2017-2018
High School Algebra 1 – Scope and Sequence

Fall Semester					Spring Semester				
Topic 1 12 Days	Topic 2 16 Days	Topic 3 13 Days	Topic 4 19 Days	Topic 5 15 Days	Topic 6 14 Days	Topic 7 13 Days	Topic 8 13 Days	Topic 9 20 Days	Topic 10 20 Days
Foundations for Algebra	Equations	Inequalities	Linear Functions	Linear Systems (Part 1)	Linear Systems (Part 2)	Exponents/ Exponential Functions	Polynomials/ Factoring (Part 1)	Polynomials/ Factoring (Part 2)	Quadratic Functions/ Equations
A-SSE 1a	A-CED 1	A-CED 1	A-SSE 1a	A-REI 11	A-REI 12	N-RN.A.1	A-APR 1	A-APR 1	A-APR.B.3
N-RN 3	A-CED 4	A-REI 3	A-CED 2	A-REI 5	A-CED 3	N-RN.A.2	A-SSE 2	A-SSE 2	A-CED.A.1
	A-REI 1		F-IF 1	A-REI 6	N-Q 2	A-SSE.A.1.b		A-SSE 1a	A-CED.A.2
	A-REI 3		F-IF 2		N-Q 3	A-SSE.B.3.c		A-SSE 1b	A-CED.A.3
	N-Q 1		F-IF 4		A-REI 6	A-CED.A.2			A-CED.A.4
			F-IF 6			A-CED.A.3			F-IF.B.4
			A-SSE 2			A-REI.D.11			F-IF.B.5
			N-Q 2			F-IF 8b			A-REI 4b
			F-LE 1b			F-IF 7e			A-SSE 1
			F-LE 2						A-SSE 3a
			F-LE 5						F-IF 7 a,b
			F-IF 7						F-IF 8 a,b
			F-BF 1a						F-BF 3

Major Clusters	Supporting Clusters	Additional Clusters
Reasoning with Equations and Inequalities (A-REI) • Understand solving equations as a process of reasoning and explain the reasoning. • Solve equations and inequalities in one variable. • Represent and solve equations and inequalities graphically. **Seeing Structure in Expressions (A-SSE)** • Interpret the structure of expressions **Arithmetic with Polynomials and Rational Expressions (A-APR)** • Perform arithmetic operations on polynomials **Creating Equations (A-CED)** • Create equations that describe numbers or relationships **Interpreting Functions (F-IF)** • Understand the concept of a function and use function notation • Interpret functions that arise in applications in terms of the context **Interpreting Categorical and Quantitative Data (S-ID)** • Interpret linear models	**Seeing Structure in Expressions (A-SSE)** • Write expressions in equivalent forms to solve problems **Interpreting Functions (F-IF)** • Analyze functions using different representations **Quantities (N-Q)** • Reason quantitatively and use units to solve problems **Arithmetic with Polynomials and Rational Expressions (A-APR)** • Understand the relationship between zeros and factors of polynomials. **Building Functions (F-BF)** • Build a function that models a relationship between two quantities **Interpreting Categorical and Quantitative Data (S-ID)** • Summarize, represent, and interpret data on two categorical and quantitative variables	**Reasoning with Equations and Inequalities (A-REI)** • Solve systems of equations. • Understand solving equation as a process of reasoning and explain the reasoning **The Real Number System(N-RN)** • Extend the properties of exponent to rational exponents **Arithmetic with Polynomials and Rational Expressions (A-APR)** • Rewrite rational expressions **Interpreting Categorical and Quantitative Data (S-ID)** • Summarize, represent, and interpret data on a single count or measurement variable.

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Summary of Year for High School Algebra I
In 9th grade Algebra, students should be given the opportunity for focused learning experiences in: procedural skill and fluency in solving linear equations and inequalities in one variable. Additionally, students will deepen their understanding of linear equations and inequalities in two variables. Also, the course will emphasize modeling with linear equations and inequalities, culminating with solving systems of both linear equations and inequalities. From there, the course shifts to developing a deeper understanding of functions. Students will focus on linear and exponential functions by exploring situations that could be modeled by either a linear function or an exponential function. Then students will move to studying quadratic equations and functions, including identifying key elements of graphs, transformations with functions, and identifying domain and range. Students will apply these newly developed understandings and skills with functions to simple radical functions and then to piecewise-defined functions. The course concludes with a study of bivariate and univariate statistics to develop necessary understandings and skills the students will need for their study of statistics in Algebra II.

Standards for Mathematical Practice	Fluency Requirements for High School Algebra 1
Throughout 9th grade Algebra, students should continue to develop proficiency with the Common Core's eight Standards for Mathematical Practice: 1. Make sense of complex problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.	• **Solving characteristic problems involving the analytic geometry of lines, including writing the equation of a line given a point and a slope.** • **Fluency in adding, subtracting, and multiplying polynomials.** • **Fluency in transforming expressions and seeing parts of an expression as a single object.**

Paramount Unified School District
Educational Services

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				2017-2018	
Topic	**Content**	**Textbook Lessons**	**Start Date**	**Assessment Dates**	**# of Days**
1	**Foundations for Algebra**	1.1, 1.2, 1.5 – 1.7, 1.0	August 17, 2017	**September 1, 2017**	12
2	**Equations**	2.1 – 2.5, 2.7	September 5, 2017	**September 25-26, 2017**	16
3	**Inequalities**	3.1 – 3.4	September 27, 2017	**October 12-13, 2017**	13
4	**Linear Functions**	4.5, 4.6, 5.1, 5.3 – 5.5	October 16, 2017	**November 8-9, 2017**	19
5	**Linear Systems (Part 1)**	6.1, 6.2, 6.3	November 13, 2017	**December 7-8, 2017**	15
6	**Linear Systems (Part 2)**	6.4, 6.5, 6.6	January 22, 2018	**February 7-8, 2018**	14
7	**Exponents/Exponential Functions**	7.2 – 7.4, 7.1, 7.6, 7.7	February 9, 2018	**Feb. 28 – Mar. 1, 2018**	13
8	**Polynomials/Factoring (Part 1)**	8.1 – 8.4	March 2, 2018	**March 19-20, 2018**	13
9	**Polynomials/Factoring (Part 2)**	8.2, 8.5 – 8.8	March 21, 2018	**April 23-24, 2018**	20
10	**Quadratic Functions/Equations**	9.4, 10.2, 9.3, 9.6, 9.5, 9.1, 9.2	April 25, 2018	**May 21-22, 2018**	20
				Total # of Instructional Days	**155**