

8TH GRADE ALGEBRA I CURRICULUM MAP 2007-08

UNITS OF STUDY	STANDARDS, BENCHMARKS, GLCES OR HSCEs	BIG IDEAS / KEY CONCEPTS	ASSESSMENTS		LEARNING STRATEGIES <i>Skills</i>	CONTENT ACTIVITIES <i>Knowledge</i>	VOCABULARY	INSTRUCTIONAL RESOURCES
			FOR LEARNING <i>(Formative)</i>	OF LEARNING <i>(Summative)</i>				
	1 st Trimester							Textbook: Algebra I – MI Edition; Holt, Rinehart, & Winston; 2007 <i>Discovering Algebra Key Curriculum; 2007</i>
UNIT 1 <i>Foundation of Algebra</i> <i>Pacing: 58 days</i>	L1.1.1 Know the different properties that hold in different number systems and recognize that the applicable properties change in the transition from the positive integers to all integers, to the rational numbers, and to the real numbers.	Properties Of Integers And Rational Numbers	Daily Homework Practice Quizzes	End of Term Assessment	Use different models, ie. number of lines and counters to show addition, subtraction, multiplication, and division of integers, rational numbers, and real numbers	Performance of addition, subtraction, multiplication, division operations using integers, rational numbers, and real numbers	Reciprocal Integers Rational Numbers Real Numbers	Algebra I – Holt Ch 0 Sec 1 – 14 Pages: Z3 – Z32 Ch 1 Sec 1 – 7 Pages: 34 – 51, 79, 86, 180 – 185 <i>Discovering Algebra</i> Ch 9 Sec 1 Pages: 496 – 501
	L1.1.2 Explain why the multiplicative inverse of a number has the same sign as the number, while the additive inverse has the opposite sign.	Additive Inverse Multiplicative Inverse	Daily Homework Practice Quizzes	End of Term Assessment	Provide examples and explanation for multiplicative inverse Identify correlation to signs of numbers	Recognize the multiplicative inverse of an operation Recognize the additive inverse of an operation	Multiplicative Inverse Additive Inverse	Algebra I – Holt Ch 1 Sec 2 & 3 Pages: 14 – 25 Ch 2 Sec 1 & 2 Pages: 77 – 90 <i>Discovering Algebra</i> Ch 2 Sec 8 Pages: 144 - 150
	L1.1.3 Explain how the properties of associativity, commutativity, and distributivity, as well as, identify and inverse elements, are used in arithmetic and algebraic calculations.	Algebra Calculations	Daily Homework Practice Quizzes	End of Term Assessment	Display examples of algebraic operations associative property, commutative property, distributive property, and identity	Identify properties of algebraic equations Transform equations given specific properties	Associative Property Commutative Property Distributive Property Identity	Algebra I – Holt Ch 1 Sec 7 Pages: 46 – 53 <i>Discovering Algebra</i> Ch 4 Sec 4 Pages: 240-247
	L1.1.4 Describe the reasons for the different effects of multiplication by, or exponentiation of, a positive number by a number less than 0, a number between 0 and 1, and a number greater than 1.	Exponents (less than 0, between 0 and 1, greater than 1)	Daily Homework Practice Quizzes	End of Term Assessment	Experiment with multiplicands and their ranging multipliers	Identify the effect on a product when the multiplier varies (negative, $0 < x < 1$, and exponential)	Product Multiplier Factors	Algebra I – Holt Ch 1 Sec 3 Pages: 20 – 23 Ch 2 Sec 2 Pages: 84 – 89 Ch 3 Sec 3 – 4 Pages: 180 – 187 <i>Discovering Algebra</i> Ch 0 Sec 1 – 5 Pages: 2 – 37

	L1.1.5 Justify numerical relationships (e.g., show that the sum of even integers is even; that every integer can be written as $3m + k$, where k is 0, 1, or 2, and m is an integer; or that the sum of the first n positive integers is $n(n + 1)/2$).	Numeric Relationships	Daily Homework Practice Quizzes	End of Term Assessment	Understand variable expressions Example: even # = $2b$; odd # $2b + 1$	Use mathematical reasoning combined with equation transformations to prove mathematical relationships	Relationship Transformation	Algebra I – Holt Ch 1 Sec 2 Pages: 14 – 18 Discovering Algebra No Correlation
	A1.1.1 Give a verbal description of an expression that is presented in symbolic form, write an algebraic expression from a verbal description, and evaluate expressions given values of the variables.	Algebraic Expressions	Daily Homework Practice Quizzes	End of Term Assessment	Identify, explain, and emphasize basic mathematic terminology located in vocabulary list	Translate word problems into mathematical expressions Provide explanation for terms found in algebraic expressions	Expression Addend Sum Subtrahend Difference Product Divisor Quotient Variables	Algebra I – Holt Ch 1 Sec 1 Pages: 6 – 13 Ch 2 Sec 3 Pages: 92 – 99 Ch 2 Sec 5 Pages: 107 – 111 Ch 3 Sec 2 – 5 Pages: 174 – 200 Discovering Algebra Ch 0 Sec 4 Pages: 22 – 28 Ch 2 Sec 7 – 8 Pages: 135 – 150
	A1.1.2 Know the definitions and properties of exponents and roots and apply them in algebraic expressions.	Applications of Exponents And Roots	Daily Homework Practice Quizzes	End of Term Assessment	Demonstrate properties of roots and exponents	Simplify expressions with roots and exponents	Exponent Square Root Cube Root	Algebra I – Holt Ch 1 Sec 4 – 6 Pages: 26 – 40 Discovering Algebra Ch 6 Sec 3 – 6 Pages: 349 – 372 Ch 11 Sec 5 Pages: 618 – 625
	A1.1.3 Factor algebraic expressions using, for example, greatest common factor, grouping, and the special product identities (e.g., differences of squares and cubes).	Factoring Algebraic Expressions	Daily Homework Practice Quizzes	End of Term Assessment	Show rectangular models connected to expanded form and factored form Demonstrate use of distributive property in finding expanded form	Given factored form, find expanded form, and vice versa Write expanded and factored form from a diagram	Greatest Common Factor vs Factor	Algebra I – Holt Ch 1 Sec 4 Pages: 26 – 31 Ch 2 Sec 3 Pages: 92 – 99 Discovering Algebra Ch 4 Sec 4 Pages: 240 - 247 Ch 9 Sec 4 – 8 Pages: 515 – 536
	L1.2.2 Interpret representations that reflect absolute value relationships (e.g., $ x - a < b$, or $a \pm b$) in such contexts as error tolerance.	Absolute Value	Daily Homework Practice Quizzes	End of Term Assessment	Interpret absolute value equations and inequalities Display equations and expressions using absolute value	Apply absolute value relationships to various real world concepts Solve equations and expressions using absolute value	Absolute Value Equations Inequalities	Algebra I – Holt Ch 3 Sec 1 Pages: 168 – 173 Discovering Algebra Ch 7 Sec 5 Pages: 418 – 423 Ch 8 Sec 2 Pages: 444 – 452

	A1.2.1 Write and solve equations and inequalities with one or two variables to represent mathematical or applied situations.	Equations And Inequalities With Variables	Daily Homework Practice Quizzes	End of Term Assessment	Review equations and inequalities Solve examples with one and two variables in the equation	Ability to solve equations and inequalities with one and two variables	Variables	Algebra I – Holt Ch 3 Sec 1 – 6 Pages: 168 – 209 Discovering Algebra Ch 3 Sec 4 – 7 Pages: 168 – 219
	L1.2.4 Organize and summarize a data set in a table, plot, chart, or spreadsheet; find patterns in a display of data; understand and critique data displays in the media.	Organize Data	Daily Homework Practice Quizzes	End of Term Assessment	Show applications to real world contexts and situations Identify patterns based on linear and quadratic functions Organize data in tables, charts, and graphs	Recognize correlations between plotted points on graph and data in tables or charts Understand the relationship between a linear and quadratic function	Tables Charts Data Set Plot Correlation	Algebra I – Holt Pages: 395, 402, 410 Discovering Algebra Ch 1 Sec 6 Pgs: 70 – 76 Ch 3 Sec 7 Pgs: 204-205 Ch 4 Sec 2 Pgs: 225-233 Ch 4 Sec 5 Pgs: 248-267 Ch 6 Sec 7-8 Pgs: 373-382 Ch 9 Sec 5 Pgs: 522-524
	2nd Trimester							
UNIT 2 <i>Linear Functions</i> <i>Pacing: 20 days</i>	A2.1.1 Recognize whether a relationship (given in contextual, symbolic, tabular, or graphical form) is a function and identify its domain and range.	Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Match equations with situations Distinguish between equations and expressions Determine relationships vs functions	Find the domain and range of functions Write an equation in function notation	Functions Contextual Symbolic Tabular Graphical Domain Range	Algebra I – Holt Ch 4 Sec 2 Pages: 236 – 243, 260 – 261 Discovering Algebra Ch 7 Sec 2 – 4 Pages: 396 – 403 Ch 9 Sec 2 – 3 Pages: 502 – 514
	A2.1.2 Read, interpret, and use function notation and evaluate a function at a value in its domain.	Function Notation	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Read function notation Evaluate functions	Write an equation in function notation Identify the domain of the function	Function Notation Relation Domain	Algebra I – Holt Ch 4 Sec 2 Pages: 236 – 246 Discovering Algebra Ch 8 Sec 1 & 3 Pages: 437 – 443, 453 – 461 Ch 9 Sec 1 & 6 Pages: 496 – 501, 525 – 530
	A.2.1.3 Represent functions in symbols, graphs, tables, diagrams, or words and translate among representations.	Representations Of Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Graph functions given a domain of real numbers Translate functions from symbols, tables, diagrams, and words into various representations	Ability to write functions in several representations including symbols, tables, diagrams, words, and graphs	Graphs Tables Symbols Words Diagrams Functions	Algebra I – Holt Ch 4 Sec 4 Pages: 245 – 261 Discovering Algebra Chapters / Sections 2.4, 2.7, 2.8, 3.1 – 5, 3.7, 4.2, 4.5, 4.6 - 8

	<p>A2.1.7 Identify and interpret the key features of a function from its graph or its formula(e), (e.g., slope, intercept(s), asymptote(s), maximum and minimum value(s), symmetry, and average rate of change over an interval). (linear)</p>	<p>Features Of Functions</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Identify key features of functions including slope, intercepts, asymptote, maximum, minimum, and symmetry Definition of slope, slope-intercept form</p>	<p>Identify slope of line (positive or negative), and intercepts from graph and equation Ability to find slope from an equation Recognize maximum, minimum, and symmetry of the function</p>	<p>Slope Intercept Horizontal Vertical Asymptote Maximum Minimum Symmetry</p>	<p>Algebra I – Holt Ch 5 Sec 1-3 Pgs: 296-319 Ch 12 Sec 2 Pgs: 858 –865 <i>Discovering Algebra</i> Ch 3 Sec 4-5 Pgs: 178-194 Ch 4 Sec 1-3 Pgs: 215-239 Ch 6 Sec 2 Pgs: 341 – 348 Ch 6 Sec 7 Pgs: 373 – 380 Ch 7 Sec 3 Pgs: 404 – 411 Ch 8 Sec 6 Pgs: 474 – 483</p>
	<p>A2.3.2 Describe the tabular pattern associated with functions having constant rate of change (linear) or variable rates of change.</p>	<p>Patterns Of Functions</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Determine if the ratio of $\frac{\Delta y}{\Delta x}$ is constant in a table</p>	<p>Know what distinguishes a linear relationship from a non-linear relationship in a table</p>	<p>Constant Linear Non-linear</p>	<p>Algebra I – Holt Ch 5 Sec 3 Pgs: 310 – 311 <i>Discovering Algebra</i> Ch 2 Sec 4-5 Pgs: 114-131 Ch 3 Sec 5 Pgs: 187 – 194 Ch 4 Sec 1 Pgs: 215 – 224 Ch 9 Sec 2 Pgs: 502 – 507 Ch 9 Sec 8 Pgs: 537 – 544</p>
	<p>A2.1.1 Recognize whether a relationship (given in contextual, symbolic, tabular, or graphical form) is a function and identify its domain and range.</p>	<p>Domain and Range</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Recognize functions and non-functions in tables, graphs, and equations</p>	<p>Develop an understanding that in a function, each value of the domain has exactly 1 corresponding value in the range</p>	<p>Domain Range</p>	<p>Algebra I – Holt Ch 4 Sec 2-6 Pgs: 236 - 284 <i>Discovering Algebra</i> Ch 7 Sec 2-4 Pgs: 396 –417 Ch 9 Sec 2-3 Pgs: 502 –514</p>
	<p>A2.1.2 Read, interpret, and use function notation and evaluate a function at a value in its domain.</p>	<p>Function Notation</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Evaluate functions for specific values of the domain</p>	<p>Know the notation $f(x)$ and $g(x)$</p>	<p>Notation</p>	<p>Algebra I – Holt Ch 4 Sec 2-6 Pgs: 236 - 284 <i>Discovering Algebra</i> Ch 7 Sec 4 Pgs: 412 – 417 Ch 8 Sec 1 Pgs: 437 – 443 Ch 8 Sec 3 Pgs: 453 – 461 Ch 9 Sec 1 Pgs: 496 – 501 Ch 9 Sec 3 Pgs: 508 – 514 Ch 9 Sec 6 Pgs: 525 – 530</p>
	<p>A2.1.3 Represent functions in symbols, graphs, tables, diagrams, or words and translate among representations.</p>	<p>Function Representations</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Translate between various representations of functions including graphs, tables, diagrams, and words</p>	<p>Understand different representations of functions</p>	<p>Functions</p>	<p>Algebra I – Holt Ch 4 Sec 2-6 Pgs: 236 - 284 <i>Discovering Algebra</i> Ch 2 Sec 4 Pgs: 114 – 122 Ch 2 Sec 7-8 Pgs: 135-150 Ch 3 Sec 1-7 Pgs: 158-205 Ch 4 Sec 2 Pgs: 225 – 233 Ch 4 Sec 5-8 Pgs: 248 –267</p>

	<p>A2.1.4 Recognize that functions may be defined by different expressions over different intervals of their domains. Such functions are piecewise-defined (e.g., absolute value and greatest integer functions).</p>	<p>Functions With Different Intervals</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Represent functions with different expressions over different intervals of the domain Example: $f(x) = x$</p>	<p>Recognize that some functions may be represented by different expressions or different intervals of the domain</p>	<p>Intervals</p>	<p>Algebra I – Holt Ch 4 Sec 2-6 Pgs: 236 - 284 Discovering Algebra Ch 3 Sec 3 Pgs: 172 – 177 Ch 7 Sec 3-4 Pgs: 404 -417</p>
	<p>A2.1.5 Recognize that functions may be defined recursively. Compute values of and graph simple recursively defined functions (e.g., $f(0) = 5$, and $f(n) = f(n-1) + 2$).</p>	<p>Recursive Functions</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Compute values of and graph simple recursively defined functions</p>	<p>Ability to write recursive routines emphasizing start plus change</p>	<p>Recursive Function</p>	<p>Algebra I – Holt Ch 4 Sec 2-6 Pgs: 236 - 284 Discovering Algebra Ch 3 Sec 1-4 Pgs: 158-184 Ch 6 Sec 1-2 Pgs: 333-348</p>
	<p>A2.4.1 Write the symbolic forms of linear functions (standard [ie., $Ax + By = C$, where $B \neq 0$], point-slope, and slope-intercept) given appropriate information and convert between forms.</p>	<p>Linear Functions</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Translate between various symbolic forms and linear functions</p>	<p>Know the symbolic forms of linear functions</p>	<p>Point-slope Slope-intercept</p>	<p>Algebra I – Holt Ch 5 Sec 7 Pgs: 341 – 347 Discovering Algebra Ch 3 Sec 4-5 Pgs: 178-194 Ch 3 Sec 7 Pgs: 204 – 205 Ch 4 Sec 2-5 Pgs: 225-252</p>
	<p>A2.4.4 Find an equation of the line parallel or perpendicular to given line through a given point. Understand and use the facts that nonvertical parallel lines have equal slopes and that nonvertical perpendicular lines have slopes that multiply to give -1.</p>	<p>Equations of Parallel and Perpendicular Lines Of A Given Line</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Know symbolic forms of linear equations and their reciprocals</p>	<p>Write an equation of a parallel and perpendicular line to a given line through a given point</p>	<p>Parallel Perpendicular</p>	<p>Algebra I – Holt Ch 5 Sec 8 Pgs: 349 – 355 Discovering Algebra Ch 4 Sec 1 Pgs: 215 – 224 Ch 11 Sec 1-2 Pgs: 595-605</p>
	<p>A2.1.6 Identify the zeros of a function and the intervals where the values of a function are positive or negative. Describe the behavior of a function as x approaches positive or negative infinity, given the symbolic and graphical representations.</p>	<p>Values Of Functions</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Provide examples of zeros of a function Display intervals of a functions Explain the behavior of a functions as x approaches positive or negative infinity</p>	<p>Demonstrate an understanding of zeros and intervals of functions Know positive and negative infinity</p>	<p>Zeros Infinity (positive and negative)</p>	<p>Algebra I – Holt Ch 5 Sec 8 Pgs: 349 – 355 Ch 5 Sec 9 Pgs: 357 – 360 Ch 9 Sec 2 Pgs: 599 – 605 Discovering Algebra Ch 9 Sec 1-2 Pgs: 496-507 Ch 9 Sec 4 Pgs: 515-521</p>
	<p>A2.2.2 Apply given transformations (e.g., vertical or horizontal shifts, stretching or shrinking, or reflections about the x- and y-axes) to basic functions and represent symbolically.(linear)</p>	<p>Transformations</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Apply transformations to basic function families</p>	<p>Know symbolic forms of basic function families – linear, quadratic, exponential</p>	<p>Transformations Function Families</p>	<p>Algebra I – Holt Ch 5 Sec 9 Pgs: 357 – 365 Discovering Algebra Ch 8 Sec 2 Pgs: 444 – 473</p>

	A2.7.3 Analyze the graphs of power functions, noting reflectional or rotational symmetry.	Interpreting Graphs of Power Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Analyze graphs and determine the type of power functions	Understand reflectional and rotational symmetry	Reflectional Rotational	Algebra I – Holt Ch 5 Sec 9 Pgs: 357-360 <i>Discovering Algebra</i> No Correlation
	A2.3.1 Identify a function as a member of a family of functions based on its symbolic or graphical representation. Recognize that different families of functions have different asymptotic behavior at infinity and describe these behaviors. (linear)	Family Of Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Recognize linear, quadratic, exponential, and other function families from their graphs and equations	Understand the range of a function as the domain approaches infinity	Infinity	Algebra I – Holt Ch 5 Sec 9 Pgs: 357 – 365 <i>Discovering Algebra</i> Ch 2 Sec 4-5 Pgs: 114-131 Ch 4 Sec 2 Pgs: 225 – 233 Ch 8 Sec 2 Pgs: 444 – 452 Ch 8 Sec 6 Pgs: 474 – 483 Ch 9 Sec 1 Pgs: 496 – 501 Ch 9 Sec 8 Pgs: 537 – 544
	A2.4.3 Relate the coefficients in a linear function to the slope and x- and y-intercepts of its graph.	Slope and x- and y-intercepts	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Determine and apply slope intercept form	Find slope, y-intercept, and x-intercept of a linear function	y-intercept x-intercept	Algebra I – Holt LAB Pg: 356 Ch 5 Sec 9 Pgs: 357 – 363 <i>Discovering Algebra</i> Ch 4 Sec 1-2 Pgs: 215-233
	L1.2.2 Interpret representations that reflect absolute value relationships (e.g., $ x-a < b$, or $a \pm b$) in such contexts as error tolerance.	Absolute Value Relationships	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Interpret absolute value equations and inequalities Display equations and expressions using absolute value	Apply absolute value relationships to various real world concepts Solve equations and expressions using absolute value	Absolute Value Equations Inequalities	Algebra I – Holt Pgs: 168 – 173 ** Ch 6 Sec 5 Pgs: 414 – 420 <i>Discovering Algebra</i> Ch 7 Sec 5 Pgs: 418 – 423 Ch 8 Sec 2 Pgs: 444 – 452
	A1.2.4 Solve absolute value equations and inequalities (e.g., solve $ x - 3 \leq 6$ and justify.	Absolute Value Equations	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Solve equations and inequalities	Solve absolute value equations	Absolute Value Equations Inequalities	Algebra I – Holt Ch 3 Ext. Pgs: 212-215 <i>Discovering Algebra</i> Ch 7 Sec 5-6 Pgs: 418-428
	A2.4.2 Graph lines (including those of the form $x = h$ and $y = k$) given appropriate information.	Graphing Lines	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Display slope-intercept form	Ability to graph lines using slope-intercept form and other special linear functions	Slope-intercept Form	Algebra I – Holt LAB Pg: 348, 359, 371 <i>Discovering Algebra</i> Ch 3 Sec 4-5 Pgs: 178-194 Ch 3 Sec 7 Pgs: 204 – 205 Ch 4 Sec 2-8 Pgs: 225-267 Ch 5 Sec 1 Pgs: 273 – 280

	A1.2.8 Solve an equation involving several variables (with numerical or letter coefficients) for a designated variable. Justify steps in the solution.	Equations With Variables	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Transform equations using properties of equality	Solve equations for designated variables	Properties Variables	Algebra I – Holt Pgs: 100 – 105 ** <i>Discovering Algebra</i> Ch 3 Sec 6 Pgs: 195 – 302 Ch 4 Sec 4 Pgs: 240 – 247 Ch 5 Sec 2 Pgs: 281 – 287
	A1.1.1 Give a verbal description of an expression that is presented in symbolic form, write an algebraic expression from a verbal description, and evaluate expressions given values of the variables.	Expressions In Symbolic Form	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Identify, explain, and emphasize basic mathematic terminology located in vocabulary list	Translate word problems into mathematical expressions Provide explanation for terms found in algebraic expressions	Expression Addend Sum Subtrahend Difference Product Divisor Quotient Variables	Algebra I – Holt Pgs: 6 – 200 ** <i>Discovering Algebra</i> Ch 2 Sec 7-8 Pgs: 135-150
	L1.1.3 Explain how the properties of associativity, commutativity, and distributivity, as well as, identify and inverse elements, are used in arithmetic and algebraic calculations.	Properties Of Numbers	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Display examples of algebraic operations associative property, commutative property, distributive property, and identity	Identify properties of algebraic equations Transform equations given specific properties	Associative Property Commutative Property Distributive Property Identity	Algebra I – Holt Pgs: 46 – 153 ** <i>Discovering Algebra</i> Ch 2 Sec 8 Pgs: 144 – 150 Ch 4 Sec 4 Pgs: 240 – 247
	L1.1.5 Justify numerical relationships (e.g., show that the sum of even integers is even; that every integer can be written as $3m + k$, where k is 0, 1, or 2, and m is an integer; or that the sum of the first n positive integers is $n(n + 1)/2$).	Numeric Relationships	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Understand variable expressions Example: even # = $2b$; odd # $2b + 1$	Use mathematical reasoning combined with equation transformations to prove mathematical relationships	Relationship Transformation	Algebra I – Holt Pgs: 14 – 18 ** <i>Discovering Algebra</i> No Correlation
UNIT 3 <i>Systems of Equations and Inequalities</i> Pacing:20 days	L1.2.4 Organize and summarize a data set in a table, plot, chart, or spreadsheet; find patterns in a display of data; understand and critique data displays in the media.	Organizing Data	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Demonstrate choosing x to get y – set up table Define dependent and independent variables in terms of x and y axis Show relationship between ordered pairs and data values	Create a table and graph from equations If given a x value, find y value If given y value, find x value Given a table determine type of function	Independent Variable Dependent Variable	Algebra I – Holt Ch 6 Sec 1-3 Pgs: 383-402, 421 <i>Discovering Algebra</i> Ch 1 Sec 1 – 7 Pgs: 39 – 82 Ch 2 Sec 6 Pgs: 132 – 134 Ch 3 Sec 7 Pgs: 204 – 205 Ch 4 Sec 5-6 Pgs: 248-260 Ch 4 Sec 8 Pgs: 266 – 267 Ch 6 Sec 7-8 Pgs: 373-382 Ch 8 Sec 5 Pgs: 471 – 473 Ch 9 Sec 5 Pgs: 522 – 524

	L2.1.1 Explain the meaning and uses of weighted averages (e.g., GNP, consumer price index, grade point average).	Weighted Averages	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Define weighted averages Show use of weighted averages Model how to calculated	Explain meaning of weighted averages Explain uses of weighted averages Find/calculate weighted averages	Averages Weighted Averages	Algebra I – Holt Ch 6 Sec 4 Pgs: 406 – 411 Discovering Algebra Ch 10 Sec 6 Pgs: 584 – 589
	L1.1.1 Know the different properties that hold in different number systems and recognize that the applicable properties change in the transition from the positive integers to all integers, to the rational numbers, and to the real numbers.	Properties Of Numbers	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Use different models, ie. number of lines and counters to show addition, subtraction, multiplication, and division of integers, rational numbers, and real numbers	Performance of addition, subtraction, multiplication, division operations using integers, rational numbers, and real numbers	Reciprocal Integers Rational Numbers Real Numbers	Algebra I – Holt Pgs: Z3 – Z32, 34 – 51, 79, 86, 180 – 185 ** Ch 6 Sec 6 Pgs: 421 – 426 Ch 7 Sec 1 Pgs: 446 – 451 Ch 7 Sec 3 Pgs: 460 – 465 Discovering Algebra Ch 9 Sec 1 Pgs: 496 – 501
	L1.1.2 Explain why the multiplicative inverse of a number has the same sign as the number, while the additive inverse has the opposite sign.	Multiplicative Inverse	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Provide examples and explanation for multiplicative inverse Identify correlation to signs of numbers	Recognize the multiplicative inverse of an operation Recognize the additive inverse of an operation	Multiplicative Inverse Additive Inverse	Algebra I – Holt Pgs: 15 – 84 ** Discovering Algebra Ch 2 Sec 8 Pgs: 144 – 150
	A1.1.3 Factor algebraic expressions using, for example, greatest common factor, grouping, and the special product identities (e.g., differences of squares and cubes).	Factoring Algebraic Expressions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Show rectangular models connected to expanded form and factored form Demonstrate use of distributive property in finding expanded form	Given factored form, find expanded form, and vice versa Write expanded and factored form from a diagram	Greatest Common Factor vs Factor	Algebra I – Holt Ch 6 Sec 2 Pgs: 390-396 Ch 8 Sec 1-2 Pgs: 524-539 Ch 9 Sec 7 Pgs: 636-641 Discovering Algebra Ch 4 Sec 4 Pgs: 240-247 Ch 9 Sec 4-8 Pgs: 515-544
	A1.2.1 Write and solve equations and inequalities with one or two variables to represent mathematical or applied situations.	Equations And Inequalities	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Review equations and inequalities Solve examples with one and two variables in the equation	Ability to solve equations and inequalities with one and two variables	Variables	Algebra I – Holt Pgs: 26 – 40, 168 – 219 ** Discovering Algebra Ch 3 Sec 4-7 Pgs: 178-205 Ch 4 Sec 2- 8 Pgs: 225-267 Ch 5 Sec 1- 7 Pgs: 273-327 Ch 6 Sec 2 Pgs: 341 – 348 Ch 6 Sec 7-8 Pgs: 373-382 Ch 8 Sec 6-7 Pgs: 474-489
	A1.2.3 Solve linear and quadratic equations and inequalities, including systems of up to three linear equations with three unknowns. Justify steps in the solutions, and apply quadratic formula appropriately. (linear)	Systems Of Equations And Inequalities	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Define linear systems Define linear inequality systems Demonstrate and practice methods of solving systems	Solve system of linear equations using 1. substitution 2. graphing 3. elimination Graph linear inequality systems	Linear Systems Inequality Systems	Algebra I – Holt Ch 6 Sec 6 Pgs: 421 – 433 Ch 9 Sec 9 Pgs: 652 – 659 Discovering Algebra Ch 2 Sec 8 Pgs: 144 – 150 Ch 3 Sec 6 Pgs: 195 – 203 Ch 5 Sec 1-7 Pgs: 273-327 Ch 9 Sec 1 Pgs: 496 – 507 Ch 9 Sec 7 Pgs: 525 – 536

<p>UNIT 4 <i>Exponents and Polynomials</i> <i>Pacing: 20 days</i></p>	<p>A1.1.2 Know the definitions and properties of exponents and roots and apply them in algebraic expressions.</p>	<p>Properties Of Exponents</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Demonstrate properties of roots and exponents</p>	<p>Simplify expressions with roots and exponents</p>	<p>Exponent Square Root Cube Root</p>	<p>Algebra I – Holt Pgs: 26 – 40 ** Ch 9 Sec 7 Pgs: 636-641 <i>Discovering Algebra</i> Ch 6 Sec 3-6 Pgs: 349-372 Ch 11 Sec 5 Pgs: 618-625</p>
	<p>L1.1.4 Describe the reasons for the different effects of multiplication by, or exponentiation of, a positive number by a number less than 0, a number between 0 and 1, and a number greater than 1.</p>	<p>Effects Of Multiplication And Exponents</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Experiment with multiplicands and their ranging multipliers</p>	<p>Identify the effect on a product when the multiplier varies (negative, $0 < x < 1$, and exponential)</p>	<p>Product Multiplier Factors</p>	<p>Algebra I – Holt Pgs: 20 – 217 ** Ch 7 Sec 1-2 Pgs: 446-457 <i>Discovering Algebra</i> Ch 6 Sec 2 Pgs: 341 – 348 Ch 6 Sec 7 Pgs: 373 – 380</p>
	<p>L2.1.2 Calculate fluently with numerical expressions involving exponents. Use the rules of exponents, and evaluate numerical expressions involving rational and negative exponents, and transition easily between roots and exponents.</p>	<p>Numerical Expressions</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>List the rules of exponents – positive exponents, negative exponents, exponents in the denominator</p>	<p>Calculate answers to equations using rational numbers and negative exponents Transfer between equations with roots and exponents</p>	<p>Roots Exponents Rational Numbers</p>	<p>Algebra I – Holt Ch 7 Sec 1-4 Pgs: 446-475 Ch 11 Ext. Pgs: 832 – 835 Ch 12 Sec 4 Pgs: 878– 884 Ch 12 Sec 5 Pgs: 885 – 888 <i>Discovering Algebra</i> Ch 7 Sec 4 Pgs: 412 – 417 Ch 8 Sec 1 Pgs: 437 – 443 Ch 8 Sec 3 Pgs: 453 – 461 Ch 9 Sec 1 Pgs: 496 – 501 Ch 9 Sec 3 Pgs: 508 – 514 Ch 9 Sec 6 Pgs: 525 – 530</p>
	<p>L2.1.3 Explain the exponential relationship between a number and its base 10 logarithm and use it to relate rules of logarithms to those exponents in expressions involving numbers.</p>	<p>Exponential Relationships</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Define scientific notation Demonstrate operations using scientific notation</p>	<p>Convert to and from scientific notation Simplify expressions involving multiplication and division using scientific notation</p>	<p>Scientific Notation</p>	<p>Algebra I – Holt Ch 7 Sec 2 Pgs: 452 – 457 Ch 11 Sec 2 Pgs: 772 –778 ONLINE EXPERIENCE http://my.hrw.com Algebra II p. 509 - 519 <i>Discovering Algebra</i> Ch 2 Sec 4 Pgs: 114 – 122 Ch 2 Sec 7-8 Pgs: 135 –150 Ch 3 Sec 1-7 Pgs: 158–205 Ch 4 Sec 2 Pgs: 225 – 233 Ch 4 Sec 5-8 Pgs: 248 –267</p>
	<p>L3.1.2 Describe and interpret logarithmic relationships in such contexts as the Richter scale, the pH scale, or decibel measurements (e.g., explain why a small change in the scale can represent a large change in intensity). Solve applied problems.</p>	<p>Logarithmic Relationships</p>	<p>Daily Homework Math Journal Practice Quizzes</p>	<p>End of Term Assessment</p>	<p>Introduce scales involving logarithmic relationships Discuss impact on values in functions</p>	<p>Describe and interpret various values on scales involving logarithmic relationships, solve application problems using such scales</p>	<p>Richter Scale pH Scale Decibels</p>	<p>Algebra I – Holt Pgs: 116 – 207 ** Ch 7 Sec 4 Pgs: 467 – 472 ONLINE EXPERIENCE http://my.hrw.com Algebra II p. 509 - 519 <i>Discovering Algebra</i> No Correlation</p>

	L2.1.6 Recognize when exact answers aren't always possible or practical. Use appropriate algorithms to approximate solutions to equations (e.g., to approximate square roots).	Approximate Solutions	Daily Homework Practice Quizzes	End of Term Assessment	Show examples of situations when using approximate answers is acceptable	Recognize situations when approximate answers are necessary and applicable	Approximation	Algebra I – Holt Ch 11 Sec 6 Pgs: 805– 810 <i>Discovering Algebra</i> No Correlation
	A2.7.1 Write the symbolic form and sketch the graph of power functions.	Graph Power Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Introduce symbolic form of power equations Use graphing calculator and paper and pencil to graph	Express graphs of power functions as equations and graph	Power Function	Algebra I – Holt Ch 7 Sec 5-6 Pgs: 476-481 Ch 11 Sec 9 Pgs: 822-829 <i>Discovering Algebra</i> No Correlation
	A2.8.1 Write the symbolic form and sketch the graph of simple polynomial functions.	Graphing Polynomial Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Demonstrate the graph of polynomial functions	Draw and sketch the line of an equation (polynomial function)	Polynomial	Algebra I – Holt Ch 7 Sec 5 Pgs: 476-481 Ch 7 Sec 7 Pgs: 492-499 <i>Discovering Algebra</i> Ch 9 Sec 8 Pgs: 537-544
	A2.8.2 Understand the effects of degree, leading coefficient, and number of real zeros on the graphs of polynomial functions of degree greater than 2.	Effects Of Degree on Graphs	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Show the effects of degree and leading coefficient of polynomial functions	Recognize attributes of polynomial functions	Leading Coefficient Degree	Algebra I – Holt Ch 7 Sec 5 Pgs: 476-481 <i>Discovering Algebra</i> Ch 9 Sec 8 Pgs: 537-544
	A.2.8.3 Determine the maximum possible number of zeros of a polynomial function and understand the relationship between the x-intercepts of the graph and the factored form of the function.	Factored Form Of Functions And x-intercepts	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Explain the possible number of zeros of a polynomial function Identify the x-intercept of the graph and its factored form	Reproduce a graph and understand the x-intercept of the graph in relation to the polynomial function	x-intercept Factored Form Possible Zeros	Algebra I – Holt Ch 8 Sec 3 Pgs: 540-547 <i>Discovering Algebra</i> Ch 9 Sec 8 Pgs: 537-544
	A1.1.6 Use the properties of exponents and logarithms, including the inverse relationship between exponents and logarithms, to transform exponential and logarithmic expressions into equivalent forms.	Properties Of Exponents And Logarithms	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Demonstrate relationships between logarithmic and exponential expressions	Convert logarithmic expressions to exponential expressions and vice versa	Logarithmic Functions	Algebra I – Holt ONLINE EXPERIENCE Algebra II p. 505 – 515, 520, 537 <i>Discovering Algebra</i> No Correlation

	A.2.2.1 Combine functions by addition, subtraction, multiplication, and division.	Combining Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Identify like terms Demonstrate how operations impact functions	Use operations to combine functions	Combine Simplify Like Terms	Algebra I – Holt Ch 7 Sec 5-6 Pgs: 476-489 <i>Discovering Algebra</i> Ch 5 Sec 3 Pgs: 289 – 295 Ch 6 Sec 3 Pgs: 349 – 354 Ch 6 Sec 5 Pgs: 360 – 365 Ch 6 Sec 6 Pgs: 366 – 372 Ch 8 Sec 6 Pgs: 474 – 483 Ch 9 Sec 3-8 Pgs: 508 –544
	3rd Trimester							
UNIT 5 <i>Quadratic Functions</i> <i>Pacing:20 days</i>	A2.6.1 Write the symbolic form and sketch the graph of a quadratic function given appropriate information (e.g., vertex, intercepts, etc.).	Graphing Quadratic Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Demonstrate how the symbolic form of a quadratic equation is represented in graph form Identify parts of graph	Construct and draw a graph to fit a quadratic equation Label parts of the graph in reference to the function	Vertex Intercepts	Algebra I – Holt Ch 9 Sec 1 Pgs: 590-598 Ch 9 Sec 4 Pgs: 613-616 <i>Discovering Algebra</i> Ch 9 Sec 1 Pgs: 496-530
	A2.6.2 Identify the elements of a parabola (vertex, axis of symmetry, and direction of opening) given its symbolic form or its graph and relate these elements to the coefficient(s) of the symbolic form of the function.	Parabolas	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Identify functions that form parabolas; including the structure and significance of a parabola	Recognize the elements of a parabola and their relationship to the function	Parabola Vertex Axis of Symmetry	Algebra I – Holt Ch 9 Sec 1-2 Pgs: 590-605 <i>Discovering Algebra</i> Ch 9 Sec 1 Pgs: 496-530
	A2.6.4 Relate the number of real solutions of a quadratic equation to the graph of the associated quadratic function.	Real Solutions of Quadratic Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Identify possible real solutions to a quadratic equation	List the number of real solutions to quadratic equations	Real Solutions	Algebra I – Holt Ch 9 Sec 1 Pgs: 590-593 <i>Discovering Algebra</i> Ch 9 Sec 7 Pgs: 531-536
	A2.6.5 Express quadratic functions in vertex form to identify their maximum or minima and in factored form to identify their zeros.	Maximum Minima Of Quadratic Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Write quadratic functions in vertex form Explain the maximum and minima of the functions	Work with vertex form to understand maximum and minima, and number of zeros	Vertex Form Maximum Minima	Algebra I – Holt Ch 9 Sec 1 Pgs: 590-593 <i>Discovering Algebra</i> Ch 9 Sec 1-2 Pgs: 496-507 Ch 9 Sec 4 Pgs: 515-521
	A1.1.3 Factor algebraic expressions using, for example, greatest common factor, grouping, and the special product identities (e.g., differences of squares and cubes).	Factoring Algebraic Expressions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Show rectangular models connected to expanded form and factored form Demonstrate use of distributive property in finding expanded form	Given factored form, find expanded form, and vice versa Write expanded and factored form from a diagram	Greatest Common Factor vs Factor	Algebra I – Holt Ch 8 Sec 1-2 Pgs: 524-539 Ch 9 Sec 7 Pgs: 636-641 <i>Discovering Algebra</i> Ch 4 Sec 4 Pgs: 240-247 Ch 9 Sec 4-8 Pgs: 515-544

	A2.6.3 Convert quadratic function from standard to vertex form by completing the square.	Standard Form Vertex Form	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Convert quadratic functions from standard form to vertex form by completing the square	Ability to move from standard form to vertex form of a quadratic equation	Standard Form Vertex Form Square	Algebra I – Holt Ch 9 Sec 8 Pgs: 645-651 <i>Discovering Algebra</i> Ch 9 Sec 6-7 Pgs: 525-530
	A2.2.2 Apply given transformations (e.g., vertical or horizontal shifts, stretching or shrinking, or reflections about the x- and y-axes) to basic functions and represent symbolically. (quadratic)	Transformations Of Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Display transformations such as shifts, slides, glides, and reflections	Ability to transform a line of an equation on the coordinate plane	Transformation Vertical Shift Horizontal Shift Reflections	Algebra I – Holt Ch 9 Sec 9 Pgs: 357-365 <i>Discovering Algebra</i> Ch 8 Sec 2-5 Pgs: 444-473
	A1.2.3 Solve linear and quadratic equations and inequalities, including systems of up to three linear equations with three unknowns. Justify steps in the solutions, and apply quadratic formula appropriately. (quadratic)	Quadratic Equations And Inequalities	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Solve quadratic equations with three unknowns	Understand the steps needed to solve a quadratic equation with three unknowns	Quadratic Equations Quadratic Formula	Algebra I – Holt Pgs: 188 – 193 ** Ch 6 Sec 6 Pgs: 421 – 429 Ch 9 Sec 9 Pgs: 652 – 659 <i>Discovering Algebra</i> Ch 2 Sec 8 Pgs: 144 – 150 Ch 3 Sec 6 Pgs: 195 – 203 Ch 5 Sec 1-7 Pgs: 273-327 Ch 9 Sec 1-2 Pgs: 496-507 Ch 9 Sec 6-7 Pgs: 525-536
UNIT 6 <i>Exponential and Radical Functions</i> <i>Pacing: 20 days</i>	A2.5.1 Write the symbolic form and sketch the graph of an exponential function given appropriate information (e.g., given an initial value of 4 and a rate of growth of 1.5, write $f(x)=4(1.5)^x$).	Graphing Exponential Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Demonstrate relationship with tables or calculator between equations and graphs	Write equations and graph exponential functions	Exponential Functions	Algebra I – Holt Ch 5 Sec 9 Pgs: 357 – 363 Ch 11 Sec 2 Pgs: 772-778 <i>Discovering Algebra</i> Ch 6 Sec 2 Pgs: 341 – 348 Ch 6 Sec 7-8 Pgs: 373-382
	L2.1.3 Explain the exponential relationship between a number and its base 10 logarithm and use it to relate rules of logarithms to those of exponents in expressions involving numbers.	Exponential Relationships	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Define exponential relationships and identify significance in the real world	Convert numbers from standard form to scientific notation	Exponential Relationships	Algebra I – Holt Ch 7 Sec 2 Pgs: 452-457 Ch 11 Sec 2 Pgs: 772-775 ONLINE EXPERIENCE http://my.hrw.com Algebra II p. 509 - 519 <i>Discovering Algebra</i> No Correlation
	A2.5.4 Understand and use the fact that the base of an exponential function determines whether the function increases or decreases and how base affects the rate of growth or decay.	Properties Of Exponential Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Show why logs impact rate of growth or decay	Write equations and graph exponential functions	Exponential Functions	Algebra I – Holt LAB Pg: 780 Ch 11 Sec 3 Pgs: 781-788 <i>Discovering Algebra</i> Ch 6 Sec 2 Pgs: 341 – 348 Ch 6 Sec 7-8 Pgs: 373-382

	A2.5.5 Relate exponential and logarithmic functions to real phenomena, including half-life and doubling time.	Applications of Exponential and Logarithmic Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Explore real life situations with exponential and logarithmic functions (half-life, etc.)	Solve real life situations using exponential and logarithmic functions	Half-life Exponential Growth and Decay	Algebra I – Holt Ch 11 Sec 3 Pgs: 783-788 <i>Discovering Algebra</i> Ch 6 Sec 2 Pgs: 341 – 348 Ch 6 Sec 7-8 Pgs: 373 – 382
	A1.2.6 Solve power equations (e.g., $(x + 1)^3 = 8$) and equations including radical expressions (e.g., $3x - 7 = 7$), justify steps in the solution, and explain how extraneous solutions may arise.	Solving Power Equations	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Demonstrate methods of solving power equations	Solve power equations	Power Equations	Algebra I – Holt Ch 11 Sec 6 Pgs: 805 – 810 <i>Discovering Algebra</i> Ch 9 Sec 8 Pgs: 537 – 544 Ch 11 Sec 6-7 Pgs: 626-640
	L2.1.4 Know that the complex number i is one of two solutions to $x^2 = -1$.	Complex Numbers	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Define complex numbers Demonstrate how to solve an equation with a complex number	Simplify and solve equations using complex numbers	i Complex Number Radical Radicand	Algebra I – Holt Ch 5 Sec 9 Pgs: 357 – 363 ONLINE EXPERIENCE http://my.hrw.com Algebra II p. 350 – 351 <i>Discovering Algebra</i> No Correlation
	L2.1.5 Add, subtract, and multiply complex numbers. Use conjugates to simplify quotients of complex numbers.	Operations With Complex Numbers	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Demonstrate how to add, subtract, multiple, and divide radicals with complex numbers	Simplify and solve radicals with multiple applications	i Complex Number Radical Radicand	Algebra I – Holt Ch 11 Sec 8 Pgs: 816-821 ONLINE EXPERIENCE http://my.hrw.com Algebra II p. 382 - 387 <i>Discovering Algebra</i> No Correlation
	A1.1.6 Use the properties of exponents and logarithms, including the inverse relationship between exponents and logarithms, to transform exponential and logarithmic expressions into equivalent forms.	Properties Of Exponents	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Demonstrate relationships between logarithmic and exponential expressions	Convert logarithmic expressions to exponential expressions and vice versa	Logarithmic Functions	Algebra I – Holt Ch 12 Sec 1 Pgs: 853 <i>Discovering Algebra</i> No Correlation
	A1.2.2 Associate a given equation with a function whose zeros are the solutions of the equation.	Solutions Of Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Define x-intercept, roots, zero solutions, model how to find	Find the solution of quadratic equations	x-intercept roots zeros solutions	Algebra I – Holt Ch 12 Sec 1 Pgs: 851-854 <i>Discovering Algebra</i> Ch 3 Sec 4 Pgs: 178-186 Ch 9 Sec 1-2 Pgs: 496-507 Ch 9 Sec 4 Pgs: 515-521 Ch 9 Sec 8 Pgs: 537-544

	A2.5.5 Relate exponential and logarithmic functions to real phenomena, including half-life and doubling time.	Applications Of Exponential And Logarithmic Functions	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Explore real life situations with exponential and logarithmic functions (half-life, etc.)	Solve real life situations using exponential and logarithmic functions	Half-life Exponential Growth and Decay	Algebra I – Holt Ch 11 Sec 3 Pg: 783 – 788 <i>Discovering Algebra</i> Ch 6 Sec 2 Pgs: 341- 348 Ch 6 Sec 7-8 Pgs: 373-382
	A2.7.2 Express direct and inverse relationships as functions (e.g., $y = kx^n$ and $y = kx^{-n}$, $n > 0$) and recognize their characteristics (e.g., in $y = x^3$, note that doubling x results in multiplying y by a factor of 8).	Direct and Inverse Relationships	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Explain direct and indirect inverse relationships	Recognize the characteristics of inverse relationships	Inverse Relationships	Algebra I – Holt No Correlation <i>Discovering Algebra</i> No Correlation Supplemented material needed
UNIT 7 <i>Data Analysis, Scatterplots, and Correlations</i> Pacing: 20 days	L1.2.4 Organize and summarize a data set in a table, plot, chart, or spreadsheet; find patterns in a display of data; understand and critique data displays in the media.	Organize Data	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Show applications to real world contexts and situations Identify patterns based on linear and quadratic functions Organize data in tables, charts, and graphs	Recognize correlations between plotted points on graph and data in tables or charts Understand the relationship between a linear and quadratic function	Tables Charts Data Set Plot Correlation	Algebra I – Holt Ch 6 Sec 2-4 Pgs: 395-410 Ch 10 Sec 1 & 2 Pgs: 678 - 693 <i>Discovering Algebra</i> See Unit 1 **
	S2.1.1 Construct a scatterplot for a bivariate data set with appropriate labels and scales.	Construct Scatterplots	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Construct scatterplots for bivariate data and relate to linear, quadratic, and exponential functions	Ability to display bivariate data in graph form	Bivariate Data Scatterplot	Algebra I – Holt Pgs: 262 – 283 ** <i>Discovering Algebra</i> Ch 1 Sec 6 Pgs: 70 – 76 Ch 3 Sec 7 Pgs: 204-205 Ch 4 Sec 2 Pgs: 225-233 Ch 4 Sec 5 Pgs: 248-267 Ch 6 Sec 7-8 Pgs: 373-382 Ch 9 Sec 5 Pgs: 522-524
	S2.1.2 Given a scatterplot, identify patterns, clusters, and outliers. Recognize no correlation, weak correlation, and strong correlation.	Identify Patterns In Scatterplots	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Display patterns found in scatterplots, and identify outliers, clusters, and correlation to linear functions	Identify patterns of data including outliers and clusters related to the data	Patterns Outliers Clusters	Algebra I – Holt Pgs: 262 – 283 ** <i>Discovering Algebra</i> Ch 1 Sec 6-7 Pgs: 70 – 76 Ch 4 Sec 5-6 Pgs: 248-260 Ch 6 Sec 7 Pgs: 373-380
	S2.1.3 Estimate and interpret Pearson’s correlation coefficient for a scatterplot of a bivariate data set. Recognize that correlation measures the strength of linear association.	Pearson’s Correlation	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Demonstrate several Pearson’s correlation coefficients for a scatterplot of bivariate data Provide connections to linear functions	Understand a correlation of bivariate data and linear functions	Pearson’s correlation Coefficients	Algebra I – Holt Pgs: 262 – 283 ** <i>Discovering Algebra</i> No Correlation

	S2.1.4 Differentiate between correlation and causation. Know that a strong correlation does not imply a cause-and effect relationship. Recognize the role of lurking variables in correlation.	Correlation And Causation	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Justify difference between correlation and causation	Differentiate between correlation and causation	Cause and Effect Relationship Correlation Causation	Algebra I – Holt Pgs: 262 – 283 ** <i>Discovering Algebra</i> No Correlation
	S2.2.1 For bivariate data that appear to form a linear pattern, find the least square regressions line by estimating visually and by calculating the equation of the regression line. Interpret the slope of the equation for a regression line.	Bivariate Data	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Practice estimating the least squares regression line Practice calculating the least squares regression line	Recognize linear patterns, and determine the least squares regression line	Estimation Least Squares Regression Line Slope of Line	Algebra I – Holt Ch 5 Sec 4 Pgs: 320-325 Ch 6 Sec 1 Pgs: 382-388 <i>Discovering Algebra</i> Ch 4 Sec 2 Pgs: 225-233 Ch 5 Sec 5-8 Pgs: 248-267
	S2.2.2 Use the equation of the least squares regression line to make appropriate predictions.	Least Squares Regression Line	Daily Homework Math Journal Practice Quizzes	End of Term Assessment	Develop predictions based on least squares regression line	Communicate predictions based on least squares regression	Least Squares Regression Line	Algebra I – Holt Ch 6 Sec 1 Pgs: 382-388 <i>Discovering Algebra</i> Ch 4 Sec 2-8 Pgs: 225-267
<i>Recommended</i>	A3.1.4 Use methods of linear programming to represent and solve simple real-life problems.	Linear Programming						