

Marking Period 1

Chapter 2 – Quadratic Functions (Test 2.1, 2.2 & 2.4)

- 2.1 Transformations and Quadratic Functions (NJSLS.F-IF.C.7c, NJSLS.F-BF.B.3)
- 2.2 Characteristics of Quadratic Functions (NJSLS.F-IF.B.4, NJSLS.F-IF.C.7.c, NJSLS.F-IF.C.9, NJSLS.A-APR.B.3)
- 2.4 Modeling with Quadratic Functions (NJSLS.A-CED.A.2)

Chapter 3 – Quadratic Equations and Complex Numbers (Test: Factoring Supplemental & 3.1)

- Supplement:* Factoring Quadratic Expressions (NJSLS.A-SSE.A.2, NJSLS.A-SSE.B.3a)
- 3.1 Solving Quadratic Equations (NJSLS.A-SSE.A.2, NJSLS.A-REI.B.4b, NJSLS.F-IF.C.8a, NJSLS.N-RN.A.2)

Chapter 3 – Quadratic Equations and Complex Numbers (Test: 3.2, Supplement, 3.3 & 3.4)

- 3.2 Complex Numbers (NJSLS.N-CN.A.1, NJSLS.N-CN.A.2, NJSLS.N-CN.C.7, NJSLS.A-REI.B.4b)
 - * include higher powers of i .
- Supplement: Simplify Radicals (NJSLS.N-RN.A.1, NJSLS.N-RN.A.2)
- 3.3 Completing the Square (NJSLS.N-CN.C.7, NJSLS.A-REI.B.4b, NJSLS.F-IF.C.8a)
- 3.4 Using the Quadratic Formula (NJSLS.N-CN.C.7, NJSLS.A-REI.B.4b)

Marking Period 2

Chapter 1 – Linear Functions (Test: Supplemental 2x2, 1.4 & 3.5)

- Supplement:* Solving 2x2 linear systems algebraically (NJSLS.A-REI.C.6)
- 1.4 Solving Linear Systems (NJSLS.A-CED.A.3, NJSLS.A-REI.C.6)
- 3.5 Solving Nonlinear Systems Graphically (NJSLS.A-CED.A.3, NJSLS.A-REI.C.7, NJSLS.A-REI.D.11)

Chapter 4 – Polynomial Functions (Test: 4.1 - 4.3)

4.1 Graphing Polynomial Functions (NJSLS.F-IF.B.4, NJSLS.F-IF.C.7c)

4.2 Adding, Subtracting, and Multiplying Polynomials (NJSLS.A-APR.A.1, NJSLS.A-APR.C.4, NJSLSA-APR.C.5)

4.3 Dividing Polynomials (NJSLS.A-APR.B.2, NJSLS.A-APR.D.6)

Chapter 4 – Polynomial Functions (Test: 4.4 - 4.6 & 4.8)

4.4 Factoring Polynomials (NJSLS.A-SSE.A.2, NJSLS.A-APR.B.2, NJSLS.A-APR.B.3)

4.5 Solving Polynomial Equations (NJSLS.A-APR.B.3)

4.6 The Fundamental Theorem of Algebra (NJSLS.N-CN.C.8, NJSLS.N-CN.C.9, NJSLS.A-APR.B.3)

4.8 Analyzing Graphs of Polynomial Functions (NJSLS.A-APR.B.3, NJSLS.F-IF.B.4, NJSLS.F-IF.C.7c, NJSLS.F-BF.B.3)

Marking Period 3

Chapter 5 – Rational Exponents and Radical Functions (Test: 5.1 - 5.4)

5.1 n th Roots and Rational Exponents (NJSLS.N-RN.A.1, NJSLS.N-RN.A.2)

5.2 Properties of Rational Exponents and Radicals (NJSLS.N-RN.A.2)

5.3 Graphing Radical Functions (NJSLS.F-IF.C.7b, NJSLS.F-BF.B.3)

5.4 Solving Radical Equations and Inequalities (NJSLS.A-REI.A.1, NJSLS.A-REI.A.2)

Chapter 5 – Rational Exponents and Radical Functions (Test: 5.5 & 5.6)

5.5 Performing Function Operations (NJSLS.F-BF.A.1b)

5.5 Supplemental – Composition of Functions (NJSLS.F-BF.A.1c)

5.6 Inverse of a Function (NJSLS.A-CED.A.4, NJSLS.F-BF.B.4a)

Chapter 6 – Exponential and Logarithmic Functions (Test: 6.2 – 6.4)

6.2 The Natural Base e (NJSLS.F-IF.C.7e, NJSLS.F-LE.B.5)

6.3 Logarithms and Logarithmic Functions (NJSLS.F-IF.C.7e, NJSLS.F-BF.B.4a, NJSLS.F-LE.A.4)

6.4 Transformations of Exponential and Logarithmic Functions (NJSLS.F-IF.C.7e, NJSLS.F-BF.B.3)

Marking Period 4

Chapter 6 – Exponential and Logarithmic Functions (Test: 6.5 - 6.6)

6.5 Properties of Logarithms (NJSLS.A-SSE.A.2, NJSLS.F-LE.A.4)

6.6 Solving Exponential and Logarithmic Equations (NJSLS.A-REI.A.1, NJSLS.F-LE.A.4)

Chapter 7 – Rational Functions (Test 7.2-7.5)

7.2 Graphing Rational Functions (NJSLS.A-APR.D.6, NJSLS.F-BF.B.3)

7.3 Multiplying and Dividing Rational Expressions (NJSLS.A-APR.D.6, NJSLS.A-APR.D.7)

7.4 Adding and Subtracting Rational Expressions (NJSLS.A-APR.D.6, NJSLS.A-APR.D.7)

7.5 Solving Rational Equations (NJSLS.A-CED.A.4, NJSLS.A-REI.A.1, NJSLS.A-REI.A.2)

*** *If time permits:*

Chapter 8 – Sequences and Series (Test 8.1 – 8.5)

8.1 Defining and Using Sequences and Series (NJSLS.F-IF.A.3)

8.2 Analyzing Arithmetic Sequences and Series (NJSLS.F-IF.A.3, NJSLS.F-BF.A.2, NJSLS.F-LE.A.2)

8.3 Analyzing Geometric Sequences and Series (NJSLS.A-SSE.B.4, NJSLS.F-IF.A.3, NJSLS.F-BF.A.2, NJSLS.F-LE.A.2)

8.4 Finding Sums of Infinite Geometric Series (NJSLS.A-SSE.B.4)

8.5 Using Recursive Rules with Sequences (NJSLS.F-IF.A.3, NJSLS.F-BF.A.1a, NJSLS.F-BF.A.2)

Course Expectations and Skills

- Students are required to have proficiency in all prerequisite topics for Algebra 1 and Geometry. Those who do not demonstrate proficiency will be required to seek additional help after school to close their achievement gap in order to be successful in this course.
- Students are required to learn and utilize a graphing calculator (TI 84+) in this course. They are encouraged to purchase a graphing calculator, but not required. Classroom sets are available for teachers to use as needed. In addition, free on-line graphing apps and programs are promoted by teachers for students on homework.
- Students are required to participate in both small and large group discussions and activities, as directed.
- Students are required to complete a project each marking period, including those which require the use of technology.

Resources

Text Book:

Big Ideas Algebra 2

Assessment Information

Department of Mathematics - Algebra 2

Marking Period 1	Marking Period 2	Marking Period 3	Marking Period 4
Major (MAJ): Summative 30%	Major (MAJ): Summative 30%	Major (MAJ): Summative 30%	Major (MAJ): Summative 30%
Benchmark (BMK): 20%	Benchmark (BMK): 20%	Benchmark (BMK): 20%	Benchmark (BMK): 20%
Project (PRJ): 10%	Project (PRJ): 10%	Project (PRJ): 10%	Project (PRJ): 10%
Minor (MIN): Formative 25%	Minor (MIN): Formative 25%	Minor (MIN): Formative 25%	Minor (MIN): Formative 25%
Class Participation (CP): 5%	Class Participation (CP): 5%	Class Participation (CP): 5%	Class Participation (CP): 5%
Homework (HW): 10%	Homework (HW): 10%	Homework (HW): 10%	Homework (HW): 10%