

## DISTRICT U-46 Pacing Guide for Algebra 3-4

Quarter 1 First-Degree Equations and Inequalities	Quarter 2 Polynomials and Quadratics	Quarter 3 Conics, Rational Expressions, Logs and Probability	Quarter 4 Trigonometry and Polynomial Functions
<u>Chapter 1: Solving Equations &amp; Inequalities</u> -1.1 Expressions and Formulas -1.2 Properties of Real Numbers -1.3 Solving Equations -1.4 Solving Absolute Value Equations -1.5 Solving Inequalities -1.6 Solving Compound and Absolute Value Inequalities	<u>Chapter 5: Polynomials Part #1</u> -5.1 Monomials -5.2 Polynomials -5.3 Dividing Polynomials -5.4 Factoring Polynomials	<u>Chapter 8: Conic Sections</u> -8.1 Midpoint and Distance Formulas -8.3 Circles -8.2 Parabolas -8.4 Ellipses -8.5 Hyperbolas -8.6 Conic Sections **No foci, directrix, latus rectum, etc	<u>Chapter 13: Trigonometric Functions</u> -13.1 Right Triangle Trigonometry -13.2 Angles and Angle Measure -13.3 Trigonometric Functions of General Angles  (ACT Prep/Review – Packets??)
<u>Chapter 2: Linear Relations and Functions</u> -2.1 Relations and Functions -2.2 Linear Equations -2.3 Slope -2.4 Writing Linear Equations -2.6 Special Functions (Absolute Value) -2.7 Graphing Inequalities	<u>Chapter 5: Polynomials Part #2</u> -5.5 Roots of Real Numbers -5.6 Radical Expressions -5.7 Rational Exponents -5.8 Radical Equations and Inequalities -5.9 Complex Numbers	<u>Ch 9: Rational Expressions and Equations</u> -9.1 Multiplying and Dividing Rational Expressions -9.2 Adding and Subtracting Rational Expressions -9.6 Solving Rational Equations	<u>Chapter 7: Polynomial Functions</u> -7.1 Polynomial Functions -7.2 Graphing Polynomial Functions -7.3 Solving Equations Using Quadratic Techniques -7.4 The Remainder and Factor Theorems -7.5 Roots and Zeros -7.6 Rational Zero Theorem
<u>Chapter 3: Systems of Equations &amp; Inequalities</u> -3.1 Solving Systems of Equations by Graphing -3.2 Solving Systems of Equations Algebraically -3.3 Solving Systems of Inequalities by Graphing -3.4 Linear Programming (set up equations)	<u>Chapter 6: Quadratic Functions and Inequalities</u> -6.1 Graphing Quadratic Functions -6.2 Solving Quadratic Equations by Graphing -6.3 Solving Quadratic Equations by Factoring -6.4 Completing the Square -6.5 The Quadratic Formula -6.6 Analyzing Graphs of Quadratic Functions	<u>Chapter 10: Logarithms</u> -10.1 Exponential Functions -10.2 Logarithms and Logarithmic Functions -10.3 Properties of Logarithms -10.4 Common Logarithms (Base 10)  <u>Chapter 12: Probability (and Statistics)</u> -12.1 The Counting Principle -12.2 Permutations and Combinations -12.3 Probability	
<b>Optional Sections:</b> -2.5 Using Scatter Plots -2.E Graph. Calc: Lines of Regression -2.6 Special Functions (the rest) -3.E Graph. Calc: Systems of Linear Inequalities -3.4 Linear Programming (graph and solve) -3.5 Solving Systems of Equations in Three Variables (Connect with Chapter 4 Systems)	<b>Optional Sections:</b> -6.E Graph Calc: Families of Parabolas -6.7 Graphing and Solving Quadratic Inequalities	<b>Optional Sections:</b> -8.7 Solving Quadratic Systems -9.3 Graphing Rational Functions -9.4 Direct, Joint, and Inverse Variation -9.5 Classes of Functions (Use graphing calculators) -9.6 Solving Rational Inequalities -10.5 Base $e$ and Natural Logarithms -10.6 Exponential Growth and Decay -12.4 – 12.9 Probability and Statistics	<b>Optional Sections:</b> <b>Chapter 4: Matrices</b> -7.7 Operations on Functions -7.8 Inverse Functions and Relations -7.9 Square Root Functions <b>Chapter 11: Sequences and Series</b> -13.4 Law of Sines -13.5 Law of Cosines -13.7 Inverse Trigonometric Functions