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


| Unit 2 <br> Polynomial Operations <br> 34 Days | A1.SSE.A. 1 <br> Interpret the contextual meaning of individual terms or factors from a given problem that utilizes formulas or expressions. <br> A1.SSE.A. 2 <br> Analyze the structure of polynomials to create equivalent expressions or equations. | A1.NQ.A. 1 <br> Explain how the meaning of rational exponents extends from the properties of integer exponents <br> A1.NQ.A. 2 <br> Rewrite expressions involving radicals and rational exponents using the properties of exponents. Limit to rational exponents with a numerator of 1 . <br> A1.APR.A. 1 <br> Add, subtract, and multiply polynomials, and understand that polynomials follow the same general rules of arithmetic and are closed under these operations. <br> A1.APR.A. 2 <br> Divide polynomials by monomials. |
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| Unit 3 <br> Introduction to Functions <br> 34 Days | A1.LQE.B. 4 <br> 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 <br> Use function notation to evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context. <br> A1.LQE.A. 1 <br> Distinguish between situations that can be modeled with linear or exponential functions. <br> a. Determine that linear functions change by equal differences over equal intervals. <br> b. Recognize exponential situations in which a quantity grows or decays by a constant percent rate per unit interval. |
| Unit 4 <br> Writing \& Graphing Linear | A1.REI.C. 6 <br> 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 <br> Create and graph linear, quadratic and exponential equations in two variables. <br> A1.REI.C. 7 |


| Functions <br> 36 Days | A1.BF.A. 1 <br> Analyze the effect of translations and scale changes on functions. <br> A1.IF.B. 3 <br> Using tables, graphs and verbal descriptions, interpret key characteristics of a function that models the relationship between two quantities. <br> A1.IF.C. 7 <br> Graph functions expressed symbolically and identify and interpret key features of the graph. <br> A1.LQE.A. 3 <br> Construct linear, quadratic and exponential equations given graphs, verbal descriptions or tables. | Graph the solution to a linear inequality in two variables. <br> A1.IF.C. 8 <br> 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. |
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| Unit 5 <br>  <br> Graphing <br> Quadratic <br> Functions <br> 30 Days | A1.BF.A. 1 <br> Analyze the effect of translations and scale changes on functions. <br> A1.REI.C. 6 <br> Explain that the graph of an equation in two variables is the set of all its solutions plotted in the Cartesian coordinate plane. <br> A1.IF.B. 3 <br> Using tables, graphs, and verbal descriptions interpret key characteristics of a function that models the relationship between two quantities. <br> A1.IF.C. 7 <br> Graph functions expressed symbolically and identify and interpret key features of the graph. <br> A1.LQE.A. 3 <br> Construct linear, quadratic and exponential equations given graphs, verbal descriptions or tables. | A1.CED.A. 2 <br> Create and graph linear, quadratic, and exponential equations in two variables. <br> A1.IF.C. 8 <br> 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. |

