Unit	Essential Skills
Name: Equations, and Inequalities **Quarter: 1** **Length (Days): 8**	1. Using number lines to graph and order real numbers 2. Identify properties of real numbers 3. Use properties of real numbers 4. Solve linear equations 5. Solve simple linear inequalities 6. Solve compound inequalities 7. Find the slopes of lines 8. Classify lines as parallel, perpendicular, or neither based on slope 9. Graph linear inequalities in two variables
Name: Systems of Linear Equations and Inequalities **Quarter: 1** **Length (Days): 9**	1. graph and solve systems of linear equations in two variables 2. Use algebraic methods to solve linear systems. 3. Solve systems of linear equations in three variables
Name: Matrices and Determinants **Quarter: 1** **Length (Days): 12**	1. Add and subtract matrices 2. Multiply matrices by scalars 3. Solve matrix equations. 4. Multiply matrices 5. Evaluate the determinant of 2x2 and 3x3 matrices 6. Use Cramer's rule to solve systems of linear equations 7. Find and use inverse matrices 8. Solve systems of linear equations using inverse matrices
Name: Quadratic Functions **Quarter: 1/2** **Length (Days): 17**	1. Graph Quadratic Functions 2. Factor quadratic expressions 3. Solve quadratic equations by factoring 4. Solve quadratic equations by finding squarer roots 5. Solve quadratic equations with complex solutions 6. Perform operations with complex umbers 7. Solve quadratic equations by completing the square 8. Solve quadratic equations using the quadratic formula 9. Use the discriminant to determine the nature of the solutions to a quadratic equation 10. Graph inequalities in two variables
Name: Polynomials and Polynomial Functons **Quarter: 2** **Length (Days): 23**	1. Use properties of exponents to evaluate and simplify expressions involving powers. 2. Evaluate a polynomial function. 3. Graph a polynomial function. 4. Add, subtract, and multiply polynomials. 5. Factor Polynomial Expressions 6. Use factoring to solve polynomial equations. 7. Divide polynomials and apply the remainder and factor theorems. 8. Find the rational zeroes of a polynomial function. 9. Use the fundamental theorem of Algebra to determine the number of zeroes of a polynomial function.
Name: Powers, Roots and Radicals **Quarter: 3** **Length (Days): 25**	1. Evaluate nth roots of real numbers. 2. Use properties of rational exponents to evaluate and simplify expressions. 3. Perform operations with functions including power functions. 4. Find inverses of linear and nonlinear functions. 5. Graph square root and cube root functions. 6. Solve equations that contain radicals or rational exponents. 7. Use measures of central tendency and measures of dispersion to describe data sets. 8. Use box-and-whisker plots and histograms to represent data graphically.
Name: Exponential and Logarithmic Functions **Quarter: 3** **Length (Days): 24**	1. Graph exponential growth functions. 2. Graph exponential decay functions. 3. Use the number e as the base of exponential functions. 4. Evaluate logarithmic functions. 5. Graph logarithmic functions. 6. Use properties of logarithms. 7. Solve exponential equations.
Name: Rational Equations and Functions **Quarter: 4** **Length (Days):**	1. Write and use inverse variation models. 2. Write and use joint variation models. 3. Write and use direct variation models. 4. Graph rational functions that are hyperbolas. 5. Graph general rational functions. 6. Multiply and divide rational functions. 7. Add and subtract rational expressions. 8. Simplify complex fractions. 9. Solve rational equations.

Name: Quadratic Relations and Conic Sections **Quarter: 4** **Length (Days):**	1. Use the distance formula to find the distance between two points. 2. Use the midpoint formula to find the midpoint between two points. 3. Graph and write equations of parabolas. 4. Graph and write equations of circles. 5. Graph and write equations of ellipses. 6. Graph and write equations of hyperbolas. 7. Write and graph the equations of conic sections that do not have their centers at the origin. 8. Solve systems of quadratic equations.