

Algebra II Scope and Sequence Aligned to SATEC Resources—DRAFT (4/06)

Square Root Functions (2–3 weeks)

This unit includes equations, inequalities, and systems. There should be an emphasis on the connection between the 5 representations: graph, table, problem situation, pictorial, symbolic. Within this unit, connections to foundations for functions and how all functions have same traits should be made.

Objective	TEKS	TEKS Clarification	TAKS Objective	SATEC Lesson / Resources ¹	SATEC Correlated Assessments	Dana Center Assessments	Resources / Text
Identify and sketch the square root function.	2A.4A	Revisit data activity from Foundations for Functions and reinforce common function characteristics.	Objectives 1, 2	Impact Revisited Just a Swingin’	Just a Swingin’: Reflect and Apply		Square Root Functions
Describe limitations of domain and range of square root functions.	2A.4A TEKS connection: 2A.1A	Revisit data to extend the investigation of square root functions to include writing equations, graphing and translating functions, and analyzing parameter changes in the context of situations.		Just a Swingin’	Just a Swingin’: Reflect and Apply	I Was Going How Fast?	Square Root Functions
Relate the various representations of the square root function.	2A.9B	Stress that the inverse of a quadratic function is not a function unless the domain of the quadratic is restricted.		Impact Revisited Just a Swingin’	Just a Swingin’: Reflect and Apply		
Investigate, describe and predict the effect of parameter changes and describe limitations of domain and range on the square root function.	2A.9A, 2A.4B TEKS connection: 2A.1A	Rationalizing denominators or multiplying by conjugate is not necessary.		Impact Revisited Just a Swingin’	Just a Swingin’: Reflect and Apply	Investigating the Effects of Parameter Changes	Algebra II Institute Part I: 1.1, 2.1 Square Root Functions
Express inverses of quadratic functions using square root functions.	2A.9F	Use technology such as graphing calculators and/or computers to link multiple representations.		Impact Revisited Just a Swingin’	Just a Swingin’: Reflect and Apply		Algebra II Institute Part I: 3.2

¹ The SATEC Resources and Coordinated Assessments are available on the Mathematics TEKS Toolkit at www.mathtekstoolkit.org/instruction/scope/alg2scope/satec.php. The Dana Center Assessments are on the toolkit at www.mathtekstoolkit.org/instruction/alg2.php.

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Formulate equations or inequalities to solve problems that can be modeled by square root functions.	2A.9E			Impact Revisited Just a Swingin’	Just a Swingin’: Reflect and Apply	Pizza Pizza	
Solve square root equations and inequalities using graphs, tables, and algebraic methods and determine the reasonableness of solutions.	2A.9D, 2A.9C			Impact Revisited Just a Swingin’	Just a Swingin’: Reflect and Apply	I Can See Forever	
For a given application, identify the mathematical domain and range and the domain and range for the situation.	2A.1A			Just a Swingin’	Just a Swingin’: Reflect and Apply	Tic Toc	Square Root Functions
Collect and organize data, make scatterplots, fit the curve to a function, interpret the results, and model, predict, and make decisions.	2A.1B			Just a Swingin’	Just a Swingin’: Reflect and Apply		
Recognize that functions can be denoted in many forms: $y =$, $d =$, $y =$, and $f(x) =$ and determine which form is the most appropriate for a given situation.	(moved to Alg 1)			Just a Swingin’	Just a Swingin’: Reflect and Apply		
Perceive functions and equations as means for analyzing and understanding relationships and as a tool for expressing generalizations.	BU A3				Square Root Functions		

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Use a variety of representations, tools, and technology and model situations to solve problems.	BU A5			Just a Swingin’	Just a Swingin’: Reflect and Apply		
Use math processes throughout, including problem solving, computation, communication, connections, reasoning, multiple representations, modeling, and justification.	BU A6						Square Root Functions
Extend parent functions with parameters and describe parameter changes of graphs of parent functions.	2A.4B						Square Root Functions
Recognize inverse relationships between various functions.	2A.4C						