select or calculate the appropriate measure of central tendency, calculate and apply the interquartile range for one-variable
varia	ables is surable	relationships and make predictions?	(univariate and bivariate)	using univariate and bivariate data.	Glencoe-Algebra 1 Section 4-5 (pgs 245-251) Pearson-Algebra 1	Line of fit Linear	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-Analyze data, make predictions, and/or answer			
			Duration: 4 Days		questions, 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
	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	systems to two linear equations. 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
Thomas	Have de very	Lincon	Mathematica	Elizabeta a via Addition	Elizabeta	problems in the context of the problem situation. Note: Limit systems to two linear equations.
There are some mathematical relationships that	How do you write, solve, and interpret	Linear system of equations	Write, solve, and interpret systems of two	Elimination using Addition and Subtraction	Elimination	2.8.A1.E-Use combinations of symbols and numbers to create expressions, equations, and
are always true and these relationships are used as the	systems of two linear equations and inequalities	and inequalities	linear equations and inequalities	Resources: Glencoe-Algebra 1 Section 6-3 (pgs 348-354)		inequalities in two or more variables, systems of equations, and inequalities, and functional
rules of arithmetic and algebra and are useful for writing	using graphing and algebraic techniques?		using graphing and algebraic techniques	Pearson-Algebra 1 Section 6-3 (pgs 378-384)		relationships that model problem situations. 2.8.A1.F-Interpret the results of
equivalent forms of expressions and solving equations				Objectives:		solving equations, inequalities, systems of equations, and systems of inequalities in the context of the
and inequalities.				SWBA to solve systems of equations elimination with addition.		situation that motivated the model. A1.1.2.2-Write, solve, and/or graph systems of linear equations using
				SWBA to solve systems of equations by elimination with		various methods. A1.1.2.2.1-Write and/or solve a
				subtraction. Duration:2 Days		system of linear equations (including problem situations) using graphing, substitution, and/or elimination.

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-	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. 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.
				problems involving systems of equations.		A1.1.2.2.1-Write and/or solve a system of linear equations (including problem situations) using graphing, substitution, and/or elimination.
				Duration: 3 Days		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	How do you	Linear	Write, solve,	Systems of Inequalities	Systems of	2.8.A1.E-Use combinations of
functions are	write, solve, and	system of	and interpret	Resources:	inequalities	symbols and numbers to create
mathematical	interpret	equations	systems of two	Glencoe-Algebra 1		expressions, equations, and
relationships that	systems of two	and	linear	Section 6-8 (pgs 383-386)		inequalities in two or more variables,
can be represented	linear equations	inequalities	equations and			systems of equations, and
and analyzed using	and inequalities		inequalities	Pearson-Algebra 1		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 C	ommon As	sessment Ur	nit 6 Systems of Equatio	ns and Inequa	lities				
	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	algebraic properties and processes are extensions of arithmetic properties and processes, and how can we use algebraic properties and	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.		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.
	and inequalities.	processes to solve problems?			SWBA to subtract polynomials. 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.	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 representati ons	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. A1.1.5.1-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. A1.1.5.1-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	multiplied by a trinomial.					
			Duration: 2 Days						
	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	There are some	How can we	Algebraic	Use algebraic	Factoring and Quadratic	Factored form	2.1.A1.E-Apply the concepts of prime
	mathematical	show that	properties	properties and	Equations		and composite monomials to
20 Days	relationships that	algebraic	and	processes in	Resources	Greatest	determine GCFs (Greatest Common
	are always true and	properties and	processes	mathematical	GlencoeAlgebra 1 (old)	common factor	Factor) and LCMs (Least Common
	these relationships	processes are		situations and	Section 9-1		Multiple) of monomials.
	are used as the	extensions of		apply them to	Glencoe-Algebra 1(2010)	Least Common	2.8.A1.B-Evaluate and simplify not
	rules of arithmetic	arithmetic		solve real	Section 8-1(pgs 471 -474)	Multiple	understood algebraic expressions
	and algebra and are	properties and		world	Section 8-2 (pgs.476-482)		and solve and graph linear equations
	useful for writing	processes, and		problems.	Pearson-Algebra 1		and inequalities.
	equivalent forms of	how can we use			Section 8-2 (pgs 492-496)		A1.1.1.2-Apply number theory
	expressions and	algebraic					concepts to show relationships
	solving equations	properties and			Objectives:		between real numbers in problem
	and inequalities.	processes to			SWBA to factor monomials.		solving settings.
		solve problems?			SWBA to find the greatest		A1.1.1.2.1-Find the Greatest
					common factor of monomials.		Common Factor (GCF) and/or the
					SWBA to find the Least		Least Common Multiple (LCM) for

				common Multiple.		sets of monomials.
There are some	How can we	Algebraic	Use algebraic	Duration: 3 Days Using the Distributive	Factoring	2.8.A1.B-Evaluate and simplify not
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.	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?	properties and processes	properties and processes in mathematical situations and apply them to solve real world problems.	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 by grouping Zero Product Property	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	How can we	Algebraic	Use algebraic	Quadratic Equations:	Difference of	2.1.A1.E-Apply the concepts of prime
mathematical	show that	properties	properties and	Difference of Two Squares	two squares	and composite monomials to
relationships that	algebraic	and	processes in	Resources:		determine GCFs (Greatest Common
are always true and	properties and	processes	mathematical	Glencoe-Algebra 1 2010		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		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
				are the difference of two squares. SWBA to use the difference of two squares to solve equations. Duration: 2 Days		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	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
				involving perfect square trinomials.		sets of monomials. A1.1.1.5-Simplify expressions

Unit 8	SWBA to simplify rational expressions. Duration:3 Days Review Common Assessment Unit 8 Factoring Duration: 1 Day								
	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.	Duration:2 Days 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	Rational expression	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. 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.		

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	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-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	How can we show that algebraic properties and processes are extensions of arithmetic properties and	Algebraic properties and processes	Use algebraic properties and processes in mathematical situations and apply them to solve real world	expressions by using rational exponents. Duration: 3 Days Simplifying Radical Expressions Resources: Glencoe-Algebra 1 (20100 Section 10-2 (pgs 612 -617) Glencoe Algebra 1 (2012) Section 10-2 (pgs. 628-6330	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-Represent and/or use
	useful for writing equivalent forms of	processes, and how can we use		problems.	Pearson Algebra 1		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). A1.1.1.2-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	Bivariate data can	How can we use	Analysis of	Display,	Simple Probability and Odds	Probability	2.6.A1.A-Design and conduct an
	be modeled with	univariate and	one and	analyze, and	Resources:		experiment using random sampling.
10 days	mathematical	bivariate data to	two	make	Glencoe-Algebra 1	Sample space	A1.2.3.2-Use data displays in
	functions that	analyze	variable	predictions	Section 0-11 (pgs P33-P36)		problem solving settings and/or to
	approximate the	relationships	(univariate	using		Equally likely	make predictions.
	data well and help	and make	and	univariate and	Pearson-Algebra 1	, , ,	A1.2.3.2.1-Estimate or calculate to
	us make predictions	predictions?	bivariate)	bivariate data.	Section 12-7 (pgs 769-774)	Tree diagram	make predictions based on a circle,
	based on the data.		data			_	line, bar graph, measures of central
					Objectives	Odds	tendency, or other representations.
					Objectives:		A1.2.3.2.2-Analyze data, make
					SWBA to find the probability and odds of simple events.	Complements	predictions, and/or answer
					SWBA to find theoretical and		questions based on displayed data (box-and-whisker plots, stem-and-
					experimental probability.		leaf plots, scatter plots, measures of
					experimental probability.		central tendency, or other
					Duration: 1 Day		representations).
	Bivariate data can	How can we use	Analysis of	Display,	Mean, Median, Mode, Range	Measures of	2.6.A1.C Select or calculate the
	be modeled with	univariate and	one and	analyze, and	and Quartiles	central tendency	appropriate measure of central
	mathematical	bivariate data to	two	make		·	tendency,
	functions that	analyze	variable	predictions	Resources:	Mean	Calculate and apply interquartile
	approximate the	relationships	(univariate	using	Glencoe-Algebra 1		range for one variable data, and

data well and help	and make	and	univariate and	Section 0-12 (pgs P37-P39)	Median	
us make predictions	predictions?	bivariate)	bivariate data.	Section 0-12 (pg3 1 37-1 33)	Iviculan	construct a line
based on the data.	predictions.	data	Sivariate data.	Pearson-Algebra 1	Mode	A1.2.3 Data Analysis
				Section 12-3 (pgs 738-744)		A1.2.3.1 Use measures of
				(PBC CCC)	Measures of	dispersion to describe a set of data.
				Objectives:	variation	A1.2.3.2 Use data displays in
				SWBA to calculate the		problem solving settings and/or to
				measure of central tendency	Range	make predictions.
				of a set of data.		A1.2.3.3 Apply probability to
					Quartiles	practical situations.
				Duration: 1 Day		A1.2.3.1.1 Calculate and/or
					Lower quartile	interpret the range, quartiles and
						interquartile range of data
					Upper quartile	A1.2.3.2.2 Analyze data, make
					Measures of	predictions, and/or answer
					dispursion	questions based on displayed data
						(box and whisker plots, stem and
					Outlier	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	How can we use	Analysis of	Display,	Representing Data	Frequency table	2.6.A1.A-Design and conduct an
be modeled with	univariate and	one and	analyze, and	Resources:	, , , , , , , ,	experiment using random sampling.
mathematical	bivariate data to	two	make		Bar graph	A1.2.3.2-Use data displays in
functions that	analyze	variable	predictions	Glencoe-Algebra 1	Bui Brupii	problem solving settings and/or to
approximate the	relationships	(univariate	using	Section 0-13 (pgs P41-P43)	Histogram	make predictions.
data well and help	and make	and	univariate and	,,	instogram	A1.2.3.2.1-Estimate or calculate to
us make predictions	predictions?	bivariate)	bivariate data.		Lina Cranh	make predictions based on a circle,
based on the data.		data		Pearson-Algebra 1	Line Graph	line, bar graph, measures of central
				Section 12-2 (pgs 732-737)	Champan - Llf	tendency, or other representations.
					Stem and leaf	A1.2.3.2.2-Analyze data, make
				Objectives:		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,

	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.	Pearson Algebra 1 Section 12-6 (pgs. 762-768) Objectives: SWBA to use permutations. SWBA to use combinations. Duration: 2 Days 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	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. 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		Tes	t Common	Assessment	Unit 10 Data Analysis	Duration: 1 D	ау			

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	Numbers, measures,	How can you use coordinates and	Concept: Analytic	Competencies: Use	Points, Lines and Planes Resource: Glencoe Geometry	Undefined term	G.2.1.2-Solve problems using analytic geometry.
15 days	expressions, equations, and inequalities can represent mathematical situations and structures in many equivalent forms.	algebraic techniques to represent interpret, and verify geometric relationships?	Geometry	coordinates and algebraic techniques to interpret, represent, and verify geometric relationships	(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	Point Line Plane Collinear Coplanar Intersection Definition Defined term Space	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.	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	How can you explain the relationship between	2- and 3- dimensional figures	Define, describe, and analyze 2- and 3-dimensional	Duration: 2 Days Angle Measure Resource: Glencoe Geometry (2010) Section 1-4	Angle Side	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
physical world.	congruence and similarity in both 2- and 3- dimensional		figures, their properties and relationships, including how	pgs 36 - 44) Objectives: -SWBA to measure and classify angles- SWBA to	Vertex Interior	the measures of missing angles.
	figures?		a change in one measurement will affect other	identify and use congruent angles and the bisector of an angle. Duration: 2 days	Exterior Degree Right angle	
			measurements of that figure.		Acute angle Obtuse angle	
					Angle bisector	

	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?	Trigonomet ric 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						

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.

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