Mt. Zion High School Curriculum Map

Name:_____Department:_____Math_____Subject:___Algebra II_Concepts_____

Quarter	Essential Skills	Strategies and Activities	CC Standards	Assessments
1	Students will be able reintroduce numbers, properties, and expressions within the context of linear and absolute value equations and inequalities	1a. Use order of operations to evaluate expressions and formulas	1a. A.SSE.1a, A.SSE.1b	1a-f. Chapter Quiz, Chapter Test, Semester Exam
		1b. Classify real numbers and use properties of real numbers to evaluate expressions	1b. A.SSE.2	
		1c. Translate between verbal expressions and equations and use properties of equality to solve equations	1c. A.CED.1	
		1d. Evaluate and solve absolute value expressions and equations	1d. A.SSE.1b, A.CED.1	
		1e. Solve multi-step inequalities	1e. A.CED.1, A.CED.3	
		1f. Solve compound inequalities and absolute value inequalities as well as understand their relationship	1f. A.CED.1, A.CED.3	
	Students will be able to graph, synthesize, analyze and explain linear functions and inequalities	2a. Analyze and describe domain and range for relations and functions	2a. F.IF.4, F.IF.5	2a-h. Chapter Quiz, Chapter Test, Semester Exam
		2b. Identify and create linear functions	2b. F.IF.4	
		2c. Evaluate and classify slope and rate of change of lines	2c. F.IF.4, F.IF.9	
		2d. Given information about a linear function, create the equation of the linear function	2d. A.SSE.1b, A.CED.2	

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		2e. Use scatter plots and regression to create linear models for prediction	2e. F.IF.4	
		2f. Define and graph piecewise and absolute value functions	2f. F.IF.4, F.IF.7b	
		2g. Understand and use transformations such as translations and reflections to graph parent functions	2g. F.IF.4, F.BF.3	
		2h. Create and graph linear and absolute value inequalities	2h. A.CED.3	

Quarter	Essential skills	Strategies and Activities	CC Standards	Assessments
2	Students will be able to solve systems of linear equations and inequalities using a variety of methods including graphically, algebraically, and using matrices.	3a. Solve linear systems in two variables using graphing and algebraic methods. 3b. Solve linear systems of inequalities in two variables by representing the solution as the intersections of the graphs of the individual inequalities 3c. Use the system of inequalities to construct a feasible region subject to an objective function in order to optimize linear relationships 3d. Use algebraic methods to solve linear systems in three variables and understand that the solution represents an ordered triple 3e. Understand dimensions and simple operations of matrices as well as how to represent data in a matrix 3f. Multiply matrices with and without context and the differences between the properties of matrix and scalar multiplication 3g. Evaluate the determinant of a 2x2 and 3x3 matrix and use the determinants to solve systems using Cramer's Rule 3h. Find the inverse of a 2x2 matrix and how its related to the original matrix while using inverses to solve linear systems in two variables	3a. A.CED.3, A.RE.11 3b. A.CED.3 3c. A.CED.3 3d. A.CED.3 3e. A.CED.3 3f. A.CED.3 3g. A.CED.3 3h. A.CED.3	3a-h. Chapter Quizzes, Semester Exam

Quarter	Essential skills	Strategies and Activities	CC Standards	Assessments
2	Students will be able to differentiate between linear and quadratic function through graphing and methodology of solving both functions. Students will also understand the different types of solutions unique to quadratic functions.	4a. Represent quadratic functions by their graphs and recognize the vertex as the extrema for the functions 4b. Factor quadratic functions and use the factored form to find the zeros of a quadratic function 4c. Define and perform arithmetic operations with complex numbers 4d. Rewrite a quadratic function in the perfect square form to use square roots to solve any quadratic equation 4e. Derive the quadratic formula by using completing the square as well as interpreting the solutions of a quadratic equations in relation to its discriminant 4f. Apply transformations to represent and graph quadratic functions 4g. Apply the properties of inequalities to quadratics to solve and graph quadratic inequalities	4a. A.SSE.1a, F.IF.9 4b. A.SSE.2, F.IF.8a 4c. N.CN.1, N.CN.2 4d. N.CN.7, F.IF.8a 4e. N.CN.7, A.SSE.1b 4f. F.IF.8a, F.BF.3 4g. A.CED.1, A.CED.3	4a-f. Chapter Quiz, Chapter Test, Semester Exam