



1<sup>st</sup> Quarter

Resources: Mc Graw Hill Mathematics,

Week	Unit/Lesson	Learning Objectives	Reporting Categories
1st:	<ul style="list-style-type: none"> <li>- Welcome</li> <li>- Survey – getting to know you</li> <li>- Collect &amp; log Supplies received</li> <li>- Classroom Rules</li> <li>- Curriculum overview</li> </ul>	<p>Solve equations with one variable</p> <p>Solve equations with two variables</p> <p>Evaluate absolute value expressions</p> <p>Solve absolute value equations</p>	
2nd:	Ch.: 1 / Lessons 1-1, 1-2	<p>Use the commutative, associative, and distributive properties in simplifying algebraic expressions and equations. (A.4.B)</p> <p>Model the distributive property and combining like terms with and without Algebra tiles. (A.1.D)</p>	<p><b>Readiness Standard(S):</b></p> <p>A.1.D represent relationships among quantities using [concrete] models, tables, graphs, diagrams, verbal descriptions, equation, and inequalities.</p> <p>A.4.A find specific function values, simplify polynomial expressions, transform and solve equations, and factor as necessary in problem situations.</p>
3rd:	Ch.: 1 / Lessons 1-3, 1-4, & 1-5	<p>Solve two-step and multi-step equations in one variable with and without Algebra tiles. (A.4.A)</p> <p>Write expressions/equations representing geometric properties – including perimeter and triangle sum. (A.1.C)</p> <p>Use a variety of symbols or variables (for example, h to represent hours – not always x and y). (A.3.A)</p> <p>Use variables, expressions, and equations to express generalizations of patterns found in verbal descriptions and / or models. (A.1.C).</p>	<p><b>Supporting Standard(S):</b></p> <p>A.1.C describe functional relationships for given problem situations and write equations or inequalities to answer questions arising from the situation</p> <p>A.3.A use symbols to represent unknowns and variables</p> <p>A.4.B use the commutative, associative, and distributive properties to simplify algebraic expressions.</p>
4th:	Ch.: 2 / Lessons 2-1, 2-2, 2-3,	<p>Solve equations in one variable that contain variables on both sides with and without Algebra tiles. (A.4.A)</p> <p>Solve an equation in two or more variables (including formulas) for a given variable. (A.4.A)</p> <p>Include problems with one solution, infinitely many solutions, and no solution. (A.4.A)</p> <p>Write equations representing perimeter and triangle sum.( A.1.C).</p>	<p><b>Readiness Standard(s):</b></p> <p>A.4.A find specific function values, simplify polynomial expressions, transform and solve equations and factor as necessary in problem situations.</p>



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Week	Unit/Lesson	Learning Objectives	Reporting Categories
5th:	Ch.: 2 / Lessons 2-4, 2-5	Write equations for problem situations. (A.1.C)  Use variables to represent unknowns in problem situations (A.3.A)	<b>Supporting Standard(s):</b> A.1.C describe functional relationships for given problem situations and write equations or inequalities to answer questions arising from the situations A.3.A use symbols to represent unknowns and variables.
6th:	Lessons 5-4, 5-5, 5-6	Solve and graph two-step and multi-step inequalities in one variable including inequalities with variables on both sides (A.4.A) Write inequalities for problem situations (A.1.C) Determine reasonableness of solutions to inequalities. ( A.4.A)	A.4.A find specific function values, simplify polynomial expressions, transform and solve equations, and factor as necessary in problem situation  <b>Supporting Standard(s):</b> A.1.C describe functional relationships for given problem situations and write equations or inequalities to answer questions arising from the situation
7th:	Ch: 1 / Lessons 1-6, 1-7, 1-8	Determine reasonable domain and range values for both continuous and discrete data in real world situations. (A.2.B) Create verbal descriptions of situations from a graph that match critical attributes of the graph. (A.2.C) Interpret a graph including critical attributes of a given problem situation. (A.2.C) Determine if a relation is a function given a graph, table, mapping diagram, or set of ordered pairs. (A.1.B) Relate functional relationships to real world situations. (A.1.C) Interpret and make predictions given a functional relationship. (A.1.E) Relate domain (x) to horizontal axis and range (y) to vertical axis. (A.2.B) Determine domain and range values from graphs, tables, mapping diagrams and verbal descriptions of real world situations (use inequality notation when appropriate). (A.2.B)	<b>Readiness Standard(s):</b> A.1.E interpret and make decisions, predictions, and critical judgments from functional relationships A.2.B identify mathematical domains and ranges and determine reasonable domain and range values for given situations, both continuous and discrete.  <b>Supporting Standard(s):</b> A.1.B gather and record data and use data sets to determine functional relationships between quantities A.1.C describe functional relationships for given problem situations and write equations or inequalities to answer questions arising from the situation A.2.C interpret situations in terms of given graphs or create situations that fit given graphs
8th:	<b>Chapter Review &amp; Reflect</b>		
9th:	Ch: 3 / Lessons 3-1, 3-2, 3-3	Use models to represent patterns (A.1.D) Identify terms given an arithmetic sequence (A.3.B) Find a formula for the nth term of an arithmetic sequence (A.3.B)  Represent patterns using equations (A.3.B)	<b>Readiness Standard(s):</b> A.1.D represent relationships among quantities using [concrete] models, tables, graphs, diagrams, verbal descriptions, equations, and inequalities A.1.E interpret and make decisions, predictions, and critical judgments



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Week	Unit/Lesson	Learning Objectives	Reporting Categories
		<p>Explain what the variables represent in a problem situation (A.3.A)</p> <p>Identify and describe independent and dependent quantities (A.1.A)</p> <p>Evaluate a function in function notation for given input/output values (A.4.A)</p> <p>Connect function notation to <math>y=mx+b</math>. (A.4.C)</p> <p>Use tables, graphs, verbal descriptions, concrete models, diagrams and equations to relate dependent and independent quantities (A.1.D)</p>	<p>from functional relationships</p> <p>A.2.B identify mathematical domains and ranges and determine reasonable domain and range values for given situations, both continuous and discrete</p> <p>A.4.A find specific function values, simplify polynomial expressions, transform and solve equations, and factor as necessary in problem situations.</p>

2nd Quarter

Resources:

Week	Unit/Lesson	Learning Objectives	Reporting Categories
1st:	Lessons 3-4, 3-5, 3-6	<p>Connect the meaning of a point as found in an ordered pair, table, graph, and as used in an equation. (A.1.D)</p> <p>Match, describe, and/or generate various views (i.e. table, graph, verbal) of a function. (A.1.D)</p> <p>Identify the domain and range of relationships represented in a table, graph, equation, verbal description, and set notation (A.2.B)</p> <p>Given a problem situation, write an equation or inequality to answer question (A.1.C)</p> <p>Answer questions and make predictions based on multiple representations: verbal, tabular, graphical, model, and/or symbolic (A.1.E)</p>	<p><b>Supporting Standard(s):</b></p> <p>A.1.A describe independent and dependent quantities in functional relationships</p> <p>A.1.C describe functional relationships for given problem situations and write equations or inequalities to answer questions arising from the situations</p> <p>A.3.A use symbols to represent unknowns and variables</p> <p>A.3.B look for patterns and represent generalizations algebraically</p> <p>A.4.C connect equation notation with function notation, such as <math>y = x + 1</math> and <math>f(x) = x+1</math></p>
2nd:	Ch: 2 & Ch: 3 / resource materials	<p>Determine if a function is linear from graphs, tables, ordered pairs, equations, and verbal description (A.5.A)</p> <p>Identify the equation of the linear parent function (A.2.A)</p> <p>Graph the linear parent function (A.2.A)</p> <p>Use the pattern of finite differences in a table of values to develop the numerical concept of determining slope – include undefined and zero slope (A.6.A)</p> <p>Determine the rate of change in a problem or problem situation by finding the ratio of the difference of <math>y</math> and difference of <math>x</math> (A.6.A)</p> <p>State the rate of change/slope in terms of the units used in the problem situation (A.6.B)</p> <p>Relate and make connections between the rate of change in a pattern,</p>	<p><b>Readiness Standard(s):</b></p> <p>A.8.B solve systems of linear equations using [concrete] models, graphs, tables, and algebraic models.</p>



2nd Quarter

Resources:

Week	Unit/Lesson	Learning Objectives	Reporting Categories
		<p>table of values, expression, and/or situation to the slope of a graph (A.5.C)</p> <p>Make connections among algebraic, tabular, graphical, or verbal descriptions of linear functions (A.5.C)</p> <p>Use the slope formula to find slope given a graph, a table, or ordered pairs (A.6.A)</p>	
3rd:	Ch: 3 / lesson 3-4	<p>Solve problems involving direct variation (A.6.G)</p> <p>Understand the significance of the intercept in direct variation situations (A.6.G)</p> <p>Compare and contrast <math>y = kx</math> and <math>y = mx + b</math> (A.6.G)</p> <p>Relate a linear function to its parent function (A.2.A)</p>	A.8.C interpret and determine the reasonableness of solutions to systems of linear equations.
4th:	Ch:4 / Lessons 4-1 / 4-2	<p>Graph a line given an equation in slope-intercept form (A.6.D)</p> <p>Relate the steepness of a line with its slope (include integers, fractions, and decimals) (A.6.B)</p> <p>Show, relate, and understand the changes in the graph to corresponding changes in slope and y-intercept to the algebraic equation (A.6.C)</p> <p>Interpret and predict the effects of changing slope and y-intercept in applied situation. (A.6F)</p> <p>When changing the slope (i.e. doubling or halving), determine the effects on the x- and y-intercepts (A.6.C)</p> <p>Write linear equations for problem situations (A.7.A)</p> <p>Write linear equations in slope-intercept, and standard forms given slope and y-intercept, x-intercept and y-intercept, two points, or slope and a point (A.6.D)</p> <p>Solve a real world problem algebraically or graphically (A.7.A)</p> <p>Relate the algebraic, graphical, and tabular solutions (A.7.B)</p> <p>Identify the reasonable domain and range of linear functions in a real world situation (A.5.B)</p>	Readiness Standard(s):
5th:	Ch: 4 / Lesson 4-3 , 4-4	<p>Write linear equations in point-slope form given x-intercept and y-intercept, two points, or slope and a point. (A.6.D)</p> <p>Write linear equations for problem situations. (A.7.A)</p> <p>Graph a line given an equation in point-slope form.(A.6.D)</p> <p>Solve a real world problem algebraically or graphically. (A.7.A)</p> <p>Relate the algebraic, graphical, and tabular representations. (A.5.C)</p> <p>Given the equations (not limited to slope-intercept form) of two lines, determine if the two lines are parallel, perpendicular, coinciding or neither. (A.6.C)</p> <p>Show that a figure in a coordinate plane is a parallelogram, right triangle or</p>	Supporting Standard(s):  A.11.A use patterns to generate the laws of exponents and apply them in problem-solving situations.



2nd Quarter			
Resources:			
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		rectangle by showing the sides are parallel or perpendicular. (A.6.A) Write equations of lines through a given point and parallel/perpendicular to a given point. (A.6.D) Transform equations from one form to another. (A.4.A)	
6th:	<b>Fall Break</b> <b>Chapter Review and Reflect</b>		
7th:	Ch: 4 / lessons 4-5, 4-6,	Given data, create scatterplots by labeling axes, plotting points, and describing general trends in the data (A.2.D) Interpret scatter plots and use trend lines to make predictions (A.2.D) Determine positive, negative, or no correlation from scatterplots and verbal situations (A.2.D) Use linear regression to determine the line of best fit (A.2.D)	<b>Readiness Standard(s):</b> A.4.A find specific function values, simplify polynomial expressions, transform and solve equations, in problem situations
8th:	Ch 4 / lesson 4-7 Ch 6 / Lesson 6-6	Use multiple representations of the line of best fit to make predictions (tabular, algebraic, graphical) (A.2.D) Graph the solution to linear inequalities in two variables (A.7.B) Write a linear inequality to represent a graph (A.7.A) Determine whether an ordered pair is a solution of an inequality (A.7.C) Write a linear inequality for a problem situation (A.7.A) Interpret the solution of a linear inequality within the context of the problem situation (A.7.C) Determine if the solution to a linear inequality is reasonable (A.7.C) Transform inequalities from one form to another. (A.4.A)	<b>Supporting Standard(s):</b> A.4.B use the commutative, associative, and distributive properties to simplify algebraic expressions
9th:	<b>Chapter Review &amp; Reflect</b> <b>Hands-On Labs &amp; Project</b> <b>Bench Mark</b>		



3rd Quarter

Resources:

Week	Unit/Lesson	Learning Objectives	Reporting Categories
1st:	Ch: 6 / Lessons 6-1	Solve systems of linear equations (including systems with one solution, infinitely many solutions, or no solution) using graphing, elimination, substitution, and tables (A.8.B)	<b>Readiness Standard(s):</b> A.8.B solve systems of linear equations using [concrete] models, graphs, tables, and algebraic models.
2nd:	Lessons 6-2, 6-3, 6-4	Define variables for a given situation (A.8.A) Formulate systems of linear equations to solve problems (A.8.A)	<b>Supporting Standard(s):</b> A.8.A analyze situations and formulate systems of linear equations in two unknowns to solve problems
3rd:	<b>Chapter Review &amp; Reflect</b>		
4th:	Lessons 6-5, 6-6	Relate the numbers in the ordered pair that is the solution to their meaning in the problem situation (A.8.C) Determine the reasonableness of solutions for problem situations (A.8.C)	A.8.C interpret and determine the reasonableness of solutions to systems of linear equations.
5th:	Ch: 7 / Lessons 7-1, 7-2	Evaluate expressions containing zero and integer exponents (A.11.A) Use iteration, repeated multiplication and division, tables, and/or models to generate laws of exponents (A.11.A) Simplify expressions using laws of exponents including zero and integer exponents (A.11.A)	<b>Readiness Standard(s):</b>
6th:	<b>Chapter Review &amp; Reflect</b>		
7th:	Lessons 7-3, 7-4	Use laws of exponents to find area and volume given dimensions of a figure (A.11.A) Use laws of exponents to find a missing dimension given area or volume and one or more of the figure's dimensions (A.11.A)	<b>Supporting Standard(s):</b> A.11.A use patterns to generate the laws of exponents and apply them in problem-solving situations.
8th:	Ch: 8 / Lessons 8-1, 8-2, 8-3	Simplify polynomial expressions (A.4.A) Write polynomials in standard form (A.4.A) Classify polynomials by degree and term (A.4.A)	<b>Readiness Standard(s):</b> A.4.A find specific function values, simplify polynomial



3rd Quarter			
Resources:			
Week	Unit/Lesson	Learning Objectives	Reporting Categories
		Evaluate polynomial expressions (A.4.A) Add, subtract, and multiply polynomials with algebra tiles and algebraically (A.4.B) Find special products of polynomials including $(a + b)^2$ , $(a - b)^2$ , and $(a + b)(a - b)$ (A.4.B) Apply simplifying polynomial expressions in geometric	expressions, transform and solve equations, in problem situations
9th:	Lessons 8-4, 8-5, 8-6	Application problems (A.4.A) Find greatest common factor of monomials containing variables and use when factoring quadratic equations (A.4.A) Model the factorization of quadratics using Algebra Tiles (A.1.D) Factor quadratics with a leading coefficient of 1 (A.4.A) Factor quadratics with a leading coefficient $\neq 1$ (A.4.A) Factor perfect square trinomials (A.4.A)	<b>Supporting Standard(s):</b> A.4.B use the commutative, associative, and distributive properties to simplify algebraic expressions

4th Quarter			
Resources:			
Week	Unit/Lesson	Learning Objectives	Reporting Categories
1st:	Lessons 8-7, 8-8, 8-9	Factor difference of two squares (A.4.A) Choose the appropriate factoring method (A.4.A) Relate factoring to area model (A.4.A)	<b>Readiness Standard(s):</b> A.4.A find specific function values, simplify polynomial expressions, transform and solve equations, and factor as necessary in problem situations A.1.D represent relationships among quantities using [concrete] models. <b>Supporting Standard(s):</b>
2nd:	Ch:9 / Lesson 9-1, 9-2	Determine whether a function is linear or quadratic from an equation, table, graph, concrete model, and/or verbal description (A.1.E) Given an equation, graph or table, identify the appropriate parent function (linear or quadratic) (A.2.A) Graph quadratic functions from a table of values (A.1.E) Identify the vertex, minimum or maximum, x- and y-intercepts (A.1.E) Identify and write the equation for the axis of symmetry (A.9.D) Interpret the meaning of the vertex, minimum or maximum, axis of symmetry, x- and y-intercepts in problem situations (A.1.E)	<b>Readiness Standard(s):</b> A.1.E interpret and make decisions, predictions, and critical judgments from functional relationships A.9.D analyze graphs of quadratic functions and draw conclusions <b>Supporting Standard(s):</b> A.2.A identify and sketch the general forms of linear ( $y=x$ ) and quadratic ( $y=x^2$ ) parent functions A.9.A determine the domain and range for quadratic functions in given situations A.9.B investigate, describe, and predict the effects of changes in a



4th Quarter			
Resources:			
Week	Unit/Lesson	Learning Objectives	Reporting Categories
		Name and interpret the meaning of solutions (intercepts, roots, zeros) (A.9.D) Determine appropriate domain and range from graph, table, equation, or verbal situation (A.9.A)	on the graph of $y = ax^2 + c$ A.9.C investigate, describe, and predict the effects of changes in c on the graph of $y = ax^2 + c$
3rd:	Lessons 9-3, 9-4	Describe and predict how a graph would be transformed by changing the values of a (A.9.B) Describe and predict how a graph would be transformed by changing the values of c (A.9.C) Interpret and make decisions given quadratic functions (A.1.E)	
4th:	<b>Chapter Review &amp; Reflect</b>		
5th:	Ch: 9 / Lessons 9-5, 9-6	Solve quadratics by graphing (A.10.A) Find values of x when the function $\neq 0$ (A.10.A) Solve quadratic functions in the form of $ax^2 + bx + c$ by factoring with a equal or not equal to 1 (A.10.A) Understand how the solutions obtained from the different methods of solving quadratic equations relate to each other (A.10.B) Understand that roots and solutions are associated with equations and that x-intercepts and zeros are associated with graphs and are related in a function (A.10.B)	<b>Readiness Standard(s):</b>  A.10.A solve quadratic equations using [concrete] models, tables, graphs, and algebraic methods
6th:	Lessons 9-7, 9-8	Solve quadratic equations by using square roots (A.10.A) Solve quadratic equations by using the Quadratic Formula (A.10.A) Determine the number of solutions of a quadratic equation by using the discriminant (A.10.A) Make connections between solutions obtained by using square roots, Quadratic Formula, factoring and tables/graphs (A.10.B)	<b>Supporting Standard(s):</b>  A.10.B make connections among the solutions (roots) of quadratic equations, the zeros of their related functions, and the horizontal intercepts (x-intercepts) of the graph of a function
7th:	<b>End of Year Review</b>		
8th:	<b>End of Year Project</b>		
9th:	<b>Testing Year End Activities &amp; Awards</b>		