

Perris Union High School District

Course of Study

A. COURSE INFORMATION

<p>Course Title: (limited to 34 characters with spaces in Infinite Campus)</p> <div style="border: 1px solid black; padding: 2px; width: 90%;">Algebra II</div> <p><input checked="" type="checkbox"/> New <input type="checkbox"/> Revised</p> <p>If revised, the previous course name if there was a change</p> <div style="border: 1px solid black; height: 20px; width: 90%;"></div> <p>Transcript Course Code/Number:</p> <div style="border: 1px solid black; height: 20px; width: 90%;"></div> <p>(To be assigned by Educational Services if it's a new course)</p> <p>CREDIT TYPE EARNED: CALPADS CODE:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 50%; padding: 2px;">Math</td> <td style="border: 1px solid black; width: 50%; padding: 2px;">9252</td> </tr> </table> <p>Was this course <u>previously approved by UC</u> for PUHSD? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Will be verified by Ed Services)</p> <p>Which A-G Requirement does/will this course meet?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 50%; padding: 2px;">C - Math</td> <td style="border: 1px solid black; width: 50%; padding: 2px;"><input type="checkbox"/> Pending</td> </tr> </table> <p>Submitted by: Ryan Lundstrom/Joe Ellett Site: Paloma Valley High School Date: 3/15/2024 Email: joe.ellett@puhsd.org</p>	Math	9252	C - Math	<input type="checkbox"/> Pending	<p>Subject Area:</p> <p><input type="checkbox"/> Social Science <input type="checkbox"/> English <input checked="" type="checkbox"/> Mathematics <input type="checkbox"/> Laboratory Science <input type="checkbox"/> World Languages <input type="checkbox"/> Visual or Performing Arts <input type="checkbox"/> College Prep Elective <input type="checkbox"/> Other</p> <p>Is this classified as a Career Technical Education course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If yes, which pathway does this course align to? Pathway Name:</p> <div style="border: 1px solid black; height: 20px; width: 90%;"></div> <p>CTE CDE Code:</p> <div style="border: 1px solid black; height: 20px; width: 90%;"></div> <p style="text-align: center;">Credential Required to teach this course: <u>To be completed by Human Resources only.</u></p> <div style="border: 1px solid black; padding: 5px; min-height: 40px;"> <i>Single Subject: Mathematics; Foundational-level Mathematics</i> </div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 60%; padding: 5px;"> </td> <td style="border: 1px solid black; width: 40%; padding: 5px;"> 3/19/2024 </td> </tr> <tr> <td style="text-align: center; padding: 5px;">Signature</td> <td style="text-align: center; padding: 5px;">Date</td> </tr> </table> <p>Unit Value/Length of Course:</p> <p><input type="checkbox"/> 0.5 (half-year or semester equivalent) <input checked="" type="checkbox"/> 1.0 (one-year equivalent) <input type="checkbox"/> 2.0 (two-year equivalent) <input type="checkbox"/> Other:</p>		3/19/2024	Signature	Date
Math	9252								
C - Math	<input type="checkbox"/> Pending								
	3/19/2024								
Signature	Date								
<p>Approvals</p> <p>Director of Curriculum & Instruction</p> <p>Asst. Superintendent of Educational Services</p> <p>Governing Board</p>	<p>Name/Signature</p> <div style="border: 1px solid black; padding: 5px; min-height: 40px;"> </div> <div style="border: 1px solid black; padding: 5px; min-height: 40px;"> <i>Kendy Lee Mackameel</i> </div>	<p>Date</p> <p><i>03/20/24</i></p> <p><i>3/21/24</i></p>							

Prerequisite(s) (REQUIRED):

Algebra I and Geometry attempted.

Corequisite(s) (REQUIRED):

None

Brief Course Description (REQUIRED):

The Algebra II course is designed to build on previous work with linear, quadratic, and exponential functions, students extend their repertoire of functions to include logarithmic, polynomial, rational, and radical functions. This course includes standards from the conceptual categories of Number and Quantity, Algebra, Functions, Geometry, and Statistics and Probability. Students work closely with the expressions that define the functions, competently manipulate algebraic expressions, and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. For the Algebra II course, instructional time should focus on four critical areas: (1) relate arithmetic of rational expressions to arithmetic of rational numbers; (2) expand understandings of functions and graphing to include more complex polynomials and rationals; (3) synthesize and generalize functions and extend understanding of exponential functions to logarithmic functions; and (4) relate data display and summary statistics to probability and explore a variety of data collection methods.

B. COURSE CONTENT**Course Purpose (REQUIRED):**

What is the purpose of this course? Please provide a brief description of the goals and expected outcomes. Note: More specificity than a simple recitation of the State Standards is needed.

Building on their work with linear, quadratic, and exponential functions, students extend their repertoire of functions to include logarithmic, polynomial, rational, and radical functions in the Algebra II course. This course includes standards from the conceptual categories of Number and Quantity, Algebra, Functions, Geometry, and Statistics and Probability. Some standards are repeated in multiple higher mathematics courses; therefore instructional notes, which appear in brackets, indicate what is appropriate for study in this particular course. Standards that were limited in Algebra I no longer have those restrictions in Algebra II. Students work closely with the expressions that define the functions, competently manipulate algebraic expressions, and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms.

For the Algebra II course, instructional time should focus on four critical areas: (1) relate arithmetic of rational expressions to arithmetic of rational numbers; (2) expand understandings of functions and graphing to include more complex polynomials and rationals; (3) synthesize and generalize functions and extend understanding of exponential functions to logarithmic functions; and (4) relate data display and summary statistics to probability and explore a variety of data collection methods.

(1) A central theme of this Algebra II course is that the arithmetic of rational expressions is governed by the same rules as the arithmetic of rational numbers. Students explore the structural similarities between the system of polynomials and the system of integers. They draw on analogies between polynomial arithmetic and base-ten computation, focusing on properties of operations, particularly the distributive property. Connections are made between multiplication of polynomials with multiplication of multi-digit integers, and division of polynomials with long division of integers. Students identify zeros of polynomials, including complex zeros of quadratic polynomials, and make connections between zeros of polynomials and solutions of polynomial equations. The Fundamental Theorem of Algebra is examined.

(2) Building on their previous work with functions and on their work with trigonometric ratios and circles in the Geometry course, students now use the coordinate plane to extend trigonometry to model periodic phenomena.

(3) Students synthesize and generalize what they have learned about a variety of function families. They extend their work with exponential functions to include solving exponential equations with logarithms. They explore the effects of transformations on graphs of diverse functions, including functions arising in an application, in order to abstract the general principle that transformations on a graph always have the same effect regardless of the type of the underlying function. They identify appropriate types of functions to model a situation, they adjust parameters to improve the model, and they compare models by analyzing appropriateness of fit and making judgments about the domain over which a model is a good fit. The description of modeling as “the process of choosing and using mathematics and statistics to analyze empirical situations, to understand them better, and to make decisions” is at the heart of this Algebra II course. The narrative discussion and diagram of the modeling cycle should be considered when knowledge of functions, statistics, and geometry is applied in a modeling context.

(4) Students see how the visual displays and summary statistics they learned in earlier grades relate to different types of data and to probability distributions. They identify different ways of collecting data—including sample surveys, experiments, and simulations—and consider how randomness and careful design affect the conclusions that can be drawn.

The Standards for Mathematical Practice complement the content standards so that students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle, and high school years.

Course Outline (REQUIRED):

Detailed description of topics covered. All historical knowledge is expected to be empirically based, give examples. Show examples of how the text is incorporated into the topics covered.

Chapter 1: Expressions, Equations, and Inequalities

During this unit students will learn how to identify and describe patterns, graph and order real numbers, and identify properties of real numbers. They will continue by learning how to evaluate and simplify algebraic

expressions, solve equations, and solve problems by writing equations. They will end the unit by solving and graphing inequalities, writing and solving compound inequalities, and writing and solving equations and inequalities involving absolute inequalities.

Essential Questions:

- How do variables help you model real-world situations?
- How can you use the properties of real numbers to simplify algebraic expressions?
- How do you solve an equation or inequality?

Assignments:

- **Practice and Problem Solving Exercises:** Students will complete practice and problem solving exercises section for each lesson

Assessments:

- Chapter 1 Mid-chapter quiz
- End of chapter Test

Common Core Performance Task: Where's My Car?

Students will determine how far Cody is from Mia's house when his car runs out of gas. Students will write expressions to represent distances in a diagram. They will also write and solve an equation that represents the relationship between several distances.

Chapter 2: Functions, Equations and Graphs

During this unit, students will learn how to graph relations, identify functions, and to write and interpret direct variation equations. They will also learn how to graph linear equations and write equations of lines. They will learn how to write linear equations that model real-world data. They will make predictions from linear models. Finally, they will graph absolute value functions and two-variable inequalities.

Essential Questions:

- Does it matter which form of linear equations you use?
- How do you use transformations to help graph absolute value functions?
- How can you model data with a linear function?

Assignments:

- **Practice and Problem Solving Exercises:** Students will complete practice and problem solving exercises for each lesson

Assessments:

- Chapter 2 Mid-chapter quiz
- End of chapter Test

Common Core Performance Task: Road Maintenance

Students will determine what time the work crew will take its afternoon break. Students will superimpose a

coordinate system on a diagram showing the intersections of several streets. They will write equations for the lines representing the streets and find a distance between two intersections. Then they will use this distance to determine what time a work crew reaches a specified point.

Chapter 3: Linear Systems

During this unit, students will solve a linear system using a graph or a table or algebraically. Students will solve systems of linear inequalities and solve systems in three variables.

Essential Questions:

- How does representing functions graphically help solve a system of equations?
- How does writing equivalent equations help you solve a system of equations?

Assignments:

- **Practice and Problem Solving Exercises:** Students will complete practice and problem solving exercises for each lesson

Assessments:

- Chapter 3 Mid-chapter quiz
- End of chapter Test

Common Core Performance Task: Planning a Triathlon

Students will plan the triathlon by determining the distance for each part of the course. Students will write a system of equations to model the problem situation. They will then solve the system of equations and interpret the results.

Chapter 4: Quadratic Functions and Equations

During this unit students will learn how to identify and graph quadratic functions, graph quadratic functions written in standard form, and model data with quadratic functions. They will then find common and binomial factors of quadratic expressions, factor special quadratic expressions, solve quadratic equations by factoring, and solve quadratic equations by graphing. They will end by solving equation by completing the square, rewrite functions by completing the square, solve quadratic equations using the Quadratic Formula, determine the number of solutions by using the discriminant, identify, graph, and perform operations with complex numbers, find complex number solutions of quadratic equations, solve and graph systems of linear and quadratic equations, and solve and graph systems of quadratic inequalities.

Essential Questions:

- What are the advantages of a quadratic function in vertex form? In a standard form?
- How is any quadratic related to the parent quadratic function of $y = x^2$?
- How are the real solutions of a quadratic equation related to the graph of the related quadratic function?

Assignment:

- **Practice and Problem Solving Exercises:** Students will complete practice and problem solving exercises for each lesson

Common Core Performance Task: Maximizing Profit

Find all possible prices Victor can charge for a bag of chips in order to make a profit, and determine the price he should charge to maximize his profit. Students will use linear functions to build a quadratic function model for profit. They will find and interpret the maximum point and the zeros of the profit function and relate them to the selling price of a product.

Assessments:

- Chapter 4 Mid-chapter quiz
- End of chapter Test

Chapter 5:

During this chapter, students will learn to classify polynomials, to graph polynomial functions and to describe end behavior. They will learn to analyze the factored form of a polynomial and write polynomial functions from its zeros. They will solve polynomial equations by factoring and graphing. They will divide polynomials using long division and synthetic division. They will solve equations using the Rational Roots Theorem, the Conjugate Root Theorem, and the Fundamental Theorem of Algebra.

Essential Questions:

- What does the degree of a polynomial tell you about its related polynomial function?
- For a polynomial function, how are the factors, zeros, and x-intercepts related?
- For a polynomial equation, how are factors and roots related?

Assignments:

- **Practice and Problem Solving Exercises:** Students will complete practice and problem solving exercises for each lesson

Common Core Performance Task: Determining the Dimensions of a Diorama

Students will determine all possible dimensions that Eliana can use for a diorama box with volume 36in^3 . Students will write and graph a polynomial function for the volume of a rectangular diorama box. They will use techniques for solving equations to find both the zeros of the function and the x-values that result in a specified volume.

Assessments:

- Chapter 5 Mid-chapter quiz
- End of chapter Test

Chapter 6: Radical Functions and Rational Exponents

Students will learn how to find nth roots and to multiply, divide, add and subtract radical expressions. They will learn how to simplify expressions with rational exponents. They will also learn how to solve square root and other radical equations. Then, they will learn how to add, subtract, multiply, divide, and compose functions. They will also learn how to find the inverse of relations and functions. Finally, they will learn how to graph square root and other radical functions.

Essential Questions:

- To simply the n th root of an expression, what must be true about the expression?
- When you square each side of an equation, is the resulting equation equivalent to the original?
- How are a function and its inverse related?

Assignment:

- **Practice and Problem Solving Exercises:** Students will complete practice and problem solving exercises for each lesson

Common Core Performance Task: Analyzing the Dimensions of a Yacht

Students will verify that the aC45 Wingsail Catamaran satisfies the America's Cup rule, and find all possible displacements for your new yacht. Students will rewrite the America's Cup rule using radicals and evaluate the rule with the given values. Then students will solve an inequality as they design a yacht with different dimensions.

Assessments:

- Chapter 6 Mid-chapter quiz
- End of chapter Test

Chapter 7: Exponential and Logarithmic Functions

In this chapter, students will learn to model exponential growth and decay. Students will explore the properties of functions in the form $y=ab^x$. Students will graph exponential functions with base e . Students will learn how to write and evaluate logarithmic expressions. They will graph logarithmic functions. Students will use the properties of logarithms to solve exponential and logarithmic equations. Finally, they will evaluate and solve natural logarithmic expressions and equations.

Essential Questions:

- How do you model a quantity that changes regularly over time by the same percentage?
- How are exponents and logarithms related?
- How are exponential functions and logarithmic functions related?

Assignment:

- **The Half Life of Caffeine**

How much caffeine am I really ingesting and how long is it in my system? With caffeine levels in drinks continuing to climb – many people are asking – what exactly is the limit? Healthy adults can safely consume between 400-500mg of caffeine a day. For teens, that number is closer to 100mg a day. The healthy and safe amount is, of course, affected by body weight, health, and individual sensitivity. Caffeine takes a certain amount of time to work through your system. According to the National Institutes of Health, the half life of caffeine is between 5 and 6 hours. This means if you consume 200mg of caffeine at noon, you would still have about 100mg in you at between 5:00-6:00 pm.

- **Practice and Problem Solving Exercises:** Students will complete practice and problem solving

exercises for each lesson

Common Core Performance Task: Apparent Magnitude of Stars

Students will find the apparent magnitude of Sirius, the brightest star in the night sky. Students will write an exponential equation to model the problem. They will use logarithms to solve the equation. Students will interpret their results.

Assessments:

- Chapter 7 Mid-chapter quiz
- End of chapter Test

Chapter 8:

During this unit students will learn to recognize and use inverse variation, and to use joint and other variations. They will also learn to graph reciprocal functions, graph translations of reciprocal functions, identify properties of rational functions, and graph rational functions. They will end the unit by learning how to simplify rational expressions, multiply and divided rational expressions, adding and subtracting rational numbers, solving rational questions, and using rational equations to solve problems.

Essential Questions:

- Are two quantities inversely proportional if an increase in one corresponds to a decrease in the other?
- What kinds of asymptotes are possible for a rational function?
- Are a rational expression and its simplified form equivalent.

Assignment:

- **Practice and Problem Solving Exercises:** Students will complete practice and problem solving exercises for each lesson

Common Core Performance Task:

How long did it take Steve and Sally to paddle to Elf Island? Assume that Steve and Sally always paddle in such a way as to result in the same speed in still water. Round your answer to the nearest 5 min. (insert overview here***)**

Assessments:

- Chapter 8 Mid-chapter quiz
- End of chapter Test

Chapter 9:

During this unit students will learn how to identify mathematical patterns found in a sequence, using a formula to find the n th term of a sequence, define, identify, and apply arithmetic sequences. They will continue to learn how to define, identify, and apply geometric sequences. They will end the chapter by learning how to define arithmetic series and find their sums, and define geometric series and find their sums.

Essential Questions:

- How can you represent the terms of a sequence explicitly? How can you represent them recursively?

- What are equivalent explicit and recursive definitions for an arithmetic sequence?
- How can you model a geometric sequence? How can you model its sum?

Assignment:

- **Practice and Problem Solving Exercises:** Students will complete practice and problem solving exercises for each lesson

Common Core Performance Task:

Determine the years in which Matthew sold the 7 cars. **(insert overview here*****)**

Assessments:

- Chapter 9 Mid-chapter quiz
- End of chapter Test

Writing Assignments (REQUIRED):

Give examples of the writing assignments and the use of critical analysis within the writing assignments.

Chapter 1: Common Core Performance Task: Where's My Car?

Students will determine how far Cody is from Mia's house when his car runs out of gas. Students will write expressions to represent distances in a diagram. They will also write and solve an equation that represents the relationship between several distances.

Chapter 2: Common Core Performance Task: Road Maintenance

Students will determine what time the work crew will take its afternoon break. Students will superimpose a coordinate system on a diagram showing the intersections of several streets. They will write equations for the lines representing the streets and find a distance between two intersections. Then they will use this distance to determine what time a work crew reaches a specified point.

Chapter 3: Common Core Performance Task: Planning a Triathlon

Students will plan the triathlon by determining the distance for each part of the course. Students will write a system of equations to model the problem situation. They will then solve the system of equations and interpret the results.

Chapter 4: Common Core Performance Task: Maximizing Profit

Find all possible prices Victor can charge for a bag of chips in order to make a profit, and determine the price he should charge to maximize his profit. Students will use linear functions to build a quadratic function model for profit. They will find and interpret the maximum point and the zeros of the profit function and relate them to the selling price of a product.

Chapter 5: Common Core Performance Task: Determining the Dimensions of a Diorama

Students will determine all possible dimensions that Eliana can use for a diorama box with volume 36in^3 . Students will write and graph a polynomial function for the volume of a rectangular diorama box. They will use techniques for solving equations to find both the zeros of the function and the x-values that result in a specified volume.

Chapter 6: Common Core Performance Task: Analyzing the Dimensions of a Yacht

Students will verify that the aC45 Wingsail Catamaran satisfies the America’s Cup rule, and find all possible displacements for your new yacht. Students will rewrite the America’s Cup rule using radicals and evaluate the rule with the given values. Then students will solve an inequality as they design a yacht with different dimensions.

The Half Life of Caffeine

How much caffeine am I really ingesting and how long is it in my system? With caffeine levels in drinks continuing to climb – many people are asking – what exactly is the limit? Healthy adults can safely consume between 400-500mg of caffeine a day. For teens, that number is closer to 100mg a day. The healthy and safe amount is, of course, affected by body weight, health, and individual sensitivity. Caffeine takes a certain amount of time to work through your system. According to the National Institutes of Health, the half life of caffeine is between 5 and 6 hours. This means if you consume 200mg of caffeine at noon, you would still have about 100mg in you at between 5:00-6:00 pm.

Chapter 7: Common Core Performance Task: Apparent Magnitude of Stars

Students will find the apparent magnitude of Sirius, the brightest star in the night sky. Students will write an exponential equation to model the problem. They will use logarithms to solve the equation. Students will interpret their results.

Chapter 8: Common Core Performance Task

How long did it take Steve and Sally to paddle to Elf Island? Assume that Steve and Sally always paddle in such a way as to result in the same speed in still water. Round your answer to the nearest 5 min. (insert overview here***)**

Common Core Performance Task:

Determine the years in which Matthew sold the 7 cars. **(insert overview here*****)**

INSTRUCTIONAL MATERIALS (REQUIRED)	
Textbook #1	
Title: Algebra 2 Student Edition + Digital Courseware + MathXL (8-year license)	Edition: First
Author: Charles, Hall, Kennedy, Bellman, Bragg, Handlin, Murphy and Wiggins	ISBN: 13: 9780133315134
Publisher: Pearson	Publication Date: 2015
Usage: <input checked="" type="checkbox"/> Primary Text <input type="checkbox"/> Read in entirety or near	

Textbook #2	
Title:	Edition:
Author:	ISBN:
Publisher:	Publication Date:
Usage: <input type="checkbox"/> Primary Text <input type="checkbox"/> Read in entirety or near	

Supplemental Instructional Materials *Please include online, and open source resources if any.*

9780133281262	Teacher's Edition	\$107.97
9780133186178	Teacher Resource DVD	\$100.97
9780133281101	Overview and Implementation Guide	\$9.97
9780133186123	Student Companion Book	\$6.47
9780133186130	Student Companion Teacher's Guide	\$21.97
9780133186147	Practice & Problem Solving Workbook	\$6.47
9780133188448	Practice & Problem Solving Teacher's Guide	\$21.97
9780133186161	Standards Practice & Review Workbook	\$4.97
9780133186154	Standards Practice & Review Teacher's Guide	\$32.47
9780133188431	All-In-One Teaching Resources	\$212.47
9780133706086	Teaching w/TI Technology Booklet w/CD-ROM	\$265.47
9780133288179	Teacher's Online Access Pack	\$318.47
9780133185652	ExamView CD-ROM	\$137.97
9780133196948	TI N-Spire Lesson Support CD-Rom	\$424.47
9780133185669	Answers and Solutions Key CD-ROM	\$159.47
9780133186147	Practice & Problem Solving Workbook	\$6.47

Estimated costs for classroom materials and supplies (REQUIRED). *Please describe in detail.*
 If more space is needed than what is provided, please attach backup as applicable.

Cost for class set of textbooks: \$ 6784.92

Description of Additional Costs:
 Per contract all resources are free.

Additional costs:\$ 0

Total cost per class set of instructional materials: \$6784.92

Key Assignments (REQUIRED):

Please provide a detailed description of the Key Assignments including tests, and quizzes, which should incorporate not only short answers but essay questions also. How do assignments incorporate topics? Include all major assessments that students will be required to complete

Key Assignments will include:

- End of Unit Assessments
- Daily/Lesson Quizzes
- Semester Benchmarks/Finals
- Performance Tasks/ Projects
- Homework
- Midterm/mid-unit Assessments
- Cornell Notes

Instructional Methods and/or Strategies (REQUIRED):

Please list specific instructional methods that will be use.

Instructional Strategies will include:

- Direct Instruction
- Targeted Feedback
- Reciprocal Teaching
- Collaboration
- Adapting to learning styles and multiple intelligences
- Realia
- Modeling
- Guided and Independent practice
- Partner/ Group work
- Spiraling
- Questioning strategies that look for participation and content understanding

Assessment Methods and/or Tools (REQUIRED):

Please list different methods of assessments that will be used.

Assessment Methods will include:

- Type of Questions include:
 - Open Response
 - Multiple Choice
 - Performance Assessment\
 - Multiple Choice
- Investigations
- Projects
- Self-assessment
- Whiteboards
- Find the error
- Portfolios/"Notebooks"
- Ticket out the Doors
- Homework

Platforms include: Pearson, Desmos, and MathXL

COURSE PACING GUIDE AND OBJECTIVES (REQUIRED)

Day(s)	Objective	Standard(s)	Chapter(s)	Reference
8-14	Expressions, Equations, and Inequalities 1-1 Patterns and Expressions Reviews 1-2 Properties of Real Numbers Reviews 1-3 Algebraic Expressions 1-4 Solving Equations 1-5 Solving Inequalities 1-6 Absolute Value Equations and Inequalities	A.SSE.3 N.RN.3 A.SSE.1a A.CED.1 A.CED.4 A.SSE.1b	Chapter 1	Essential Standards Addressed
13-21	Functions, Equations, and Graphs 2-1 Relations and Functions Reviews 2-2 Direct Variation	A.CED.2 A.REI.12 F.IF.7.b F.BF.3 N.Q.1		

	<p>2-3 Linear Functions and Slope-Intercept Form</p> <p>2-4 More About Linear Equations</p> <p>2-5 Using Linear Models (optional)</p> <p>2-6 Families of Functions (optional)</p> <p>2-7 Absolute Value Functions and Graphs</p> <p>2-8 Two-Variable Inequalities</p>	<p>F.IF.4</p> <p>F.IF.6</p> <p>F.LE.2</p> <p>S.ID.6</p> <p>S.ID.6.a</p> <p>S.ID.6.c</p> <p>S.ID.7</p> <p>S.ID.8</p> <p>N.Q.1</p> <p>F.IF.8</p> <p>F.IF.7.a</p> <p>F.LE.5</p> <p>F.IF.1</p> <p>F.IF.2</p> <p>F.IF.7</p>		
8-14	<p>Linear Systems</p> <p>3-1 Solving Systems Using Tables and Graphs</p> <p>3-2 Solving Systems Algebraically</p> <p>3-3 Systems of Inequalities</p> <p>3-4 Linear Programming (optional)</p>	<p>N.Q.1</p> <p>A.CED.2</p> <p>A.CED.3</p> <p>A.REI.6</p> <p>A.REI.11</p> <p>A.REI.5</p>		
16-25	<p>Quadratic Functions and Equations</p> <p>4-1 Quadratic Functions and Transformations</p> <p>4-2 Standard Form of a Quadratic Function</p> <p>4-3 Modeling With Quadratic Functions</p> <p>4-4 Factoring Quadratic Expressions</p> <p>4-5 Quadratic Equations</p> <p>4-6 Completing the Square</p> <p>4-7 The Quadratic Formula</p> <p>4-8 Complex Numbers</p> <p>4-9 Quadratic Systems (optional)</p>	<p>A.CED.1</p> <p>F.IF.1</p> <p>F.IF.2</p> <p>F.IF.4</p> <p>F.IF.7</p> <p>F.IF.7.a</p> <p>F.BF.3</p> <p>A.REI.4.b</p> <p>N.Q.1</p> <p>F.IF.5</p> <p>F.LE.5</p> <p>A.SSE.3</p> <p>A.SSE.3.c</p> <p>A.CED.2</p> <p>A.REI.11</p> <p>F.IF.8</p> <p>A.SSE.1.a</p> <p>A.SSE.1.b</p> <p>A.SSE.4</p> <p>A.CED.3</p>		

		A.REI.7 N.CN.1 N.CN.2 N.CN.3 N.CN.5 N.CN.7 A.REI.4 A.REI.4.a		
10-18	Polynomials and Polynomial Functions 5-1 Polynomial Functions 5-2 Polynomials, Linear Factors, and Zeros 5-3 Solving Polynomial Equations 5-4 Dividing Polynomials 5-5 Theorems About Roots of Polynomial Equations (optional) 5-6 The Fundamental Theorem of Algebra (optional)	F.IF.1 F.IF.2 F.IF.7.c A.SSE.1.a, A.SSE.1.b A.APR.1 A.APR.3 A.SSE.2 A.REI.11 A.APR.2 A.APR.6 N.CN.7 N.CN.8 N.CN.9 G.GPE.5 A.APR.5 N.Q.1 F.IF.4 F.IF.5 F.IF.8 F.BF.3	Chapter 5	
11-19	Radical Functions and Rational Exponents 6-1 Roots and Radical Expressions 6-2 Multiplying and Dividing Radical Expressions 6-3 Binomial Radical Expressions 6-4 Rational Exponents 6-5 Solving Square Root and Other Radical Equations 6-6 Function Operations 6-7 Inverse Relations and Functions	A.SSE.2 N.RN.1 N.RN.2 A.REI.2 F.BF.1.b F.BF.1.c F.BF.4 F.BF.4.a F.BF.4.b F.BF.4.c F.IF.7.b F.IF.8	Chapter 6	

	6-8 Graphing Radical Functions			
12-18	Exponential and Logarithmic Functions 7-1 Exploring Exponential Models 7-2 Properties of Exponential Functions 7-3 Logarithmic Functions as Inverses 7-4 Properties of Logarithms 7-5 Exponential and Logarithmic Equations 7-6 Natural Logarithms	N.Q.1 A.CED.2 F.IF.1 F.IF.2 F.IF.7.e F.IF.8 F.IF.8.b F.LE.2 S.ID.6.a F.LE.5 A.SSE.1.b F.BF.4.a F.BF.5 A.REI.11 F.LE.4	Chapter 7	
12-18	Rational Functions 8-1 Inverse Variation 8-2 The Reciprocal Function Family 8-3 Rational Functions and Their Graphs 8-4 Rational Expressions 8-5 Adding and Subtracting Rational Expressions 8-6 Solving Rational Equations	N.Q.1 A.CED.2 F.BF.3 F.BF.1.b A.CED.1 F.IF.7 F.IF.7.d A.SSE.1.a A.SSE.1.b A.SSE.2 A.APR.6 A.REI.2 A.REI.11	Chapter 8	
7-12	Sequences and Series 9-1 Mathematical Patterns (optional) 9-2 Arithmetic Sequences 9-3 Geometric Sequences 9-4 Arithmetic Series Extends 9-5 Geometric Series	F.IF.3 F.BF.1.a F.BF.2 F.LE.2 A.SSE.4	Chapter 9	

12-22	Probability and Statistics 11-1 Permutations and Combinations 11-2 Probability 11-3 Probability of Multiple Events 11-4 Conditional Probability 11-5 Probability Models	S.CP.9 S.IC.2 S.CP.7 S.CP.6 S.MD.6 S.MD.7 S.ID.4 S.ID.1	Chapter 11	
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