Portrait of an Abington Heights Mathematician

By the end of Algebra II, students will:

Patterns, Relations, and Functions	Applications of Functions	Operations with Complex Numbers	Non-Linear Expressions	Non-Linear Equations	Data Analysis
☐ Analyze a set of data for the existence of a pattern, and represent the pattern with a rule algebraically and/or graphically ☐ Determine the domain, range, or inverse of a relation ☐ Identify and/or determine the characteristics of an exponential, quadratic, or polynomial function (e.g. intercepts, zeros)	☐ Create, interpret, and/or use the equation, graph, or table of quadratic, absolute value, piecewise, and step functions ☐ Determine, use, and/or interpret minimum and maximum values over a specified interval of a graph of quadratic, absolute value, piecewise, or step functions ☐ Translate a quadratic, absolute value, piecewise, or step function from one representation of a function to another (graph, table, and equation)	☐ Simplify/write square roots in terms of *i* ☐ Simplify/evaluate expressions involving powers of *i* ☐ Add and subtract complex numbers ☐ Multiply and divide complex numbers	☐ Use exponential expressions to represent rational numbers ☐ Simplify/evaluate expressions involving positive and negative exponents and/or roots ☐ Simplify/evaluate expressions involving multiplying with exponents, powers of powers, and powers of products ☐ Simplify or evaluate expressions involving logarithms and exponents ☐ Factor algebraic expressions, including difference of squares and trinomials ☐ Simplify rational algebraic expressions	☐ Write and/or solve quadratic equations (including factoring and using Quadratic Formula) ☐ Solve equations involving rational and radical expressions ☐ Write and/or solve a simple exponential or logarithmic equation ☐ Use algebra processes to solve a formula for a given variable ☐ Identify or describe the effect of changing parameters within a family of functions	☐ Draw, identify, find, interpret, and/or write an equation and make predictions for a linear regression model for a scatter plot ☐ Use combinations, permutations, and the fundamental counting principle to solve problems involving probability ☐ Use odds to find probability and/or use probability to find odds ☐ Use probability for independent, dependent, or compound events to predict outcomes