

Grade Level(s) <u>HS</u>	Course <u>Algebra I A</u>	Date Last Revised <u>April 21, 2010</u>
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Pacing <i>Year, Month or Week (length of time)</i>	Curriculum Focus				Instructional Strategies & Activities <i>Interventions, accommodations, technology integration (required & supplemental materials)</i>	Resources <i>Various resources used to support student learning (i.e.), technology, media, required & supplemental materials.</i>	Assessments <i>Types: classroom, rubrics, common grade level, formative, subjective, evidence used to measure performance & skills</i>
	GLCE/HSCE Aligned Standard/Benchmark <i>Include Code (ie: N.ME.04.05), Description/Objective</i>	Unit(s) or Topic(s)	Student Skills	Vocabulary Words To Know Content & Academic <i>Not limited to list but shows relationship to content/topic</i>			
Weeks 1 of 12 Review Pre-Algebra Skills		0-3: The Coordinate Plane	Identify points in the coordinate plane. Graph points in the coordinate plane.	Origin Coordinate plane Point Ordered pair		Textbook	None
		0-7: Prime and Composite Numbers	Use divisibility rules to find all factors of a given number. Identify numbers as prime or composite.	Factor Divisible Composite number Prime number		Textbook	None
		0-8: Factoring	Write the prime factorization of a number.	Prime factorization		Textbook	None
		0-9: GCF and LCM	Find the GCF of two or more numbers. Find the LCM of two or more numbers.	Greatest Common Factor (GCF) Least Common Multiple (LCM)		Textbook	None

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Weeks 1-2 of 12	A1.1.1	1-1: Variables and Expressions	Write an algebraic expression from a verbal description Evaluate algebraic expressions given values for the variables	<ul style="list-style-type: none"> • Variable • Constant • Numerical expression • Algebraic expression • Evaluate 	<ul style="list-style-type: none"> • Partner-pairs • Board review • Demonstrations <ul style="list-style-type: none"> ○ Taking notes ○ Example problems • After-school tutorial • Direct instruction • Daily practice problems • Practice testing • Create multiplication tables. 	<ul style="list-style-type: none"> • Textbook • PowerPoint lessons on projector • Practice, Reteach, Reading Strategies and Challenge activities • Know-it-Notebook • Pinnacle Parent-Viewer • Internet help • Scientific calculator • Rope • Overhead projector • Vocabulary Definition Worksheet • Algebra Squares • Probability Kit • Geometric Solids 	<ul style="list-style-type: none"> • 5-minute quizzes • Teacher observation • Self-checked assignments • Teacher-checked assignments • Notebook checks • Formative assessments • Summative assessments • Multiplication table warm-up
	L1.1.2 L1.1.5	1-2: Adding and Subtracting Real Numbers	Add real numbers. Subtract real numbers.	<ul style="list-style-type: none"> • Absolute value • Opposites • Additive inverse 	<ul style="list-style-type: none"> • 		
	L1.1.2 L1.1.4	1-3: Multiplying and Dividing Real Numbers	Multiply real numbers. Divide real numbers.	<ul style="list-style-type: none"> • Reciprocal • Multiplicative inverse 			
	A1.1.2 A1.1.3 L1.1.6	1-4: Powers and Exponents	Evaluate expressions containing exponents.	<ul style="list-style-type: none"> • Power • Base • Exponent 			
	A1.1.2 A1.2.9 L1.1.1 L1.1.5 L1.1.6 L3.1.3	1-5: Square Roots and Real Numbers	Evaluate expressions containing square roots. Classify numbers within the real number system.	<ul style="list-style-type: none"> • Square root • Perfect square • Real numbers • Natural numbers • Whole numbers • Integers • Rational numbers • Terminating decimal • Repeating decimal • Irrational number 			

	A1.1.2	1-6: Order of Operations	Use the order of operations to simplify expressions.	<ul style="list-style-type: none"> • Order of operations 			
	L1.1.1 L1.1.3	1-7: simplifying Expressions	Use the Commutative, Associative, and Distributive Properties to simplify expressions. Combine like terms	<ul style="list-style-type: none"> • Term • Like term • Coefficient 			
	A1.1.1	1-8: Introduction to Functions	Graph ordered pairs in the coordinate plane. Graph functions from ordered pairs.	<ul style="list-style-type: none"> • Coordinate plane • Axes • Origin • X-axis • Y-axis • Ordered pair • X-coordinate • Y-coordinate • Quadrant • Input • Output 			

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Weeks 3-4 of 12	A2.2.3 L1.1.1 L1.1.2	2-1: Solving Equations by Adding & Subtracting	Solve 1-step equations in 1 variable by using addition or subtraction	<ul style="list-style-type: none"> Equation Solution of an equation 	<ul style="list-style-type: none"> Partner-pairs Board review Demonstrations <ul style="list-style-type: none"> Taking notes Example problems After-school tutorial Direct instruction Daily practice problems Practice testing Create multiplication tables. 	<ul style="list-style-type: none"> Textbook PowerPoint lessons on projector Practice, Reteach, Reading Strategies and Challenge activities Know-it- Notebook Pinnacle Parent- Viewer Internet help Scientific calculator Rope Overhead projector Vocabulary Definition Worksheet 	<ul style="list-style-type: none"> 5-minute quizzes Teacher observation Self-checked assignments Teacher-checked assignments Notebook checks Formative assessments Summative assessments Multiplication table warm-up
	A2.2.3 L 1.1.1 L1.1.2 L1.1.4	2-2: Solving Equations by Multiplying or Dividing	Solve 1 step equations in 1 variable by using multiplication or division	<ul style="list-style-type: none"> 			
	A1.1.1 A1.1.3	2-3: Solving 2 step & multi-step equations	Solve equations in 1 variable that contain more than 1 operation	<ul style="list-style-type: none"> 			
	A1.2.8 L1.1.3 L3.3.2	2-4: Solving Equations w/Variable on Both Sides	Solve equations in 1 variable that contain variable terms on both sides	<ul style="list-style-type: none"> Identity Contradiction 			
	A1.1.1 A2.2.3	2-5: Solving for a Variable	Solve a formula for a given variable. Solve an equation in 2 or more variable for 1 of the variables.	<ul style="list-style-type: none"> Formula Literal equation 			
	A1.2.4 L1.2.2	2-Extension: Solving Absolute-Value Equations	Solve equations in 1 variable that contain absolute-value expressions	<ul style="list-style-type: none"> Absolute Value 			
	L2.3.1 L2.3.2	2-6: Rates. Ratios & Proportions	Write & use ratios, rates & unit rates.	<ul style="list-style-type: none"> Ratio Rate Scale Unit Rate Conversion Factor Proportion Cross Products Scale Drawing Scale Model 			
	L1.1.6 L2.3.2	2-7: Application of Proportions	Use proportions to solve problems involving geometric figures. Use proportions & similar figures to measure objects indirectly.	<ul style="list-style-type: none"> Similar Corresponding Sides Corresponding Angles Indirect Measurement Scale factor 			
	L1.1.3	2-8: Percents	Solve problems involving percents	<ul style="list-style-type: none"> Percent 			

	A1.2.3	2-10: Percent Increase & Decrease	Find percent increase & decrease	<ul style="list-style-type: none">• Percent change• Percent increase• Percent decrease• Discount• Markup			
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Weeks 5-6 of 12	A1.2.1 L1.2.2 L1.2.1	3-1: Graphing & Writing Inequalities	Identify solutions of inequalities in one variable Write & graph inequalities in 1 variable	Inequality Solution of an inequality	<ul style="list-style-type: none"> • Partner-pairs • Board review • Demonstrations <ul style="list-style-type: none"> ○ Taking notes ○ Example problems • After-school tutorial • Direct instruction • Daily practice problems • Practice testing • Create multiplication tables. • 	<ul style="list-style-type: none"> • Textbook • PowerPoint lessons on projector • Practice, Reteach, Reading Strategies and Challenge activities • Know-it-Notebook • Pinnacle Parent-Viewer • Internet help • Scientific calculator • Rope • Overhead projector • Vocabulary Definition Worksheet • 	<ul style="list-style-type: none"> • 5-minute quizzes • Teacher observation • Self-checked assignments • Teacher-checked assignments • Notebook checks • Formative assessments • Summative assessments • Multiplication table warm-up
	A1.1.1 L1.2.1 A1.2.1	3-2: Solving Inequalities by Adding or Subtracting	Solve 1-step inequalities by using addition Solve 1-step inequalities by using subtraction				
	A1.1.1 L1.1.1 L1.2.1 A1.2.1	3-3: Solving Inequalities by Multiplication or Division	Solve 1-step inequalities by using multiplication. Solve 1-step inequalities by using division				
	A1.1.1 A1.2.1 A1.2.3	3-4: Solving 2-Step & Multi Step Inequalities	Solve inequalities that contain more than 1 operation				
	A1.1.1 L3.3.2 A1.2.1	3-5 Solving Inequalities w/Variable on Both Sides	Solve inequalities that contain variable terms on both sides				
	L3.2.2	3-6: Solving Compound Inequalities	Solve compound inequalities in 1 variable Graph solution sets on compound inequalities in 1 variable	Compound inequality Intersection Union			
	A1.2.4	3-Extension: Solving Absolute-Value Inequalities	Solve inequalities in 1 variable involving absolute-value expressions				

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Weeks 7-8 of 12	A21.1 A2.1.2 A2.1.4	4-2: Relations & Functions	Identify functions. Find the domain & range of relations & functions.	Relation Domain Range Function	<ul style="list-style-type: none"> • Partner-pairs • Board review • Demonstrations <ul style="list-style-type: none"> ○ Taking notes ○ Example problems • After-school tutorial • Direct instruction • Daily practice problems • Practice testing • Create multiplication tables. 	<ul style="list-style-type: none"> • Textbook • PowerPoint lessons on projector • Practice, Reteach, Reading Strategies and Challenge activities • Know-it-Notebook • Pinnacle Parent-Viewer • Internet help • Scientific calculator • Rope • Overhead projector • Vocabulary Definition Worksheet • 	<ul style="list-style-type: none"> • 5-minute quizzes • Teacher observation • Self-checked assignments • Teacher-checked assignments • Notebook checks • Formative assessments • Summative assessments • Multiplication table warm-up
	A2.1.2 A2.1.3 A2.1.4 A2.15 L1.2.1	4-3: Writing Functions	Identify independent & dependent variables. Write an equation in function notation & evaluate a function for given input values.	Independent variable Dependent variable Function rule Function notation			
	A2.1.3	4-4: Graphing Functions	Graph functions given a limited domain. Graph functions given a domain of all real numbers.				
	A2.1.6 S1.1.1 S2.1.1 S2.1.2 S2.1.3 S2.1.4	4-5: Scatter plots & Trend Lines	Create & interpret scatter plots. Use trend lines to make predictions	Scatter plot Correlation Positive Correlation Negative Correlation No Correlation Trend line			
	L2.2.1**	4-6: Arithmetic sequences	Recognize & extend an arithmetic sequence. Find a given term of an arithmetic sequence.	Sequence Term Arithmetic sequence Common difference			

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Weeks 9-10 of 12	A1.1.1 A2.1.7 A2.4.1 A2.4.2	5-1: Identifying Linear Functions	Identify linear functions and linear equations. Graph linear functions that represent real-world situations and give their domain and range	<ul style="list-style-type: none"> Linear function Linear equation 	<ul style="list-style-type: none"> Partner-pairs Board review Demonstrations <ul style="list-style-type: none"> Taking notes Example problems After-school tutorial Direct instruction Daily practice problems Practice testing Create multiplication tables. 	<ul style="list-style-type: none"> Textbook PowerPoint lessons on projector Practice, Reteach, Reading Strategies and Challenge activities Know-it-Notebook Pinnacle Parent-Viewer Internet help Scientific calculator Rope Overhead projector Vocabulary Definition Worksheet Rope Wood stair support 	<ul style="list-style-type: none"> 5-minute quizzes Teacher observation Self-checked assignments Teacher-checked assignments Notebook checks Formative assessments Summative assessments Multiplication table warm-up
		5-2: Using Intercepts	Find x- and y-intercepts and interpret their meanings in real-world situations. Use x- and y-intercepts to graph lines.	<ul style="list-style-type: none"> x-intercept y-intercept 			
	A2.1.7 A2.3.2	5-3: Rate of Change and Slope	Find rates of change and slopes. Relate a constant rate of change to the slope of a line.	<ul style="list-style-type: none"> Rate of change Rise Run Slope 			
	A1.2.9 S2.2.A	5-4: The Slope Formula	Find slope by using the slope formula	<ul style="list-style-type: none"> $m = \frac{y_2 - y_1}{x_2 - x_1}$ 			
	A1.2.1 A3.1.2	5-5: Direct Variation	Identify, write, and graph direct variations.	<ul style="list-style-type: none"> Direct variation Constant of variation 			
	S2.2.1	5-6: Slope-Intercept Form	Write a linear equation in slope-intercept form. Graph a line using slope-intercept form.	<ul style="list-style-type: none"> $y = mx + b$ 			
	A3.1.1	5-7: Point-Slope Form	Graph a line and write a linear equation using point-slope form. Write a linear equation given two points.	<ul style="list-style-type: none"> $y - y_1 = m(x - x_1)$ 			
	A3.1.4	5-8: Slopes of Parallel and Perpendicular Lines	Identify and graph parallel and perpendicular lines. Write equations to describe lines parallel or perpendicular to a given line.	<ul style="list-style-type: none"> Parallel lines Perpendicular lines 			
	A2.1.6 A2.2.2 A2.3.1 A2.3.3 A3.1.2 A3.1.3 A3.2.1 A3.4.3 L2.1.4	5-9: Transforming Linear Functions	Describe how changing slope and y-intercepts affect the graph of a linear function.	<ul style="list-style-type: none"> Family of functions Parent function Transformation Translation Rotation Reflection 			

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Weeks 11-12 of 12	S2.2.1 S2.2.2	6-1: Solving Systems by Graphing	Identify solutions of systems of linear equation in two variables.	<ul style="list-style-type: none"> Systems of linear equations Solution of a system of linear equations 	<ul style="list-style-type: none"> Partner-pairs Board review Demonstrations <ul style="list-style-type: none"> Taking notes Example problems After-school tutorial Direct instruction Daily practice problems Practice testing Create multiplication tables. 	<ul style="list-style-type: none"> Textbook PowerPoint lessons on projector Practice, Reteach, Reading Strategies and Challenge activities Know-it-Notebook Pinnacle Parent-Viewer Internet help Scientific calculator Rope Overhead projector Vocabulary Definition Worksheet 	<ul style="list-style-type: none"> 5-minute quizzes Teacher observation Self-checked assignments Teacher-checked assignments Notebook checks Formative assessments Summative assessments Multiplication table warm-up
	A1.1.3 L1.2.4	6-2: Solving Systems by Substitution	Solve systems of linear equation in two variables by substitution.	<ul style="list-style-type: none"> 			
	A1.1.3 L1.2.4 S2.2.1 S2.2.2	6-3: Solving Systems by Elimination	Solve systems of linear equation in two variables by elimination. Compare and choose an appropriate method for solving systems of linear equations	<ul style="list-style-type: none"> 			
	L1.2.4 L2.1.1	6-4: Solving Special Systems	Solve special systems of linear equation in two variables. Classifying systems of linear equations and determine the number of solutions.	<ul style="list-style-type: none"> Inconsistent system Consistent system Independent system Dependent system 			
	L1.2.2	6-5: Solving Linear Inequalities	Graph and solve linear inequalities in two variables.	<ul style="list-style-type: none"> Linear inequality Solution of a linear inequality 			
	A1.2.3 L1.1.1	6-6: Solving Systems of Linear Inequalities	Graph and solve systems of linear inequalities in two variables.	<ul style="list-style-type: none"> Systems of linear inequalities Solution of a system of linear inequities 			