Algebra II CP Scope and Sequence

Text: Algebra 2, by Larson, publisher Holt McDougal, 2012, ISBN 978-0-54764715-9

For these 8 units, depth of understanding is important. ·Reference Standards.

Unit 1- Quadratic Function and Factoring
1-1 Graphing Quadratics in Standard Form
1-2 Graphing Quadratics in Vertex and Intercept Form
1-3 Solving Quadratics by factoring with a= 1
1-4 Solving Quadratics by factoring with a = other than 1
1-5 Solving Quadratics by using Square Roots
1-6 Complex Numbers
1-7 Complete the Square
1-8 Quadratic Formula and Discriminant
1-9 Graph and Solve Quadratic Inequalities

Unit 2 - Polynomials
2-1 Exponents Properties
2-2 Evaluating and Graphing Polynomials
2-3 Operations with Polynomials
2-4 Factor and Solve Polynomial Equations
2-5 Remainder and Factor Theorem
2-6 Find Rational Zeros
2-7 Fundamental Theorem of Algebra
2-8 Analyze Graphs of Polynomial Functions

Unit 3 - Rational Exponents and Radical Functions
3.1 Evaluate nth Roots of Use Rational Exponents
3.2 Apply Properties of Rational Exponents
3.3 Function Operations and Composition
3.4 Inverse Functions
3.5 Graph Square Root and Cube Root Functions
3.6 Solve Radical Equations

Unit 4 - Exponential and Logarithmic Functions
4.1 Graph Exponential Growth Functions
4.2 Graph Exponential Decay Functions
4.3 Use Functions Involving e ·
4.4 Evaluate Logarithms and Graph Logarithmic Functions
4.5 Apply Properties of Logarithms
4.6 Solve Exponential and Logarithmic Equations

Unit 5 - Rational Functions
5.1 Model Inverse and Joint Variation
5.2 Graph Simple Rational Functions
5.3 Graph General Rational Functions
5.4 Multiply and Divide Rational Expressions
5.5 Add and Subtract Rational Expressions
5.6 Solve Rational Equations
5.7 Describe and Compare Function Characteristics

Unit 6 - Data Analysis and Statistics

6.0 Department supplement on Permutations and Combinations
6.05 Department supplement on Probability - dependent and independent
6.1 Combinations and the Binomial Theorem
6.2 Construct and Interpret Binomial Distributions
6.3 Normal Distributions
6.4 Select and Draw Conclusions from Samples
6.5 Compare Surveys, Experiments and Observational Studies

Unit 7 - Sequences and Series

7.1 Define and Use Sequences and Series
7.2 Arithmetic Sequences and Series
7.3 Geometric Sequences and Series
7.4 Sums of Infinite Geometric Series
7.5 Recursive Rules with Sequences and Functions

Unit 8 - Trigonometry

9.1 Right Triangle Trigonometry
9.2 Define General Angles and Use Radian Measure
9.3 Evaluate Trig Functions of Any Angle
10.1 Graph sine and cosine (NOT Tangent)
10.2 Translations to Sine and Cosine waves
10.3 Verifying Trig Identities