

4th Nine weeks				
TAKS Obj.	TEKS: Student Expectation	Teaching and Planning Notes	Glencoe	UCSMP
1,2,4,5	<p>2A4A identify and sketch graphs of parent functions, including linear ($f(x) = x$), quadratic ($f(x) = x^2$), exponential ($f(x) = a^x$), and logarithmic ($f(x) = \log_a x$) functions, absolute value of x ($f(x) = x$), square root of x ($f(x) = \sqrt{x}$), and reciprocal of x ($f(x) = 1/x$);</p> <p>2A4B extend parent functions with parameters such as a in $f(x) = a/x$ and describe the effects of the parameter changes on the graph of parent functions; and</p> <p>2A11B use the parent functions to investigate, describe, and predict the effects of parameter changes on the graphs of exponential and logarithmic functions, describe limitations on the domains and ranges, and examine asymptotic behavior;</p> <p>2A11C determine the reasonable domain and range values of exponential and logarithmic functions, as well as interpret and determine the reasonableness of solutions to exponential and logarithmic equations and inequalities;</p> <p>2A11D determine solutions of exponential and logarithmic equations using graphs, tables, and algebraic methods;</p> <p>2A11E determine solutions of exponential and logarithmic inequalities using graphs and tables; and</p> <p>2A1B collect and organize data, make and interpret scatterplots, fit the graph of a function to the data, interpret the results, and proceed to model, predict, and make decisions and critical judgments.</p>	<ul style="list-style-type: none"> • Exponential graphs • Domain and range • Parameter changes and asymptotic behavior • Fits and exponential model to data • Clarifying activity 	10-1 p. 594-602	9-4 p. 552-556 Lesson Master 9-4A
2,5	2A11A develop the definition of logarithms by exploring and describing the relationship between exponential functions and their inverses;	Introduction to logs, converting between logarithmic and exponential notation	10-2 p. 605-610	9-6 p. 563-569

<p>2,5</p>	<p>2A11C determine the reasonable domain and range values of exponential and logarithmic functions, as well as interpret and determine the reasonableness of solutions to exponential and logarithmic equations and inequalities;</p> <p>2A11D determine solutions of exponential and logarithmic equations using graphs, tables, and algebraic methods;</p> <p>2A11E determine solutions of exponential and logarithmic inequalities using graphs and tables; and</p> <p>2A11F analyze a situation modeled by an exponential function, formulate an equation or inequality, and solve the problem.</p> <p>2A2A use tools including factoring and properties of exponents to simplify expressions and to transform and solve equations; and</p>	<ul style="list-style-type: none"> • Both common logs and logs with other bases (natural logs optional) should be considered as this skill is necessary to solve logarithmic equations, Lightly discuss parameter changes for logarithmic and exponential functions; • Clarifying Activity: Algebra 2 TEXTTEAMS II Exponential and Logarithmic Functions Intro Activity and 1.2 Activity • Properties of logarithms • Graphing logarithmic functions, identifying properties of logarithmic and exponential graphs, domain and range • Clarifying Activity: Algebra 2 TEXTTEAMS II Exponential and Logarithmic Functions 1.2 Reflect and Apply • Solving exponential equations 	<p>10-3 p. 611-616 10-4 p. 617-621 10-6 p. 626-630</p>	
<p>3,5,6,7 8,10</p>	<p>2A5A describe a conic section as the intersection of a plane and a cone;</p> <p>2A5B sketch graphs of conic sections to relate simple parameter changes in the equation to corresponding changes in the graph;</p> <p>2A5C identify symmetries from graphs of conic sections;</p> <p>2A5D identify the conic section from a given equation; and</p> <p>2A5E use the method of completing the square.</p>	<ul style="list-style-type: none"> • Describe the conic sections as the intersection of a plane and a cone • Write the equation of and graph parabolas, both function and non-function parabola. • Graph and write the equations for circles • Graph and write the equations for ellipses • Graph and write the equations for hyperbolas • Given an equation identify a conic section • For all conic sections, investigate parameter changes 	<p>7-2 p. 415-422 7-3 p. 423-429 7-4 p. 431-439 7-5 p. 440-447 7-6 p. 450-455</p>	
<p>1 2 4 10</p>	<p>2A3B use algebraic methods, graphs, tables, or matrices, to solve systems of equations or inequalities; and</p>	<ul style="list-style-type: none"> • Instructional Considerations: appropriate use of technology to solve systems, work examples motivating the need for matrix arithmetic application problem Glencoe p. 194 and p. 199, UCSMP 4-3 p. 214-219; Clarifying Activity • Storing data in a matrix, interpreting data from matrices • Perform matrix operations • Use matrix operations to solve real world problems • Identity matrices, inverse matrices, and determinants of 2X2; find determinants and inverses of 3x3 matrices using technology • Solve systems of equations using matrices 	<p>4-1 through 4-6 p. 186-225</p>	<p>4-1 p. 204-208 Lesson Master 4-1A,B</p>
	<p>Review and Assess</p>			