# Common Core Algebra II Table of Contents 

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## Annotated with Parce EOY Common Core Standards

## Unit \#1 - Algebraic Essentials Review

- Lesson \#1 - Variables, Terms and Expressions In review/preparation for other standards.
- Lesson \#2 - Solving Linear Equations

A-CED. 1

- Lesson \#3 - Common Algebraic Expressions In review/preparation for other standards.
- Lesson \#4 - Basic Exponent Manipulation

N-RN. 2

- Lesson \#5 - Multiplying Polynomials

A-SSE. 2

- Lesson \#6 - Using Tables on Your Calculator


## Unit \#2 - Functions as the Cornerstones of Algebra

- Lesson \#1 - Introduction to Functions

In review/preparation for other standards.

- Lesson \#2 - Function Notation

In review/preparation for other standards.

- Lesson \#3 - Function Composition

Not addressed in standards

- Lesson \#4 - The Domain and Range of a Function In review/preparation for other standards.


## Unit \#2 - Functions as the Cornerstones of Algebra (CONTINUED)

- Lesson \#5 - One to One Functions

In preparation for F-BF.4.

- Lesson \#6 - Inverse Functions

F-BF. 4

- Lesson \#7 - Key Features of Functions

F-IF.9, F-IF. 4

## Unit \#3 - Linear Functions, Equations, and Their Algebra

- Lesson \#1 - Direct Variation

In review/preparation for other standards.

- Lesson \#2 - Average Rate of Change

F-IF. 6

- Lesson \#3 - Forms of a Line

F-LE. 2

- Lesson \#4 - Linear Modeling

F-LE. 5

- Lesson \#5 - Inverses of Linear Functions

F-BF. 4

- Lesson \#6 - Piecewise Linear Functions

In review/preparation for other standards.

- Lesson \#7 - Systems of Linear Equations (Primarily 3 by 3)

A-REI. 6

## Unit \#4 - Exponential and Logarithmic Functions

- Lesson \#1 - Integer Exponents

N-RN. 2

- Lesson \#2 - Rational Exponents

N-RN.1, N-RN. 2

- Lesson \#3 - Exponential Function Basics

F-LE. 5

## Unit \#4 - Exponential and Logarithmic Functions (CONTINUED)

- Lesson \#4 - Finding Equations of Exponentials

F-LE. 2

- Lesson \#5 - The Method of Common Bases

A-CED. 2

- Lesson \#6 - Exponential Modeling with Percent Growth and Decay

A-CED.1, A-SSE. 3

- Lesson \#7 - Mindful Percent Manipulations

A-SSE. 3

- Lesson \#8 - Introduction to Logarithms

In review/preparation for other standards.

- Lesson \#9 - Graphs of Logarithms

F-IF.4, F-IF.7(e)

- Lesson \#10 - Logarithm Laws

Not addressed in standards

- Lesson \#11 - Solving Exponential Equations Using Logarithms

F-LE. 4

- Lesson \#12 - The Number e and the Natural Logarithm

F-LE. 4

- Lesson \#13 - Compound Interest

F-IF.8, F-BF.1(a), A-SSE. 3

- Lesson \#14 - Newton's Law of Cooling

F-BF.1(b)

## Unit \#5 - SEQUENCES AND SERIES

- Lesson \#1 - Sequences

F-IF.3, F-BF. 2

- Lesson \#2 - Arithmetic and Geometric Sequences

F-BF.2, F-LE. 2

- Lesson \#3 - Summation Notation

A-SSE. 4

## Unit \#5 - Sequences and Series (CONTINUED)

- Lesson \#4 - Arithmetic Series

Not addressed in standards

- Lesson \#5 - Geometric Series

A-SSE. 4

- Lesson \#6 - Mortgage Payments

A-SSE. 4

## Unit \#6 -Quadratic Functions and Their Algebra

- Lesson \#1 - Quadratic Function Review

F-IF. 4

- Lesson \#2 - Factoring

A-SSE. 2

- Lesson \#3 - Factoring Trinomials

A-SSE. 2

- Lesson \#4 - Complete Factoring

A-SSE. 2

- Lesson \#5 - Factoring by Grouping

A-SSE. 2

- Lesson \#6 - The Zero Product Law

A-APR.3, A-REI. 4

- Lesson \#7- Quadratic Inequalities in One Variable

A-CED. 1

- Lesson \#8 - Completing the Square and Shifting Parabolas

F-BF. 3

- Lesson \#9 - Modeling with Quadratic Functions

A-CED. 1

- Lesson \#10 - Equations of Circles

A-REI. 7

- Lesson \#11 - The Locus Definition of a Parabola

G-GPE. 2

## Unit \#7 - Transformations of Functions

- Lesson \#1 - Shifting Functions

F-BF. 3

- Lesson \#2 - Reflecting Parabolas

F-BF. 3

- Lesson \#3 - Vertically Stretching of Functions

F-BF. 3

- Lesson \#4 - Horizontal Stretching of Functions

F-BF. 3

- Lesson \#5 - Even and Odd Functions

F-BF. 3

## Unit \#8 - Radicals and the Quadratic Formula

- Lesson \#1 - Square Root Functions

F-IF. 4

- Lesson \#2 - Solving Square Root Equations

A-REI. 2

- Lesson \#3 - The Basic Exponent Properties

N-RN. 2

- Lesson \#4 - Fractional Exponents Revisited

N-RN.1, N-RN. 2

- Lesson \#5 - More Exponent Practice

N-RN. 2

- Lesson \#6 - The Quadratic Formula

A-REI.4(b)

- Lesson \#7 - More Work with the Quadratic Formula

A-REI.4(b)

## Unit \#9 - Complex Numbers

- Lesson \#1 - Imaginary Numbers

N-CN. 1

- Lesson \#2 - Complex Numbers

N-CN.1, N-CN. 2

- Lesson \#3 - Solving Quadratic Equations with Complex Solutions

A-REI.4, N-CN. 7

- Lesson \#4 - The Discriminant of a Quadratic

A-REI.4, N-CN. 7

## Unit \#10 - Polynomial and Rational Functions

- Lesson \#1 - Power Functions

F-IF.4, F-BF. 3

- Lesson \#2 - Graphs and Zeroes of a Polynomial

A-APR.3, F-IF.4, F-IF. 7

- Lesson \#3 - Creating Polynomial Equations

F-IF. 7

- Lesson \#4 - Polynomial Identities

A-APR. 4

- Lesson \#5 - Introduction to Rational Functions

F-IF. 4

- Lesson \#6 - Simplifying Rational Expressions

A-APR. 6

- Lesson \#7 - Multiplying and Dividing Rational Expressions

A-APR. 6

- Lesson \#8 - Combing Rational Expressions Using Addition and Subtraction A-APR. 6
- Lesson \#9 - Complex Fractions

Not addressed in standards

- Lesson \#10 - Polynomial Long Division

A-APR. 6

## Unit \#10 - Polynomial and Rational Functions (CONTINUED)

- Lesson \#11 - The Remainder Theorem

A-APR.2, A-APR. 6

- Lesson \#12 - Solving Rational Equations

A-REI. 2

- Lesson \#13 - Solving Rational Inequalities

A-CED. 1

- Lesson \#14 - Reasoning About Radical and Rational Equations

A-REI. 1

## Unit \#11 - The Circular Functions

- Lesson \#1 - Rotations and Angle Terminology

In review/preparation for other standards.

- Lesson \#2 - Radian Angle Measurement

F-TF. 1

- Lesson \#3 - The Unit Circle

F-TF. 2

- Lesson \#4 - The Definition of the Sine and Cosine Functions

F-TF.2, F-TF. 8

- Lesson \#5 - More Work with the Sine and Cosine Functions F-TF.2, F-TF. 8
- Lesson \#6 - Basic Graphs of Sine and Cosine F-TF.5, F-IF.7(e)
- Lesson \#7-Vertical Shifting of Sinusoidal Graphs

F-TF.5, F-IF.7(e)

- Lesson \#8 - The Frequency and Period of a Sinusoidal Graph

F-TF.5, F-IF.7(e)

- Lesson \#9 - Sinusoidal Modeling

F-TF.5, F-IF.7(e)

- Lesson \#10 - The Tangent Function

F-TF. 8

- Lesson \#11-The Reciprocal Functions

F-TF. 8

## Unit \#12 - Probability

- Lesson \#1 - Introduction to Probability

In review/preparation for other standards.

- Lesson \#2 - Sets and Probability

S-CP. 1

- Lesson \#3 - Adding Probabilities

S-CP. 7

- Lesson \#4 - Conditional Probability

S-CP.3, S-CP.4, S-CP.5, S-CP. 6

- Lesson \#5 - Independent and Dependent Events

S-CP.2, S-CP.4, S-CP. 5

- Lesson \#6 - Multiplying Probabilities

S-CP.4, S-CP. 2

## Unit \#13 - Statistics

- Lesson \#1 - Variability and Sampling

S-IC. 3

- Lesson \#2 - Population Parameters

In review/preparation for other standards.

- Lesson \#3 - The Normal Distributions

S-ID. 4

- Lesson \#4 - The Normal Distribution and Z-Scores

S-ID. 4

- Lesson \#5 - Sample Means

S-IC.1, S-IC.2, S-IC. 5

- Lesson \#6 - Sample Proportions

S-IC.1, S-IC. 4

- Lesson \#7 - The Difference in Samples Means

S-IC. 5

- Lesson \#8 - The Distribution of Sample Means

S-IC.1, S-IC. 4

## Unit \#13 - STATISTICS (CONTINUED)

- Lesson \#9 - The Distribution of Sample Proportions

S-IC.1, S-IC. 4

- Lesson \#10 - Margin of Error

S-IC.1, S-IC. 4

- Lesson \#11 - Linear Regression and Lines of Best Fit

S-ID.6(a)

- Lesson \#12 - Other Types of Regression S-ID.6(a)

