## JC Schools Algebra IB 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 | A1.APR.A.1 <br> Add, subtract and multiply polynomials, and understand <br> that polynomials follow the same general rules of <br> arithmetic and are closed under these operations. |  |
| Introduction <br> Algebra IB | A1.APR.A.2 <br> Divide polynomials by monomials. <br> 21.CED.A.1 |  |


|  | Create equations and inequalities in one variable and use them to model and/or solve problems. <br> A1.CED.A. 2 <br> Create and graph linear, quadratic and exponential equations in two variables. <br> A1.SSE.A. 1 <br> Interpret the contextual meaning of individual terms or factors from a given problem that utilizes formulas or expressions. |  |
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| Unit 6 <br> Factoring \& Solving Quadratic Functions 33 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. <br> A1.REI.A.2c <br> Solve problems involving quadratic equations <br> c. Analyze different methods of solving quadratic equations. <br> A1.CED.A. 1 <br> Create equations and inequalities in one variable and use them to model and/or solve problems. | A1.SSE.A.3.a <br> Choose and produce equivalent forms of a quadratic expression or equations to reveal and explain properties. <br> a. Find the zeros of a quadratic function by rewriting it in factored form. <br> A1.REI.A.2.a, Solve problems involving quadratic equations. <br> a. Use the method of completing the square to create an equivalent quadratic equation. |
| Unit 7 <br> Exponential Functions <br> 34 Days | 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.BF.A. 1 <br> Analyze the effect of translations and scale changes on functions. | 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. |


|  | 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.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. |
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| Unit 8 <br> Systems <br> 34 Days | A1.REI.C. 8 <br> Solve problems involving a system of linear inequalities. | A1.REI.B. 3 <br> Solve a system of linear equations algebraically and/or graphically. <br> A1.REI.B. 4 <br> Solve a system consisting of a linear equation and a quadratic equation algebraically and/or graphically. <br> A1.CED.A. 3 <br> 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. |
| Unit 9 <br> Statistics <br> 42 Days | A1.DS.A. 1 <br> Analyze and interpret graphical displays of data. | A1.DS.A. 4 <br> Summarize data in two-way frequency tables. Interpret relative frequencies in the context of the data, and recognize possible associations and trends in the data. <br> A1.DS.A. 5 <br> Construct a scatter plot of bivariate quantitative data describing how the variables are related; determine and use a function that models the relationship. <br> a. Construct a linear function to model bivariate data represented on a scatter plot that minimizes residuals. |


|  |  | b. Construct an exponential function to model bivariate <br> data represented on a scatter plot that minimizes residuals. <br> A1.DS.A.8 <br> Distinguish between correlation and causation. |
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