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JC Schools Algebra IA Yearly Math Standards

Overarching Standards

A1.NQ.B.3
Use units of measure as a way to understand and solve problems involving quantities.
a. Identify, label and use appropriate units of measure within a problem.
b. Convert units and rates.
c. Use units within problems.
d. Choose and interpret the scale and the origin in graphs and data displays.

A1.NQ.B.4
Define and use appropriate quantities for representing a given context or problem.

A1.NQ.B.5
Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

A1.CED.A.3
Represent constraints by equations or inequalities and by systems of equations or inequalities, and interpret the data points as a solution or non-solution in a modeling context.

Units	Priority Standards	Supporting Standards
Unit 1 Equations & Inequalities 31 Days	**A1.CED.A.1** Create equations and inequalities in one variable and use them to model and/or solve problems.	**A1.CED.A.4** Solve literal equations and formulas for a specified variable that highlights a quantity of interest **A1.REI.A.1** Explain how each step taken when solving an equation or inequality in one variable creates an equivalent equation or inequality that has the same solution(s) as the original.

Unit 2 Polynomial Operations 32 Days	**A1.SSE.A.1** Interpret the contextual meaning of individual terms or factors from a given problem that utilizes formulas or expressions. **A1.SSE.A.2** Analyze the structure of polynomials to create equivalent expressions or equations.	**A1.NQ.A.1** Explain how the meaning of rational exponents extends from the properties of integer exponents **A1.NQ.A.2** Rewrite expressions involving radicals and rational exponents using the properties of exponents. *Limit to rational exponents with a numerator of 1.* **A1.APR.A.1** Add, subtract, and multiply polynomials, and understand that polynomials follow the same general rules of arithmetic and are closed under these operations. **A1.APR.A.2** Divide polynomials by monomials.
Unit 3 Introduction to Functions 30 Days	**A1.LQE.B.4** Write arithmetic and geometric sequences in recursive and explicit forms and use them to model situations and translate between the two forms.	**A1.IF.A.2** Use function notation to evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context. **A1.LQE.A.1** Distinguish between situations that can be modeled with linear or exponential functions. a. Determine that linear functions change by equal differences over equal intervals. b. Recognize exponential situations in which a quantity grows or decays by a constant percent rate per unit interval.
Unit 4 Writing & Graphing Linear	**A1.REI.C.6** Explain that the graph of an equation in two variables is the set of all its solutions plotted in the Cartesian coordinate plane.	**A1.CED.A.2** Create and graph linear, quadratic and exponential equations in two variables. **A1.REI.C.7**

Functions 32 Days	**A1.BF.A.1** Analyze the effect of translations and scale changes on functions. **A1.IF.B.3** Using tables, graphs and verbal descriptions, interpret key characteristics of a function that models the relationship between two quantities. **A1.IF.C.7** Graph functions expressed symbolically and identify and interpret key features of the graph. **A1.LQE.A.3** Construct linear, quadratic and exponential equations given graphs, verbal descriptions or tables.	Graph the solution to a linear inequality in two variables. **A1.IF.C.8** Translate between different but equivalent forms of a function to reveal and explain properties of the function and interpret these in terms of a context.
Unit 5 Writing & Graphing Quadratic Functions 30 Days	**A1.BF.A.1** Analyze the effect of translations and scale changes on functions. **A1.REI.C.6** Explain that the graph of an equation in two variables is the set of all its solutions plotted in the Cartesian coordinate plane. **A1.IF.B.3** Using tables, graphs, and verbal descriptions interpret key characteristics of a function that models the relationship between two quantities. **A1.IF.C.7** Graph functions expressed symbolically and identify and interpret key features of the graph. **A1.LQE.A.3** Construct linear, quadratic and exponential equations given graphs, verbal descriptions or tables.	**A1.CED.A.2** Create and graph linear, quadratic, and exponential equations in two variables. **A1.IF.C.8** Translate between different but equivalent forms of a function to reveal and explain properties of the function and interpret these in terms of a context.