

**Argenta-Oreana High School**  
**Algebra II**  
**Textbook: Algebra 2**  
**Prentice Hall, 2007**

<b>Date Semester</b>	<b>IL Lrning Stnds</b>	<b>IL Assmnt Stnds</b>	<b>Unit and/or Essential Question Content and/or Skills</b>	<b>Assessments and/or Products</b>
<b>Semester I</b>  <b>August</b> <b>September</b>	6. B. 8. C. 8. D. 10. C.	6.11.01 6.11.05 6.11.10 6.11.13 6.11.16 8.11.01 8.11.06 8.11.16 10.11.09	Chapter 1: Tools of Algebra <ul style="list-style-type: none"> <li>• Real Numbers – Graphing, Ordering, Identifying properties, and using properties</li> <li>• Algebraic expressions - evaluating and simplifying</li> <li>• Equations – solving equations and solving problems by solving equations</li> <li>• Inequalities – solving, graphing, solving and graphing compound inequalities</li> <li>• Solving absolute value equations and inequalities</li> <li>• Probability – finding experimental and theoretical probabilities</li> </ul>	Daily Homework  Worksheets  Graphing calculator activities  Quizzes/Chapter Test
<b>September</b> <b>October</b>	8. B. 8. B. 5	6.11.19 8.11.05 8.11.08 8.11.09 8.11.10 8.11.11 8.11.12 8.11.14 9.11.09	Chapter 2: Functions, Equations, and Graphs <ul style="list-style-type: none"> <li>• Graphing relations and identifying functions</li> <li>• Linear Equations – graphing and writing equations of lines</li> <li>• Writing and interpreting direct variation</li> <li>• Using Linear Models – writing, making predictions</li> <li>• Absolute value functions and graphs</li> <li>• Families of functions – analyzing transitions, stretches, shrinks, and reflections</li> <li>• Two-variable inequalities – graphing linear and absolute value inequalities</li> </ul>	Daily Homework  Worksheets  Graphing calculator activities  Quizzes/Chapter Test
<b>October</b> <b>November</b>	8. C. 8. D. 9. C. 5b	6.11.14 8.11.15 8.11.17 8.11.22 9.11.11	Chapter 3: Linear Systems <ul style="list-style-type: none"> <li>• Graphing systems of equations</li> <li>• Solving systems algebraically – substitution and elimination</li> <li>• Solving systems of inequalities</li> <li>• Systems with three variables - solving by substitution and elimination</li> </ul>	Daily Homework  Worksheets  Graphing calculator activities  Quizzes/Chapter Test

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<b>November December</b>	8. C 8. D	6.11.03 6.11.09 6.11.12	Chapter 4: Matrices <ul style="list-style-type: none"> <li>Organizing Data into Matrices – identifying matrices and their elements</li> <li>Adding and subtracting matrices</li> <li>Matrix Multiplication – matrix by a scalar and two matrices</li> <li>Geometric Transformations with matrices – representing translations, dilations, reflections and rotations</li> <li>2 x 2 Matrices, determinants and inverses – solving matrix equations</li> <li>Inverse matrices and systems – solving</li> <li>Augmented matrices and systems – solving, Cramer’s Rule</li> </ul>	Daily Homework Worksheets Graphing calculator activities Quizzes/Chapter Test
<b>Semester II January</b>	6. A. 5 8. B 8. B. 5 8. C. 5 8. D 8. D. 5	6.11.11 8.11.03 8.11.12 8.11.18 8.11.20	Chapter 5: Quadratic Equations and Functions <ul style="list-style-type: none"> <li>Modeling data with quadratic functions – identifying and graphs</li> <li>Properties of parabolas – graphing, finding maximum and minimum</li> <li>Transforming parabolas – vertex form</li> </ul>	Daily Homework Worksheets Graphing calculator activities Quizzes/Chapter Test
<b>January</b>	8. B. 5	8.11.12 8.11.19 8.11.20	Chapter 10: Quadratic Relations and Conic Sections <ul style="list-style-type: none"> <li>Writing and graphing parabolas</li> <li>Circles – writing and graphing the equation, finding the center and radius</li> </ul>	Daily Homework Worksheets Graphing calculator activities Quizzes/Chapter Test
<b>February</b>	6. A. 5 8. B 8. B. 5	6.11.11 8.11.03 8.11.12	Return to Chapter 5: <ul style="list-style-type: none"> <li>Factoring quadratic expressions – finding common and</li> </ul>	Daily Homework Worksheets

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	8. C. 5 8. D 8. D. 5	8.11.18 8.11.20	binomial factors, factoring special quadratic expressions <ul style="list-style-type: none"> <li>• Quadratic equations – solving by factoring, finding square root and graphing</li> <li>• Complex numbers – identifying, graphing, operations</li> <li>• Completing the square – solving and rewriting</li> <li>• The quadratic formula</li> </ul>	Graphing calculator activities Quizzes/Chapter Test
<b>February</b> <b>March</b>	8. B. 5 8. C. 5 8. D. 10. C. 5b	8.11.11 8.11.14 8.11.19 8.11.21	Chapter 6: Polynomials and Polynomial Functions <ul style="list-style-type: none"> <li>• Polynomial functions – classifying, modeling data</li> <li>• Polynomials and linear factors – analyzing, and writing from its zero</li> <li>• Dividing polynomials – long division and synthetic</li> <li>• Solving polynomial equations – graphing and factoring</li> <li>• Theorems about roots of polynomial equations – Rational Root Theorem and Imaginary root Theorem</li> <li>• The Fundamental Theorem of Algebra (Optional)</li> <li>• Permutations and combinations (Optional)</li> <li>• The Binomial Theorem – Pascal’s Triangle (Optional)</li> </ul>	Daily Homework Worksheets Graphing calculator activities Quizzes/Chapter Test
<b>March</b>	6. B. 8. B. 8. D. 5	8.11.01 8.11.12	Chapter 7: Radical Functions and Rational Exponents <ul style="list-style-type: none"> <li>• Simplifying nth roots</li> <li>• Multiplying and dividing radical expressions</li> <li>• Adding and subtracting radical expressions</li> <li>• Multiplying and dividing binomial radical expressions</li> <li>• Rational Exponents</li> <li>• Solving square root and other radical equations</li> <li>• Function Operations – include finding composite of two functions</li> </ul>	Daily Homework Worksheets Graphing calculator activities Quizzes/Chapter Test

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			<ul style="list-style-type: none"> <li>• Inverse relations and functions</li> <li>• Graphing square root and other radical functions (Optional)</li> </ul>	
<b>April</b>	6. B. 5 8.B 8. B. 5 8. C. 5 8. D 8. D. 5	8.11.01 8.11.12 8.11.14 8.11.19	Chapter 8: Exponential and Logarithmic Functions <ul style="list-style-type: none"> <li>• Modeling exponential growth and decay</li> <li>• Properties of exponential functions</li> <li>• Logarithmic functions as inverses – writing, evaluating and graphing</li> <li>• Properties of logarithms</li> <li>• Solving exponential and logarithmic equations</li> <li>• Natural logarithms</li> </ul>	Daily Homework  Worksheets  Graphing calculator activities  Quizzes/Chapter Test
<b>May</b>	8. B. 5 8. C 8.D 8. D. 5 10. C	6.11.06 6.11.19 8.11.01 8.11.12 8.11.19	Chapter 9: Rational Functions <ul style="list-style-type: none"> <li>• Inverse variation and joint</li> <li>• Graphing reciprocal function family and translations</li> <li>• Rational functions and their graphs</li> <li>• Adding and subtracting rational expressions – simplifying complex fractions</li> <li>• Solving rational equations</li> <li>• Probability of multiple events</li> </ul>	Daily Homework  Worksheets  Graphing calculator activities  Quizzes/Chapter Test