

## Scope and Sequence

Subject/Title of Unit	Grade	6 Weeks	Estimated Time Frame (# of days)
Algebra 2 *Chapter 6 Polynomials and Polynomial Functions	10-12	4 <sup>th</sup>	13 days
TEKS/Student Expectations		Examples/Specifications:	
<p><i>The student uses properties and attributes of functions and applies functions to problem situations. Following are performance descriptions.</i></p> <p>2A.1.A – For a variety of situations, the student identifies the mathematical domains and ranges and determines reasonable domain and range values for given situations.</p> <p><i>The student understands the importance of the skills required to manipulate symbols in order to solve problems and uses the necessary algebraic skills required to simplify algebraic expressions and solve equations and inequalities in problem situations. Following are performance descriptions.</i></p> <p>2A.2.A – The student uses tools including matrices, factoring, and properties of exponents to simplify expressions and transform and solve equations.</p> <p><i>The student connects algebraic and geometric representations of functions. Following are performance descriptions.</i></p> <p>2A.4.B – The student extends parent functions with parameters such as m in <math>y = mx</math> and describes parameter changes on the graph of parent functions.</p> <p>2A.4.C – The student recognizes inverse relationships between various functions.</p> <p><i>The student formulates equations and inequalities based on square root functions, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation. Following are performance descriptions.</i></p> <p>2A.9.B – The student relates representations of square root functions, such as algebraic, tabular, graphical, and verbal descriptions.</p> <p>2A.9.C – For given contexts, the student determines the reasonable domain and range values of square root functions, as well as interprets and determines the reasonableness of solutions to square root equations and inequalities.</p> <p>2A.9.D – The student solves square root equations and inequalities using graphs, tables, and algebraic methods.</p> <p>2A.9.E – The student analyzes situations modeled by square root functions, formulates equations or inequalities, selects a method, and solves problems.</p> <p>2A.9.F – The student expresses inverses of quadratic functions using square root functions.</p> <p>2A.9.G – connect inverses of square root functions with quadratic functions</p>		<ul style="list-style-type: none"> <li>✓ Student will be able to evaluate <math>n</math>th roots and rational exponents</li> <li>✓ Student will be able to apply properties of rational exponents</li> <li>✓ Student will be able to perform function operations and composition</li> <li>✓ Student will be able to use inverse functions</li> <li>✓ Student will be able to graph square root and cube root functions</li> <li>✓ Student will be able to solve radical equations</li> </ul> <p>* P.2.B, G.8.A</p>	

Process of Instruction/Products:	Instructional Resources/Textbook Correlations:																		
Lecture using transparencies and note taking on: <ol style="list-style-type: none"> <li>1. Evaluate <math>n</math>th Roots and Rational Exponents (6.1)</li> <li>2. Apply Properties of Rational Exponents (6.2)</li> <li>3. Perform Function Operations and Composition (6.3)</li> <li>4. Use Inverse Functions (6.4)</li> <li>5. Graph Square Root and Cube Root Functions (6.5)</li> <li>6. Solve Radical Equations (6.6)</li> </ol> White board activity and student directed assignment for test review of concepts	McDougal Littell/ Larson Algebra 2  CH 6 pages 412 - 475																		
Language of Instruction	Weblinks/Other Resources:																		
$n$ th root                      index of a radical                      like radicals simplest form of a radical                      power function composition                      inverse relation                      inverse function radical function                      radical equation	<a href="http://www.coolmath.com">www.coolmath.com</a>																		
Evaluation/External Assessment/Local Assessment:	Best Instruction Timeline:																		
Daily Homework In-class work End of Unit Test 2-5 Quizzes	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Day 1</td> <td style="width: 33%;">Day 7, 8</td> <td style="width: 33%;">Day 13</td> </tr> <tr> <td>Day 13</td> <td></td> <td></td> </tr> <tr> <td>Day 2</td> <td>Day 9</td> <td></td> </tr> <tr> <td>Day 3</td> <td>Day 10</td> <td></td> </tr> <tr> <td>Day 4, 5</td> <td>Day 11</td> <td></td> </tr> <tr> <td>Day 6</td> <td>Day 12</td> <td></td> </tr> </table>	Day 1	Day 7, 8	Day 13	Day 13			Day 2	Day 9		Day 3	Day 10		Day 4, 5	Day 11		Day 6	Day 12	
Day 1	Day 7, 8	Day 13																	
Day 13																			
Day 2	Day 9																		
Day 3	Day 10																		
Day 4, 5	Day 11																		
Day 6	Day 12																		