MAGIC CITY ACCEPTANCE
ACADEMY

Algebra 1 2nd Semester

Timeline	Unit/theme	Standard	Student Focused Objective	Resources/ Suggested Activities
3 days	Unit 3 Rational Exponents	1. Explain how the meaning of rational exponents follow from extending the properties of integer exponents to those values, allowing for an additional notation for radicals using rational exponents. 2. Rewrite expressions involving radicals and rational exponents using the properties of exponents.	I can use rational and irrational numbers to complete the real number system.	Accelerated Learning, MathNation, Desmos. MathNation
10 days	Unit 1 Sequences and Functions	22. Define sequences as functions, including recursive definitions, whose domain is a subset of the integers. 25. Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs.	I can identify and define functions by using a variety of representations: mapping, diagrams, function notation, recursive definitions, tables and graphs. I can tell that functions that are members of the same family have common attributes.	Accelerated Learning, MathNation, Desmos. MathNation
16 days	Unit 6 Introduction to Quadratic Functions	4. Interpret linear, quadratic, and exponential expressions in terms of a context by viewing one or more of their parts as a single entry 5. Use the structure of an expression to identify ways to rewrite it. 6. Choose and produce an equivalent form of an	I will be able to identify and evaluate quadratic functions. I will be able to compare and contrast	Accelerated Learning, MathNation, Desmos. MathNation

		expression to reveal and explain properties of the quantity represented by the expression. 15a. Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of context. 16. Compare and contrast relations and functions represented by equations, graphs, or tables that show related values; determine whether a relation is a function. 21. Compare properties of two functions, each represented in a different way (algebraically, graphically, numerically in tables, or by verbal description). 25. Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs. 26. Use graphs and tables to show that a quantity increasing exponentially eventually exceeds a quantity increasing linearly or quadratically. 28. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. 30. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.	their graph vs the graphs of other functions.	
15 Days	Unit 7/ Quadratic Functions	4. Interpret linear, quadratic, and exponential expressions in terms of a context by viewing one or more of their parts as a single entry 5. Use the structure of an expression to identify ways to rewrite it. 6. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. 9. Select an appropriate method to solve a quadratic equation in one variable 11. Create equations and inequalities in one variable and use them	I can evaluate and graph quadratic functions.	MathNation, Unit 7, Desmos

		to solve problems in context, either exactly or approximately. Extend from contests arising from linear functions to those involving quadratic, exponential, and absolute value functions. 13. Represent constraints by equations and/or inequalities, and solve systems of equations and/or inequalities, interpreting solutions as viable or nonviable options in a modeling context. Limit to contexts arising from linear, quadratic, exponential, absolute value, and linear piecewise functions. 14 given a relation defined by an equation in two variables, identify the graph of the relation as the set of all its solutions plotted in the coordinate plain. 15. Define a function as a mapping from one set to another set that assigns to each element of the domain exactly one element of the range. 16. Compare and contrast relations and functions represented by equations, graphs, or tables that show related values; determine whether a relation is a function. Explain that a function f is a special kind of relation defined by the equation y= f(x). 18. Solve systems consisting of linear and/or quadratic equations in two variables graphically, using technology here appropriate. 26. Use graphs and tables to show that a quantity increasing exponentially exceeds a quantity increasing linearly or quadratically. 28. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Extend from relationships that can be represented by linear functions to quadratic, exponential, absolute value, and linear piecewise functions. 30. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.		
10 days/5 days	Algebra 2 Unit 5/ Transformation of functions	17. Combine different types of standard functions to write, evaluate, and interpret functions in context. Limit to linear, quadratic, exponential, and absolute value functions. 23. Identify the effect on the graph of replacing, f(x) by f(x) +k, k* f(x), f(x*k) and f(x+k) for specific values of k, (both positive and negative) find the value of k given the graphs. Experiment with	I can write and interpret functions in context. I can understand how to identify transforming	MathNation, Algebra 2 Units 5 and 2. Desmos.

	Algebra 2 Unit 2, Polynomials	cases and explain the effects on the graph, using technology as appropriate. Limit to linear, quadratic, exponential, absolute value, and linear piecewise functions. 1. Explain how the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for an additional notation for radicals using rational exponents. 2. Rewrite expressions involving radicals and rational exponents using the properties of exponents. 3. Define the imaginary number i such that $i^2 = -1$. 4. Interpret linear, quadratic, and exponential expressions in terms of a context by viewing one or more of their parts as a single entity. 5. Use the structure of an expression to identify ways to rewrite it. 6. Choose and produce an equivalent form of an depression to reveal and explain properties of the quantity represented by the expression.	functions and see the transformation on a graph. I can explain and define rational and irrational exponents.	
3 days/ 11 days	Algebra 1 Unit 3, Two-Variable Statistics/ Geometry Unit 8, Conditional Probability	35. Analyze the possible association between two categorical variables. 36. Generate a two way categorical table in order to find and evaluate solutions to real-world problems. 37. Describe events as subsets of a sample space (the set of outcomes) using characteristics of the outcomes, or as unions, intersections, or complements of other events. 38. Explain whether two events, A and B, are independent, using two-way tables or diagrams. 39. Compute the conditional probability of event A given event B, using two way tables or tree diagrams. 40. Recognize and describe the concepts of conditional probability and independence in everyday situations and explain them using everyday language. 41. Explain why the conditional probability of A given B is the fraction of B's outcomes that also belong to A, and interpret the answer in context.	I will be able to analyze possible outcomes and associations between 2 variables. I will be able to build and interpret probability tables and tree diagrams.	Mathanation, Algebra 1 Unit 3, and Geometry Unit 8, desmos.
5 days	Algebra 2 Unit 3/ Complex Numbers	1. Explain how the meaning of the rational exponents follows from extending the properties of integer exponents to those values, allowing for an additional notation for radicals using rational exponents.	I can explain the meaning of rational exponents and their properties. I can	MathNation Algebra 2 Unit 3, Desmos.

| | | 2. Rewrite expressions involving radicals and rational exponents using the properties of exponents.
3. Define the imaginary number i such that $i^2 = -1$
19. Explain why the x-coordinates of the points where the graphs of the equations y= f(x) and y= g(x) intersect are the solutions of the equation f(x) = g(x) | understand imaginary numbers and graph equations involving radicals. | |