Pacing Guide 2010-2011
Subject Algebra 1 (revised 5/10)
Grade Level 8-12

Grading Period 1st Quarter

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
8/5 to 8/27 **Weeks 1, 2, 3**	2.0* Students understand and use such operations as taking the opposite, finding the reciprocal, taking a root, and raising to a power. 1.0 Students identify and use the arithmetic properties of subsets of integers and rational, irrational, and real numbers, including closure properties for the four basic arithmetic operations where applicable 1.1 Students use properties of numbers to demonstrate whether assertions are true or false	**Holt Algebra 1** **Chapter 1** 1-1 Variables and Expressions 1-2 Adding and subtracting real numbers 1-3 Multiplying and dividing real numbers 1-4 Powers and Exponents 1-5 Roots and irrational numbers 1-6 Properties of Real numbers *(closure property optional)* 1-7 Simplifying Expressions	**Holt** Chapter 1 Resource File Practice workbook Review for Mastery workbook Algebra tiles; two-color counters and other manipulative materials	Assessment Resources Chapter 1 quizzes and tests Test and practice generator	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
8/30 to 9/17 **Weeks 4, 5, 6**	2.0* Students understand and use such operations as taking the opposite, finding the reciprocal, taking a root, and raising to a power. 4.0* Students simplify expressions prior to solving linear equations and in one variable, such as *3(2x-5) + 4(x-2) = 12* 5.0* Students solve multi-step problems, including word problems, involving linear equations in one variable and provide justification for each step.	**Holt Algebra 1** **Chapter 2** 2-1 Solving 1 step equations 2-2 Solving 2 step equations 2-3 Solving multi-step equations 2-4 Solving equations with variables on both sides 2-5 Solving proportions Using Formulas Worksheet: manipulating and evaluating formulas, such as quadratic formula, slope formula, temperature conversion, d=rt, simple interest; unit conversions, etc.	**Holt** Chapter 2 Resource File Practice workbook Review for Mastery workbook Algebra tiles and other manipulative materials Pan Balance Virtual tiles, balances, and other virtual materials online (see nlvm) Teacher made worksheet	Chapter 2 quizzes and tests Test and practice generator	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
9/20 to 10/1 **Weeks 7, 8** **10/4 to 10/7** **Week 9**	4.0* Students simplify expressions prior to solving linear equations and inequalities in one variable, such as $3(2x-5) + 4(x-2) = 12$ 5.0* Students solve multi-step problems, including word problems, involving linear equations and linear inequalities in one variable and provide justification for each step. Review and Benchmark	**Holt Algebra 1** **Chapter 3** 3-1 Graphing and writing inequalities 3-2 Solving inequalities by adding or subtracting 3-3 Solving inequalities by multiplying and dividing 3-4 Solving 2 and multi-step inequalities 3-5 Solving inequalities with variables on both sides 3-6 Solving compound inequalities 2-7 and 3-7 Moved to Quarter 2	**Holt** Chapter 3 Resource File Practice workbook Review for Mastery workbook Algebra tiles and other manipulative materials	Assessment Resources Chapter 3 Test and Practice Generator	District Benchmark Test Oct. 4 - 7

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
Embedded in Curriculum Weeks 1-8	24. 1 Students explain the difference between inductive and deductive reasoning and identify and provide examples of each. 24.2 Students identify the hypothesis and conclusion in logical deduction. 24.1 Students use counterexamples to show that an assertion is false and recognize that a single counterexample is sufficient to refute an assertion. 25.1 Students use properties of numbers to construct simple, valid arguments (direct and indirect) for, or formulate counterexamples to, claimed assertions. 25.2 Students judge the validity of an argument according to whether the properties of the real number system and the order of operations have been applied correctly at each step 25.3				

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Grading Period 2nd Quarter

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
10/12 – 10/15 **Week 10** **10/18 – 10/22** **Week 11**	3.0 Students solve equations and inequalities involving absolute values 16.0 Students understand the concepts of a relation and a function, determine whether a given relation defines a function, and give pertinent information about given relations and functions. 17.0 Students determine the domain or independent variables and the range of dependent variables defined by a graph, a set of ordered pairs, or a symbolic expression. 18.0 Students determine whether a relation defined by a graph, a set of ordered pairs, or a symbolic expression is a function and justify the conclusion	**Holt Algebra 1 Chapter 2 and 3** 2-7 Solving absolute value equations 3-7 Solving absolute value inequalities **Holt Algebra 1 Chapter 4** 4-1 Graphing relationships 4-2 Relations and functions 4-3 Writing functions – focus on evaluating functions and functional notation 4-4 Scatter plots and trend lines – activity based; real world focus *{Skip4-5 Arithmetic sequences}*	**Holt** Chapter 2 and 3 Resource File Practice workbook Review for Mastery workbook Graphing Calculators Algebra tiles and other manipulative materials Holt lab resouces	Holt Assessment Resources Chapter 2 and 3 quizzes and tests Assessment Resources Chapter 4 quizzes and tests	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
10/25 – 11/ 19 **Weeks 12, 13, 14, 15**	6.0 Students graph a linear equation and compute the x- and y- intercepts (e.g., graph $2x + 6y = 4$) They are also able to sketch the region defined by linear inequality (e.g. they sketch the region defined by $2x + 6y < 4$) 7.0* Students verify that a point lies on a line, given an equation of the line. Students are able to derive linear equations using the point - slope formula. 8.0 Students understand the concepts of parallel lines and perpendicular lines and how those slopes are related. Students are able to find the equation of a line perpendicular to a given line that passes through a given point	**Holt Algebra 1** **Chapter 5** 5-1 Linear equations and functions 5-2 Using intercepts 5-3 Slope *{Skip5-4 Direct variation}* 5-5 Slope intercept form *(Optional:5-6 point slope form)* 5-7 Slopes of parallel and perpendicular lines	**Holt** Chapter 5 Resource File Practice workbook Review for Mastery workbook Algebra tiles and other manipulative materials Graphing Calculators and Calculator Based Laboratories (CBL's)	Assessment Resources Chapter 5 Quizzes and tests	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
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11/ 22 – 12/ 10 **Weeks 16 , 17, 18**	6.0 Students graph a linear equation and compute the x- and y- intercepts (e.g., graph 2x = 6y = 4) They are also able to sketch the region defined by linear inequality (e.g. they sketch the region defined by 2x + 6y < 4) 8.0 Students understand the concepts of parallel lines and perpendicular lines and how those slopes are related. Students are able to find the equation of a line perpendicular to a given line that passes through a given point 9.0 Students solve a system of linear equations in two variables algebraically and are able to interpret the answer graphically. Students are able to solve a system of two linear inequalities in two variables and to sketch the solution sets. 15. Students apply algebraic techniques to solve rate problems, work problems , and percent mixture problem	**Holt Algebra 1** **Chapter 6** 6-1 Solving systems by graphing 6-2 Solving systems by substitution 6-3 Solving systems by elimination 6-4 Solving special systems 6-5 Applying systems 6-6 Solving linear inequalities 6-7 Solving systems of linear inequalities	**Holt** Chapter 6 Resource File Practice workbook Review for Mastery workbook Algebra tiles and other manipulative materials Graphing calculators and CBL's	Assessment Resources Chapter 6	
December 13 - 17	Review standards from first half of year			Finals and Mid-year Exams	District Benchmark Test ?

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
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Week 19 Embedded in Curriculum Weeks 9- 18	24.1 Students explain the difference between inductive and deductive reasoning and identify and provide examples of each. 24.2 Students identify the hypothesis and conclusion in logical deduction. 24.2 Students use counterexamples to show that an assertion is false and recognize that a single counterexample is sufficient to refute an assertion. 25.1 Students use properties of numbers to construct simple, valid arguments (direct and indirect) for, or formulate counterexamples to, claimed assertions. 25.2 Students judge the validity of an argument according to whether the properties of the real number system and the order of operations have been applied correctly at each step				

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Grading Period 3rd Quarter

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
1/ 6 – 1/25 **Weeks 20, 21**	2.0 Students understand and use such operations as taking the oppsite, finding the reciprocal, taking a root, and raising to a fractional power. They understand and use the rules of exponents. 10. Studentss add, subtract, multiply , and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.	**Holt Algebra 1** **Chapter 7** 7-1 Integer Exponents *(Optional 7-2 powers of 10 and scientific notation)* 7-3 Multiplication properties of exponents 7-4 Division properties of Exponents 1 day mixed review of multiplication and division properties *{Skip 7-5 fractional exponents}* *{ Skip 7-6 Polynomials, but use vocabulary in later sections}* 7-7 Adding and subtracting polynomials	**Holt** Chapter 7 Resource File Practice workbook Review for Mastery workbook Algebra tiles and other manipulative materials	Assessment Resources Chapter 7 quizzes and tests	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
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1/ 26 – 2/11 **Weeks 21, 22, 23**	11. 0 Students apply basic factoring techniques to second and simple third degree polynomials. These techniques include finding a common factor for all terms in a polynomial, recognizing the difference of two squares, and recognizing perfect squares of binomials.	7-8 Multiplying polynomials 7-9 special products of binomials **Holt Algebra 1** **Chapter 8** {Skip 8-1 Factors and greatest common factors} 8-2 Factoring by GCF {skip factoring by grouping} 8-3 Factoring x^2+bx+c 8-4 Factoring ax^2+bx+c 8-5 Factoring special products 8-6 Choosing a factoring method Note: Optional: Chapter 10 after 8 and before 9 while factoring is fresh	Algebra tile lab – identifying like terms **Holt** Chapter 8 Resource File Practice workbook Review for Mastery workbook Algebra tiles and other manipulative materials Teacher made worksheet	Assessment Resources Chapter 8 quizzes and tests	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
2/14 – 3/ 7 **Weeks 26-27- 28**	2.0 Students understand and use such operations as taking the oppsite, finding the recirocal, taking a root, and raising to a fractional power. They understand and use the rules of exponents. 14.0 Students solve a quadratic equation by factoring or completing the square. 17.0 Students determine the domain in independent variables and the range of dependent varialbels defined by a graph , a set of ordered pairs , or a symbolic expression. 19.0 Students know the quadritic formula and are familiar with its proof by completing the square. 20.0 Students use the quaratic formula to find the roots of a second-degree polynomial and to solve quadratic equations. 21.0Students graph quadratic functions and know that their roots are x-intercepts. 22.0 Students use the quadratic firmula or factoring techniques or both to determine whether the graph if a quadratic function will intersect the x-axis in zero, one, or two points . 23.0 Students apply quadratic equations to physical problems, such as the motion of an object under the force of gravity .	**Holt Algebra 1** **Chapter 9** 9-1 Quadratic equations and functions 9-2 Characteristics of quadratic functions *(skip axis of symmetry)* 9-3 graphing quadratic functions (Note: focus on 9-2 in first three sections and emphasize relationship between zeros and x-intercepts on graphs. Also, emphasize upward/downward facing, intercepts, whether it will be "skinny" or "fat", domain and range, and a "T"-table for graphing) *{Skip 9-4 Solving quadratic equations by graphing}* 9-5 Solving quadratic equations by factoring 9-6 Solving quadratic	**Holt** Chapter 9 Resource File Practice workbook Review for Mastery workbook Algebra tiles and other manipulative materials Graphing calculators and/or Graphing software Matching equations of quadratics with graphs worksheet (called *Graphing Quadratic Equations)*	Assessment Resources Chapter 9	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
		equations by using square roots 9-7 Completing the square 9-8 The quadratic formula 9-9 The discriminant	Algebra tiles		
3/8 – 3/11 **week 29**	Review all standards				District Benchmark March 7-11?
Embedded in Curriculum Weeks 19- 28	24.1 Students explain the difference between inductive and deductive reasoning and identify and provide examples of each 24.2Students identify the hypothesis and conclusion in logical deduction. 24.3 Students use counterexamples to show that an assertion is false and recognize that a single counterexample is sufficient to refute an assertion. 25.1Students use properties of numbers to construct simple, valid arguments (direct and indirect) for, or formulate counterexamples to, claimed				

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	assertions. 25.2 Students judge the validity of an argument according to whether the properties of the real number system and the order of operations have been applied correctly at each step. 25.3 Given a specific algebraic statement involving linear, quadratic, or absolute value expressions or equations or inequalities, students determine whether the statement is true sometimes, always, or never.				

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Grading Period 4th Quarter

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
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3/21- 4/4 **Weeks 29-30**	12.0 Students simplify fractions with polynomials in the numerator and denomenator by factoring both and reducing them to the lwest terms . 13.0 Students add, subtract , multiply, and divide rational expressiosns and functions. Students solve both computationally and conceptually challenging problems by using these techniques. 15.0 Students apply algebraic techniques to solve rate , work problems, and and percent mixture problems 17.0 Students determine the domain in independent variables and the range of dependent varialbels defined by a graph , a set of ordered pairs , or a symbolic expression. 10.0 Students add, subtract, multiply , and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these technique	**Holt Algebra 1** **Chapter 10** *{Skip 10-1 Inverse variation}* *{Skip 10-2 Rational functions}* 10-3 Simplifying rational expressions 10-4 Multiplying and dividing rational expressions *{skip probability}* 10-5 Adding and subtracting rational expressions *{Skip 10-6 Dividing polynomials}* 10-7 Solving rational equations (examples 1 and 2 only in Holt) 10 – 8 Applying rational equations (focus on work problems)	**Holt** Chapter 10Resource File Practice workbook Review for Mastery workbook	Assessment Resources Chapter 10 quizzes and tests	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
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4/6 to ? _____ **?**	Review of all Algebra 1 standards . State testing ? 2.0 Students understand and use such operations as taking the oppsite, finding the recirocal, taking a root, and raising to a fractional power. They understand and use the rules of exponent 7.0 Students verify that a point lies on a lone, given an equation of the line. Students are able to derive linear equations by using the point-slope formula	**Holt Algebra 1** **Chapters 1 - 10** **Holt Algebra 1** **Chapter 11 (Optional)** 11-1 Square root functions 11-2 Radical expressions 11-3 Adding and subtracting radical expressions 11-4 Multiplying and dividing radical expressions 11-5 Solving radical Equations 11-6 Geometric sequences 11-7 Exponential functions 11-8 Exponential Growth and decay 11-9 Linear, quadratic and exponential models	**Holt resource books** Focus on California Standards -Benchmark Test -Intervention -Review for Mastery **Holt** Chapter 11 Resource File Practice workbook Review for Mastery workbook Algebra tiles and other manipulative materials	_____ Assessment Resources Chapter 11 quizzes and tests May 24-26? High school finals	_____

Note: ***Teachers may choose to substitute a cumulative project instead of chapter 11 as long as it is at an appropriate level.***