

Scope and Sequence

Subject/Title of Unit	Grade	6 Weeks	Estimated Time Frame (# of days)
Algebra 2 *Chapter 7 Exponential and Logarithmic Functions	10-12	4 th	13 days
TEKS/Student Expectations		Examples/Specifications:	
<p><u>The student uses properties and attributes of functions and applies functions to problem situations. Following are performance descriptions.</u></p> <p>2A.1.B – In solving problems, the student collects data and records results, organizes the data, makes scatterplots, fits the curves to the appropriate parent function, interprets the results, and proceeds to model, predict, and make decisions and critical judgments.</p> <p><u>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.</u></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><u>The student connects algebraic and geometric representations of functions. Following are performance descriptions.</u></p> <p>2A.4.B – The student extends parent functions with parameters such as m in $y = mx$ 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><u>Exponential and logarithmic functions: knowledge and skills and performance descriptions. The student formulates equations and inequalities based on exponential and logarithmic functions, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation. Following are performance descriptions.</u></p> <p>2A.11.A- The student develops the definition of logarithms by exploring and describing the relationship between exponential functions and their inverses.</p> <p>2A.11.B – The student uses the parent functions to investigate, describe, and predict the effects of parameter changes on the graphs of exponential and logarithmic functions, describes limitations on the domains and ranges, and examines asymptotic behavior.</p> <p>2A.11.C – For given contexts, the student determines the reasonable domain and range values of exponential and logarithmic functions, as well as interprets and determines the reasonableness of solutions to exponential and logarithmic equations and inequalities.</p> <p>2A.11.D – The student solves exponential and logarithmic equations and inequalities using graphs, tables, and algebraic methods.</p> <p>2A.11.E – The student analyzes a situation modeled by an exponential function, formulates an equation or inequality, and solves the problem.</p> <p>G.6.B, G.9.D</p>		<ul style="list-style-type: none"> ✓ Student will be able to graph exponential growth functions ✓ Student will be able to graph exponential decay functions ✓ Student will be able to use functions involving e ✓ Student will be able to evaluate logarithms and graph logarithmic functions ✓ Student will be to able apply properties of logarithms ✓ Student will be to able solving exponential and logarithmic equations ✓ Student will be able to write and apply exponential and power functions 	

Process of Instruction/Products:	Instructional Resources/Textbook Correlations:													
Lecture using transparencies and note taking on: <ol style="list-style-type: none"> 1. Graph Exponential Growth Functions (7.1) 2. Graph Exponential Decay Functions (7.2) 3. Use Functions Involving e (7.3) 4. Evaluate Logarithms and Graph Logarithmic Functions (7.4) 5. Apply Properties of Logarithms (7.5) 6. Solving Exponential and Logarithmic Equations (7.6) 7. Write and Apply Exponential and Power Functions (7.7) Math Activity and student directed assignment for test review of concepts	McDougal Littell/ Larson Algebra 2 CH 7 pages 476 - 547													
Language of Instruction	Weblinks/Other Resources:													
Exponential function exponential growth function Asymptote exponential decay function growth factor Decay factor natural base e logarithm of y with base b Common logarithm natural logarithm Exponential equation logarithmic equation	www.coolmath.com													
Evaluation/External Assessment/Local Assessment:	Best Instruction Timeline:													
Daily Homework In-class work End of Unit Test 2-6 Quizzes	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Day 1</td> <td style="width: 50%;">Day 7, 8</td> </tr> <tr> <td>Day 14</td> <td></td> </tr> <tr> <td>Day 2</td> <td>Day 9, 10</td> </tr> <tr> <td>Day 3</td> <td>Day 11</td> </tr> <tr> <td>Day 4, 5</td> <td>Day 12</td> </tr> <tr> <td>Day 6</td> <td>Day 13</td> </tr> </table>		Day 1	Day 7, 8	Day 14		Day 2	Day 9, 10	Day 3	Day 11	Day 4, 5	Day 12	Day 6	Day 13
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