ALGEBRA I NEXT GENERATION REGENTS STANDARDS

Sections refer to the *Algebra I Next Generation Course Workbook* (2024-2025).

Standard	***Description***	***Sections***
N.RN	**The Real Number System**	
(B)	***Use properties of rational and irrational numbers.***	
N.RN.3	Use properties and operations to understand the different forms of rational and irrational numbers. a. Perform all four arithmetic operations and apply properties to generate equivalent forms of rational numbers and square roots. Note: Tasks include rationalizing numerical denominators of the form $\frac{a}{\sqrt{b}}$ where a is an integer and b is a natural number. b. Categorize the sum or product of rational or irrational numbers. • The sum and product of two rational numbers is rational. • The sum of a rational number and an irrational number is irrational. • The product of a nonzero rational number and an irrational number is irrational. • The sum and product of two irrational numbers could be either rational or irrational.	10.1 – 10.3 10.4
N.Q	**Quantities**	
(A)	***Reason quantitatively and use units to solve problems.***	
N.Q.1	Select quantities and use units as a way to: i) interpret and guide the solution of multi-step problems; ii) choose and interpret units consistently in formulas; and iii) choose and interpret the scale and the origin in graphs and data displays.	2.7 *and throughout*
N.Q.3	Choose a level of accuracy appropriate to limitations on measurement and context when reporting quantities.	*all*

A.SSE	Seeing Structure in Expressions	
(A)	***Interpret the structure of expressions.***	
A.SSE.1	Interpret expressions that represent a quantity in terms of its context. a. Write the standard form of a given polynomial and identify the terms, coefficients, degree, leading coefficient, and constant term. b. Interpret expressions by viewing one or more of their parts as a single entity; e.g., Interpret $P(1+r)^n$ as the product of *P* and a factor not depending on *P*.	5.1 *throughout*
A.SSE.2	Recognize and use the structure of an expression to identify ways to rewrite it. e.g., • $x^3 - x^2 - x = x(x^2 - x - 1)$ • $53^2 - 47^2 = (53 + 47)(53 - 47)$ • $16x^2 - 36 = (4x)^2 - (6)^2 = (4x + 6)(4x - 6) = 4(2x + 3)(2x - 3)$ or $16x^2 - 36 = 4(4x^2 - 9) = 4(2x + 3)(2x - 3)$ • $-2x^2 + 8x + 10 = -2(x^2 - 4x - 5) = -2(x - 5)(x + 1)$ • $x^4 + 6x^2 - 7 = (x^2 + 7)(x^2 - 1) = (x^2 + 7)(x + 1)(x - 1)$ Note: Algebra I expressions are limited to numerical and polynomial expressions in one variable. Use factoring techniques such as factoring out a greatest common factor, factoring the difference of two perfect squares, factoring trinomials of the form $ax^2 + bx + c$ with a lead coefficient of 1, or a combination of methods to factor completely. Factoring will not involve factoring by grouping and factoring the sum and difference of cubes.	5.4, 11.1 – 11.4
(B)	***Write expressions in equivalent forms to reveal their characteristics.***	
A.SSE.3	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. c. Use the properties of exponents to rewrite exponential expressions. e.g., • $3^{2x} = (3^2)^x = 9^x$ • $3^{2x+3} = 3^{2x} \cdot 3^3 = 9^x \cdot 27$ Exponential expressions will include those with integer exponents, as well as those whose exponents are linear expressions. Any linear term in those expressions will have an integer coefficient. Rational exponents are an expectation for Algebra II.	8.3

A.APR	**Arithmetic with Polynomials and Rational Expressions**	
(A)	***Perform arithmetic operations on polynomials.***	
A.APR.1	Add, subtract, and multiply polynomials and recognize that the result of the operation is also a polynomial. This forms a system analogous to the integers.	5.1 – 5.3
A.APR.3	Identify zeros of polynomial functions when suitable factorizations are available. Note: Algebra I tasks will focus on identifying the zeros of quadratic and cubic polynomial functions. For tasks that involve finding the zeros of cubic polynomial functions, the linear and quadratic factors of the cubic polynomial function will be given (e.g., find the zeros of $P(x) = (x - 2)(x^2 - 9)$).	12.3 – 12.5, 15.1

A.CED	**Creating Equations**	
(A)	***Create equations that describe numbers or relationships.***	
A.CED.1	Create equations and inequalities in one variable to represent a real-world context. *[See NG Notes 1, 2, and 3, p. 9.]*	2.1 – 2.6, 4.5 – 4.6, 8.1, 12.7
A.CED.2	Create equations and linear inequalities in two variables to represent a real-world context. *[See NG Note 1, p. 9.]*	2.1 – 2.6, 4.5 – 4.6, 8.1, 12.7
A.CED.3	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. e.g., Represent inequalities describing nutritional and cost constraints on combinations of different foods.	6.5
A.CED.4	Rewrite formulas to highlight a quantity of interest, using the same reasoning as in solving equations. e.g., Rearrange Ohm's law $V = IR$ to highlight resistance R.	1.5

A.REI	**Reasoning with Equations and Inequalities**	
(A)	***Understand solving equations as a process of reasoning and explain the reasoning.***	
A.REI.1	a. Explain each step when solving a linear or quadratic equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.	1.1
(B)	***Solve equations and inequalities in one variable.***	
A.REI.3	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters. *[See NG Note 2, p. 9.]*	1.2 – 1.4

A.REI.4	Solve quadratic equations in one variable. a. Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x - p)^2 = q$ that has the same solutions. Understand that the quadratic formula is a derivative of this process. Note: When utilizing the method of completing the square, the quadratic's leading coefficient will be 1 and the coefficient of the linear term will be limited to even (after the possible factoring out of a GCF). Students in Algebra I should be able to complete the square in which manipulating the given quadratic equation yields an integer value for q. b. Solve quadratic equations by: i) inspection, ii) taking square roots, iii) factoring, iv) completing the square, v) the quadratic formula, and vi) graphing. Recognize when the process yields no real solutions. Notes: • Solutions may include simplifying radicals or writing solutions in simplest radical form. • An example for inspection would be $x^2 = 49$, where a student should know that the solutions would include 7 and –7. • When utilizing the quadratic formula, there are no coefficient limits. • The discriminant is a sufficient way to recognize when the process yields no real solutions.	12.4 – 12.5 12.1 – 12.6, 13.1
(C)	***Solve systems of equations.***	
A.REI.6	a. Solve systems of linear equations in two variables both algebraically and graphically. Note: Algebraic methods include both elimination and substitution.	4.1 – 4.2, 4.5
A.REI.7	a. Solve a system, with rational solutions, consisting of a linear equation and a quadratic equation (parabolas only) in two variables algebraically and graphically.	14.1 – 14.2
(D)	***Represent and solve equations and inequalities graphically.***	
A.REI.10	Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane.	3.1 – 3.8, 8.2, 13.4

A.REI.11	Given the equations $y = f(x)$ and $y = g(x)$: i) recognize that each *x*-coordinate of the intersection(s) is the solution to the equation $f(x) = g(x)$; ii) find the solutions approximately using technology to graph the functions or make tables of values; and iii) interpret the solution in context. Note: Students should be taught to find the solutions approximately using technology to graph the functions and make tables of values. When solving any problem, students can choose either strategy. *[See NG Note 4, p. 9.]*	7.6, 14.1 – 14.2
A.REI.12	Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.	3.9, 4.3 – 4.4, 4.6

F.IF	**Interpreting Functions**	
(A)	***Understand the concept of a function and use function notation.***	
F.IF.1	Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If *f* is a function and *x* is an element of its domain, then $f(x)$ denotes the output of *f* corresponding to the input *x*. The graph of *f* is the graph of the equation $y = f(x)$. Note: Domain and range can be expressed using inequalities, set builder, verbal description, and interval notations for functions of subsets of real numbers to the real numbers.	6.5
F.IF.2	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.	6.1 – 6.4, 7.5
F.IF.3	Recognize that a sequence is a function whose domain is a subset of the integers. Note: Sequences (arithmetic and geometric) will be written explicitly and only in subscript notation. *[See NG Note 3, p. 9.]*	9.1 – 9.2
(B)	***Interpret functions that arise in applications in terms of the context.***	
F.IF.4	For a function that models a relationship between two quantities: i) interpret key features of graphs and tables in terms of the quantities; and ii) sketch graphs showing key features given a verbal description of the relationship. *[See NG Notes 4 and 5, p. 9.]*	6.4, 7.5, 13.1 – 13.4
F.IF.5	Determine the domain of a function from its graph and, where applicable, identify the appropriate domain for a function in context.	6.5

F.IF.6	Calculate and interpret the average rate of change of a function presented over a specified interval. Note: Functions may be presented by function notation, a table of values, or graphically. *[See NG Note 4, p. 9.]*	7.3 – 7.4
(C)	***Analyze functions using different representations.***	
F.IF.7	Graph functions and show key features of the graph by hand and by using technology where appropriate. a. Graph linear, quadratic, and exponential functions and show key features. b. Graph square root, and piecewise-defined functions, including step functions and absolute value functions and show key features. *[See NG Notes 4 and 5, p. 9.]*	3.6, 8.2, 13.4 6.6, 15.2, 17.1 – 17.2
F.IF.8	Write a function in different but equivalent forms to reveal and explain different properties of the function. a. For a quadratic function, use an algebraic process to find zeros, maxima, minima, and symmetry of the graph, and interpret these in terms of context. Note: Algebraic processes include but are not limited to factoring, completing the square, use of the quadratic formula, and the use of the axis of symmetry.	12.1 – 12.7, 13.1 – 13.5
F.IF.9	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *[See NG Note 4, p. 9.]*	6.4, 8.4

F.BF	**Building Functions**	
(A)	***Build a function that models a relationship between two quantities.***	
F.BF.1	Write a function that describes a relationship between two quantities. a. Determine a function from context. Define a sequence explicitly or steps for calculation from a context. Note: Sequences will be written explicitly and only in subscript notation. *[See NG Notes 3 and 4, p. 9.]*	7.1 – 7.2, 7.5, 8.1, 9.1 – 9.2, 12.7
(B)	***Build new functions from existing functions***	
F.BF.3	a. Using $f(x) + k$, $k \cdot f(x)$, and $f(x + k)$: i) identify the effect on the graph when replacing $f(x)$ by $f(x) + k$, $k \cdot f(x)$, and $f(x + k)$ for specific values of k (both positive and negative); ii) find the value of k given the graphs; iii) write a new function using the value of k; and iv) use technology to experiment with cases and explore the effects on the graph. *[See NG Note 4, p. 9.]*	7.7, 16.1 – 16.3

F.LE	Linear, Quadratic, and Exponential Models	
(A)	***Construct and compare linear, quadratic, and exponential models and solve problems.***	
F.LE.1	Distinguish between situations that can be modeled with linear functions and with exponential functions. a. Justify that a function is linear because it grows by equal differences over equal intervals, and that a function is exponential because it grows by equal factors over equal intervals. b. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another, and therefore can be modeled linearly (e.g., a flower grows two inches per day). c. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another, and therefore can be modeled exponentially (e.g., a flower doubles in size after each day).	8.4, 9.1 – 9.2
F.LE.2	Construct a linear or exponential function symbolically given: i) a graph; ii) a description of the relationship; iii) two input-output pairs (include reading these from a table). Note: Tasks are limited to constructing linear and exponential functions in simple context (not multi-step).	2.3 – 2.4, 3.7 – 3.8, 8.1 – 8.2
F.LE.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.	8.4
(B)	***Interpret expressions for functions in terms of the situation they model***	
F.LE.5	Interpret the parameters in a linear or exponential function in terms of a context. *[See NG Note 4, p. 9.]*	2.3, 8.1

S.ID	Interpreting Categorical and Quantitative Data	
(A)	***Summarize, represent, and interpret data on a single count or measurement variable.***	
S.ID.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).	18.3, 18.5, 18.8

S.ID.2	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (inter-quartile range, sample standard deviation) of two or more different data sets. Note: Values in the given data sets will represent samples of larger populations. The calculation of standard deviation will be based on the sample standard deviation formula $s = \sqrt{\sum \frac{(x - \bar{x})^2}{n - 1}}$. The sample standard deviation calculation will be used to make a statement about the population standard deviation from which the sample was drawn.	18.4 – 18.7
S.ID.3	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).	18.4 – 18.6
(B)	***Summarize, represent, and interpret data on two categorical and quantitative variables.***	
S.ID.5	Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.	19.1
S.ID.6	Represent bivariate data on a scatter plot, and describe how the variables' values are related. Note: It's important to keep in mind that the data must be linked to the same "subjects," not just two unrelated quantitative variables; being careful not to assume a relationship between the actual variables (correlation/causation issue). a. Fit a function to real-world data; use functions fitted to data to solve problems in the context of the data. Note: Algebra I emphasis is on linear models and includes the regression capabilities of the calculator.	19.2 – 19.5
(C)	***Interpret linear models.***	
S.ID.7	Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.	6.2, 7.3, 19.4
S.ID.8	Compute (using technology) and interpret the correlation coefficient of a linear fit.	19.6
S.ID.9	Distinguish between correlation and causation.	19.3

Next Generation Notes:

1. For tasks requiring the creation of equations, limit the equations to linear, quadratic, and exponentials of the form $f(x) = a(b)^x$ where $a > 0$ and $b > 0$ ($b \neq 1$).

2. Inequalities are limited to linear inequalities. Algebra I tasks do not involve compound inequalities.

3. Work with geometric sequences may involve an exponential equation/formula of the form $a_n = ar^{n-1}$, where a is the first term and r is the common ratio.

4. Functions are limited to linear, quadratic, square root, piece-wise defined (including step and absolute value), and exponential functions of the form $f(x) = a(b)^x$ where $a > 0$ and $b > 0$ ($b \neq 1$).

5. Key features of function graphs include the following: intercepts, zeros; intervals where the function is increasing, decreasing, positive, or negative; maxima, minima; and symmetries.

CORRELATION TO STANDARDS

Sections refer to the *Algebra I Next Generation Course Workbook* (2024-2025).

Chapter	*Section*	*Standards*
Chapter 1.	**Equations and Inequalities**	
1.1	Properties of Real Numbers	A.REI.1
1.2	Solve Linear Equations in One Variable	A.REI.3
1.3	Solve Equations with Fractions	A.REI.3
1.4	Solve Linear Inequalities in One Variable	A.REI.3
1.5	Solve Literal Equations and Inequalities	A.CED.4
Chapter 2.	**Verbal Problems**	
2.1	Translate Expressions	A.CED.1,2
2.2	Translate Equations	A.CED.1,2
2.3	Linear Model in Two Variables	A.CED.1,2, F.LE.2,5
2.4	Word Problems – Linear Equations	A.CED.1,2, F.LE.2
2.5	Translate Inequalities	A.CED.1,2
2.6	Word Problems – Inequalities	A.CED.1,2
2.7	Conversions	N.Q.1
Chapter 3.	**Linear Graphs**	
3.1	Determine Whether a Point is on a Line	A.REI.10
3.2	Lines Parallel to Axes	A.REI.10
3.3	Find Intercepts	A.REI.10
3.4	Find Slope Given Two Points	A.REI.10
3.5	Find Slope Given an Equation	A.REI.10
3.6	Graph Linear Equations	A.REI.10, F.IF.7a
3.7	Write an Equation Given a Point and Slope	A.REI.10, F.LE.2
3.8	Write an Equation Given Two Points	A.REI.10, F.LE.2
3.9	Graph Inequalities	A.REI.12
Chapter 4.	**Linear Systems**	
4.1	Solve Linear Systems Algebraically	A.REI.6
4.2	Solve Linear Systems Graphically	A.REI.6
4.3	Solutions to Systems of Inequalities	A.REI.12
4.4	Solve Systems of Inequalities Graphically	A.REI.12
4.5	Word Problems – Linear Systems	A.CED.1,2, A.REI.6
4.6	Word Problems – Systems of Inequalities	A.CED.1,2, A.REI.12
Chapter 5.	**Polynomials**	
5.1	Polynomial Expressions	A.SSE.1, A.APR.1
5.2	Add and Subtract Polynomials	A.APR.1
5.3	Multiply Polynomials	A.APR.1
5.4	Divide a Polynomial by a Monomial	A.SSE.2
Chapter 6.	**Introduction to Functions**	
6.1	Recognize Functions	F.IF.2
6.2	Function Graphs	F.IF.2, S.ID.7
6.3	Evaluate Functions	F.IF.2
6.4	Features of Function Graphs	F.IF.2,4,9
6.5	Domain and Range	A.CED.3, F.IF.1,5
6.6	Absolute Value Functions	F.IF.7b

Chapter	*Section*	*Standards*
Chapter 7.	**Functions as Models**	
7.1	Write a Function from a Table	F.BF.1
7.2	Graph Linear Functions	F.BF.1
7.3	Rate of Change for Linear Functions	F.IF.6, S.ID.7
7.4	Average Rate of Change	F.IF.6
7.5	Functions of Time	F.IF.2,4, F.BF.1
7.6	Systems of Functions	A.REI.11
7.7	Combine Functions	F.BF.3
Chapter 8.	**Exponential Functions**	
8.1	Exponential Growth and Decay	A.CED.1,2, F.BF.1, F.LE.2,5
8.2	Graphs of Exponential Functions	A.REI.10, F.IF.7a, F.LE.2
8.3	Rewrite Exponential Expressions	A.SSE.3
8.4	Compare Linear and Exponential Functions	F.IF.9, F.LE.1,3
Chapter 9.	**Sequences**	
9.1	Arithmetic Sequences	F.IF.3, F.BF.1, F.LE.1
9.2	Geometric Sequences	F.IF.3, F.BF.1, F.LE.1
Chapter 10.	**Irrational Numbers**	
10.1	Simplify Radicals	N.RN.3a
10.2	Operations with Radicals	N.RN.3a
10.3	Rationalize Denominators	N.RN.3a
10.4	Closure	N.RN.3b
Chapter 11.	**Factoring**	
11.1	Factor Out the Greatest Common Factor	A.SSE.2
11.2	Factor a Trinomial	A.SSE.2
11.3	Factor the Difference of Perfect Squares	A.SSE.2
11.4	Factor Completely	A.SSE.2
Chapter 12.	**Quadratic Functions**	
12.1	Solve Simple Quadratic Equations	A.REI.4b, F.IF.8
12.2	Solve Quadratic Equations by Factoring	A.REI.4b, F.IF.8
12.3	Find Quadratic Equations from Given Roots	A.APR.3, A.REI.4b, F.IF.8
12.4	Equations with the Square of a Binomial	A.APR.3, A.REI.4a,b, F.IF.8
12.5	Complete the Square	A.APR.3, A.REI.4a,b, F.IF.8
12.6	Quadratic Formula and the Discriminant	A.REI.4b, F.IF.8
12.7	Word Problems – Quadratic Equations	A.CED.1,2, F.IF.8, F.BF.1
Chapter 13.	**Parabolas**	
13.1	Find Roots Given a Parabolic Graph	A.REI.4b, F.IF.4,8
13.2	Find Vertex and Axis Graphically	F.IF.4,8
13.3	Find Vertex and Axis Algebraically	F.IF.4,8
13.4	Graph Parabolas	A.REI.10, F.IF.4,7a,8
13.5	Vertex Form	F.IF.8
Chapter 14.	**Quadratic-Linear Systems**	
14.1	Solve Quadratic-Linear Systems Algebraically	A.REI.7,11
14.2	Solve Quadratic-Linear Systems Graphically	A.REI.7,11
Chapter 15.	**Cubic and Radical Functions**	
15.1	Cubic Functions	A.APR.3
15.2	Square Root Functions	F.IF.7b

Chapter	*Section*	*Standards*
Chapter 16.	**Transformations of Functions**	
16.1	Translations	F.BF.3
16.2	Reflections	F.BF.3
16.3	Stretches	F.BF.3
Chapter 17.	**Discontinuous Functions**	
17.1	Piecewise Functions	F.IF.7b
17.2	Step Functions	F.IF.7b
Chapter 18.	**Univariate Data**	
18.1	Types of Data	
18.2	Frequency Tables	
18.3	Histograms	S.ID.1
18.4	Central Tendency	S.ID.2,3
18.5	Distribution	S.ID.1,2,3
18.6	Standard Deviation	S.ID.2,3
18.7	Percentiles and Quartiles	S.ID.2
18.8	Box Plots	S.ID.1
Chapter 19.	**Bivariate Data**	
19.1	Two-Way Frequency Tables	S.ID.5
19.2	Scatter Plots	S.ID.6
19.3	Correlation and Causality	S.ID.6,9
19.4	Identify Correlation in Scatter Plots	S.ID.6,7
19.5	Lines of Fit	S.ID.6
19.6	Correlation Coefficients	S.ID.8

SUGGESTED PACING CALENDAR

Sections refer to the *Algebra I Next Generation Course Workbook* (2024-2025).

Chapter	*Section*	*Regents Questions **	*Days*
Chapter 1.	**Equations and Inequalities**	**67**	**10**
1.1	Properties of Real Numbers	8	1
1.2	Solve Linear Equations in One Variable	6	1
1.3	Solve Equations with Fractions	11	2
1.4	Solve Linear Inequalities in One Variable	20	3
1.5	Solve Literal Equations and Inequalities	22	3
Chapter 2.	**Verbal Problems**	**68**	**12**
2.1	Translate Expressions	4	1
2.2	Translate Equations	8	1
2.3	Linear Model in Two Variables	18	3
2.4	Word Problems – Linear Equations	3	1
2.5	Translate Inequalities	6	1
2.6	Word Problems – Inequalities	10	2
2.7	Conversions	19	3
Chapter 3.	**Linear Graphs**	**24**	**9**
3.1	Determine Whether a Point is on a Line	7	1
3.2	Lines Parallel to Axes	0	1
3.3	Find Intercepts	2	1
3.4	Find Slope Given Two Points	0	1
3.5	Find Slope Given an Equation	0	1
3.6	Graph Linear Equations	4	1
3.7	Write an Equation Given a Point and Slope	1	1
3.8	Write an Equation Given Two Points	3	1
3.9	Graph Inequalities	7	1
Chapter 4.	**Linear Systems**	**73**	**13**
4.1	Solve Linear Systems Algebraically	11	2
4.2	Solve Linear Systems Graphically	5	1
4.3	Solutions to Systems of Inequalities	2	1
4.4	Solve Systems of Inequalities Graphically	18	3
4.5	Word Problems – Linear Systems	27	4
4.6	Word Problems – Systems of Inequalities	10	2
Chapter 5.	**Polynomials**	**43**	**8**
5.1	Polynomial Expressions	12	2
5.2	Add and Subtract Polynomials	7	1
5.3	Multiply Polynomials	24	4
5.4	Divide a Polynomial by a Monomial	0	1
Chapter 6.	**Introduction to Functions**	**89**	**15**
6.1	Recognize Functions	16	2
6.2	Function Graphs	4	1
6.3	Evaluate Functions	24	4
6.4	Features of Function Graphs	4	1
6.5	Domain and Range	32	5
6.6	Absolute Value Functions	9	2

Chapter	*Section*	*Regents Questions **	*Days*
Chapter 7.	**Functions as Models**	**56**	**10**
7.1	Write a Function from a Table	4	1
7.2	Graph Linear Functions	2	1
7.3	Rate of Change for Linear Functions	7	1
7.4	Average Rate of Change	19	3
7.5	Functions of Time	14	2
7.6	Systems of Functions	8	1
7.7	Combine Functions	2	1
Chapter 8.	**Exponential Functions**	**95**	**14**
8.1	Exponential Growth and Decay	33	5
8.2	Graphs of Exponential Functions	6	1
8.3	Rewrite Exponential Expressions	15	2
8.4	Compare Linear and Exponential Functions	41	6
Chapter 9.	**Sequences**	**16**	**3**
9.1	Arithmetic Sequences	12	2
9.2	Geometric Sequences	4	1
Chapter 10.	**Irrational Numbers**	**43**	**8**
10.1	Simplify Radicals	0	1
10.2	Operations with Radicals *[new to NG]*	*[10]*	2
10.3	Rationalize Denominators *[new to NG]*	*[10]*	2
10.4	Closure	23	3
Chapter 11.	**Factoring**	**31**	**6**
11.1	Factor Out the Greatest Common Factor	0	1
11.2	Factor a Trinomial	6	1
11.3	Factor the Difference of Perfect Squares	10	2
11.4	Factor Completely	15	2
Chapter 12.	**Quadratic Functions**	**80**	**13**
12.1	Solve Simple Quadratic Equations	14	2
12.2	Solve Quadratic Equations by Factoring	12	2
12.3	Find Quadratic Equations from Given Roots	2	1
12.4	Equations with the Square of a Binomial	7	1
12.5	Complete the Square	19	3
12.6	Quadratic Formula and the Discriminant	11	2
12.7	Word Problems – Quadratic Equations	15	2
Chapter 13.	**Parabolas**	**49**	**8**
13.1	Find Roots Given a Parabolic Graph	9	1
13.2	Find Vertex and Axis Graphically	0	1
13.3	Find Vertex and Axis Algebraically	15	2
13.4	Graph Parabolas	17	3
13.5	Vertex Form	8	1
Chapter 14.	**Quadratic-Linear Systems**	**18**	**3**
14.1	Solve Quadratic-Linear Systems Algebraically	4*[+6]*	2
14.2	Solve Quadratic-Linear Systems Graphically	8	1
Chapter 15.	**Cubic and Radical Functions**	**26**	**4**
15.1	Cubic Functions	19	3
15.2	Square Root Functions	7	1

Chapter	*Section*	*Regents Questions **	*Days*
Chapter 16.	**Transformations of Functions**	**25**	**5**
16.1	Translations	19	3
16.2	Reflections	0	1
16.3	Stretches	6	1
Chapter 17.	**Discontinuous Functions**	**16**	**3**
17.1	Piecewise Functions	14	2
17.2	Step Functions	2	1
Chapter 18.	**Univariate Data**	**25**	**9**
18.1	Types of Data	0	1
18.2	Frequency Tables	0	1
18.3	Histograms	0	1
18.4	Central Tendency	3	1
18.5	Distribution	1	1
18.6	Standard Deviation	3	1
18.7	Percentiles and Quartiles	7	1
18.8	Box Plots	11	2
Chapter 19.	**Bivariate Data**	**45**	**9**
19.1	Two-Way Frequency Tables	14	2
19.2	Scatter Plots	0	1
19.3	Correlation and Causality	4	1
19.4	Identify Correlation in Scatter Plots	1	1
19.5	Lines of Fit	5	1
19.6	Correlation Coefficients	21	3
	Totals:	**889**	**162**

* Questions appearing on Algebra I Common Core Regents exams, through Aug. '23.