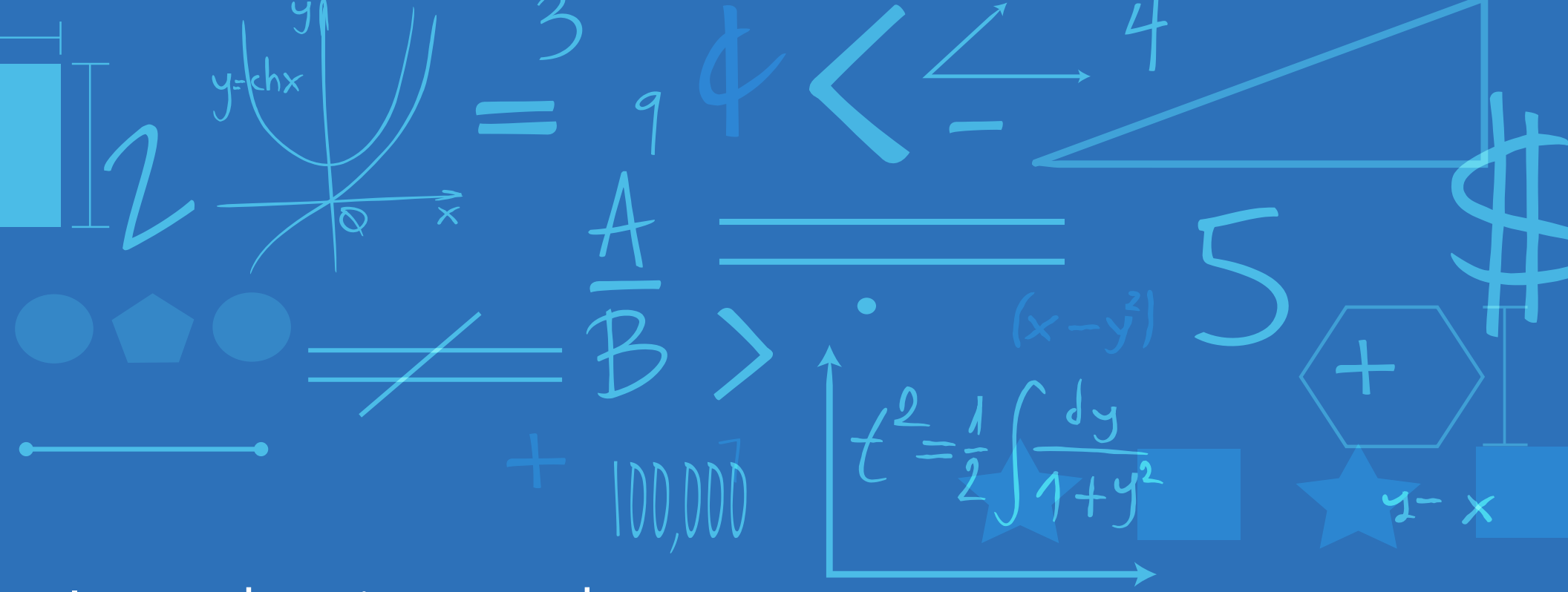

Introduction to the

Revised Mathematics TEKS

SIDE-BY-SIDE TEKS COMPARISON
ALGEBRA I

TEA™
TEXAS EDUCATION AGENCY

Old TEKS	Current TEKS (2012)	Supporting Information	Notes
	(a) General requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in Grades 8 or 9. Prerequisite: Mathematics, Grade 8 or its equivalent.	The Revised TEKS (2012) include descriptions of prerequisite coursework.	
	(b) Introduction. (1) The desire to achieve educational excellence is the driving force behind the Texas essential knowledge and skills for mathematics, guided by the college and career readiness standards. By embedding statistics, probability, and finance, while focusing on fluency and solid understanding, Texas will lead the way in mathematics education and prepare all Texas students for the challenges they will face in the 21st century.	A well-balanced mathematics curriculum includes the College and Career Readiness Standards. A focus on mathematical fluency and solid understanding allows for rich exploration of the key ideas of Algebra I.	

Old TEKS	Current TEKS (2012)	Supporting Information	Notes
(a) Basic understandings. (1) Foundation concepts for high school mathematics. As presented in Grades K-8, the basic understandings of number, operation, and quantitative reasoning; patterns, relationships, and algebraic thinking; geometry; measurement; and probability and statistics are essential foundations for all work in high school mathematics. Students will continue to build on this foundation as they expand their understanding through other mathematical experiences.	(b) Introduction (3) In Algebra I, students will build on the knowledge and skills for mathematics in Grades 6-8, which provide a foundation in linear relationships, number and operations, and proportionality. Students will study linear, quadratic, and exponential functions and their related transformations, equations, and associated solutions. Students will connect functions and their associated solutions in both mathematical and real-world situations. Students will use technology to collect and explore data and analyze statistical relationships. In addition, students will study polynomials of degree one and two, radical expressions, sequences, and laws of exponents. Students will generate and solve linear systems with two equations and two variables and will create new functions through transformations.	The Revised TEKS (2012) condense the language of the basic understandings.	
(a) Basic understandings. (2) Algebraic thinking and symbolic reasoning. Symbolic reasoning plays a critical role in algebra; symbols provide powerful ways to represent mathematical situations and to express generalizations. Students use symbols in a variety of ways to study relationships among quantities.			
(a) Basic understandings. (3) Function concepts. A function is a fundamental mathematical concept; it expresses a special kind of relationship between two quantities. Students use functions to determine one quantity from another, to represent and model problem situations, and to analyze and interpret relationships.			
(a) Basic understandings. (4) Relationship between equations and functions. Equations and inequalities arise as a way of asking and answering questions involving functional relationships. Students work in many situations to set up equations and inequalities and use a variety of methods to solve them.			

Old TEKS	Current TEKS (2012)	Supporting Information	Notes
(a) Basic understandings. (5) Tools for algebraic thinking. Techniques for working with functions and equations are essential in understanding underlying relationships. Students use a variety of representations (concrete, pictorial, numerical, symbolic, graphical, and verbal), tools, and technology (including, but not limited to, calculators with graphing capabilities, data collection devices, and computers) to model mathematical situations to solve meaningful problems. (a) Basic understandings. (6) Underlying mathematical processes. Many processes underlie all content areas in mathematics. As they do mathematics, students continually use problem-solving, language and communication, and reasoning (justification and proof) to make connections within and outside mathematics. Students also use multiple representations, technology, applications and modeling, and numerical fluency in problem-solving contexts.	(b) Introduction (2) The process standards describe ways in which students are expected to engage in the content. The placement of the process standards at the beginning of the knowledge and skills listed for each grade and course is intentional. The process standards weave the other knowledge and skills together so that students may be successful problem solvers and use mathematics efficiently and effectively in daily life. The process standards are integrated at every grade level and course. When possible, students will apply mathematics to problems arising in everyday life, society, and the workplace. Students will use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. Students will select appropriate tools such as real objects, manipulatives, paper and pencil, and technology and techniques such as mental math, estimation, and number sense to solve problems. Students will effectively communicate mathematical ideas, reasoning, and their implications using multiple representations such as symbols, diagrams, graphs, and language. Students will use mathematical relationships to generate solutions and make connections and predictions. Students will analyze mathematical relationships to connect and communicate mathematical ideas. Students will display, explain, or justify mathematical ideas and arguments using precise mathematical language in written or oral communication. (b) Introduction (4) Statements that contain the word “including” reference content that must be mastered, while those containing the phrase “such as” are intended as possible illustrative examples.	The 2012 paragraph occurs second in the Revised TEKS (2012), preceding the content descriptions. This highlights the student’s use of the mathematical process standards to acquire and demonstrate mathematical understanding.	

Content that is deleted by 2012 TEKS – Content that remains or is clarified in 2012 TEKS (● Stay) (●+Addition) (⭘ Deletion) Content that is new in 2012 TEKS +

	Old TEKS: Foundations for functions	Current TEKS (2012)	Supporting Information	Notes
–	A(1)(A) **Foundations for functions.** The student understands that a function represents a dependence of one quantity on another and can be described in a variety of ways. **The student is expected to describe independent and dependent quantities in functional relationships.**		Describing the relationship between independent and dependent quantities begins in grade 6: *Expressions, equations, and relationships* 6(6)(B) Though the content of this SE is explicitly removed, it is implicitly addressed as students represent functional relationships using function notation to communicate mathematical ideas. Students begin to explore the notion of independent and dependent variables through simple experimental investigations and testing single variables through the science SE 5(2)(A).	
◎	A(1)(B) **Foundations for functions.** The student understands that a function represents a dependence of one quantity on another and can be described in a variety of ways. **The student is expected to gather and record data and use data sets to determine functional relationships between quantities.**	A(12)(A) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to write, solve, analyze, and evaluate equations, relations and functions. **The student is expected to decide whether relations represented verbally, tabularly, graphically, and symbolically define a function.**	When paired with mathematical process standard A(1)(A), the expectation is that students gather and record data. The revised SE focuses on determining whether a functional relationship exists between quantities in a relation. Specificity regarding representations of the relations has been added. Given that a functional relationship exists, representing the relationship between quantities has moved to grade 8: *Proportionality* 8(4)(C) 8(5)(A) 8(5)(B)	
●+	A(1)(C) **Foundations for functions.** The student understands that a function represents a dependence of one quantity on another and can be described in a variety of ways. **The student is expected to describe functional relationships for given problem situations and write equations or inequalities to answer questions arising from the situations.**	A(4)(C) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards to formulate statistical relationships and evaluate their reasonableness based on real-world data. **The student is expected to write, with and without technology, linear functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems.**	Specificity has been added through differentiation by function. Writing equations that are a reasonable fit for data has been distributed among these three revised SEs. Questions may prompt students to estimate solutions and make predictions for real-world problems. Specificity regarding the use of technology has been added. When paired with mathematical process standard A(1)(C), the expectation is that students write functions using algebraic methods and technology.	

	Old TEKS: Foundations for functions	Current TEKS (2012)	Supporting Information	Notes
		A(2)(H) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to write linear inequalities in two variables given a table of values, a graph, and a verbal description.**	Specificity has been added regarding writing linear inequalities. The expectation is that students be able to translate a table of values, a graph, or a verbal description into an inequality. When paired with mathematical process standard A(1)(A), the expectation is that students write inequalities for questions arising from problem situations.	
●+	A(1)(C) **Foundations for functions**. The student understands that a function represents a dependence of one quantity on another and can be described in a variety of ways. **The student is expected to describe functional relationships for given problem situations and write equations or inequalities to answer questions arising from the situations.**	A(8)(B) **Quadratic functions and equations.** The student applies the mathematical process standards to solve, with and without technology, quadratic equations and evaluate the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. **The student is expected to write, using technology, quadratic functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems.**	The expectation is that students use tools involving regression.	
		A(9)(E) **Exponential functions and equations**. The student applies the mathematical process standards when using properties of exponential functions and their related transformations to write, graph, and represent in multiple ways exponential equations, and evaluate, with and without technology, the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. **The student is expected to write, using technology, exponential functions that provide a reasonable fit to data and make predictions for real-world problems.**	The revised SEs specify using technology to write quadratic and exponential functions that provide a reasonable fit to data.	

	Old TEKS: Foundations for functions	Current TEKS (2012)	Supporting Information	Notes
●	A(1)(D) **Foundations for functions.** The student understands that a function represents a dependence of one quantity on another and can be described in a variety of ways. **The student is expected to represent relationships among quantities using concrete models, tables, graphs, diagrams, verbal descriptions, equations, and inequalities.**	A(2)(C) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to write linear equations in two variables given a table of values, a graph, and a verbal description.** A(2)(H) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to write linear inequalities in two variables given a table of values, a graph, and a verbal description.** A(2)(I) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to write systems of two linear equations given a table of values, a graph, and a verbal description.**	The use of multiple representations for linear relationships begins in middle school: *Expressions, equations, and relationships* 6(6)(C) 7(7)(A) 8(5)(A) 8(5)(B) 8(5)(I) Expectations for student use of representations are described in the mathematical process standards. The expectation is that students use these representations to acquire and demonstrate mathematical understanding: A(1)(D), A(1)(E), and A(1)(G) The emphasis of the revised TEKS has shifted to writing equations and linear inequalities from multiple representations and writing equations given specified representations. A verbal description may be a mathematical description. When paired with the mathematical process standards, the verbal description may be a description of a real-world context. A table could consist of points which satisfy the inequality and points which do not. There is the potential for multiple correct answers.	
–	A(1)(E) **Foundations for functions.** The student understands that a function represents a dependence of one quantity on another and can be described in a variety of ways. **The student is expected to interpret and make decisions, predictions, and critical judgments from functional relationships.**		Though the specific language of this SE is explicitly removed, it is subsumed within A(1)(B), A(1)(D), and A(1)(G).	

	Old TEKS: Foundations for functions	Current TEKS (2012)	Supporting Information	Notes
●+	A(2)(A) **Foundations for functions.** The student uses the properties and attributes of functions. **The student is expected to identify and sketch the general forms of linear ($y = x$) and quadratic ($y = x^2$) parent functions.**	A(3)(E) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. **The student is expected to determine the effects on the graph of the parent function $f(x) = x$**		
		when $f(x)$ is replaced by $af(x)$, $f(x) + d$, $f(x - c)$, $f(bx)$ for specific values of a, b, c and d.	The revised SE extends the current SE by determining the effects of parameter changes on the parent function with horizontal transformations.	
		A(7)(C) **Quadratic functions, and equations.** The student applies the mathematical process standards when using graphs of quadratic functions and their related transformations to represent in multiple ways and determine, with and without technology, the solutions to equations. **The student is expected to determine the effects on the graph of the parent function $f(x) = x^2$**		
		when $f(x)$ is replaced by $af(x)$, $f(x) + d$, $f(x - c)$, $f(bx)$ for specific values of a, b, c and d.	The revised SE extends the current SE by determining the effects of parameter changes on the parent function with horizontal transformations.	

	Old TEKS: Foundations for functions	Current TEKS (2012)	Supporting Information	Notes
●	A(2)(B) **Foundations for functions.** The student uses the properties and attributes of functions. **The student is expected to identify mathematical domains and ranges and determine reasonable domain and range values for given situations, both continuous and discrete.**	A(2)(A) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to determine the domain and range of a linear function in mathematical problems; determine reasonable domain and range values for real-world situations, both continuous and discrete; and represent domain and range using inequalities.** A(6)(A) **Quadratic functions and equations.** The student applies the mathematical process standards when using properties of quadratic functions to write and represent in multiple ways, with and without technology, quadratic equations. **The student is expected to determine the domain and range of quadratic functions and represent the domain and range using inequalities.** A(9)(A) **Exponential functions, and equations.** The student applies the mathematical process standards when using properties of exponential functions and their related transformations to write, graph, and represent in multiple ways exponential equations, and evaluate, with and without technology, the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. **The student is expected to determine the domain and range of exponential functions of the form $f(x) = ab^x$ and represent the domain and range using inequalities.**	Specificity has been added for the current SE through differentiation by function. Identifying domain and range has been distributed among three revised SEs. Continuous and discrete situations are specified for linear functions. The expectation is that students represent domain and range using inequalities. Notation for domain and range is extended in Algebra II to include interval and set notation: *Number and algebraic methods* 2A(7)(I)	
–	A(2)(C) **Foundations for functions.** The student uses the properties and attributes of functions. **The student is expected to interpret situations in terms of given graphs or creates situations that fit given graphs.**		Though the specific language of this SE is explicitly removed, it is subsumed within A(1)(E), A(1)(F), and A(1)(G).	

Content that is deleted by 2012 TEKS – Content that remains or is clarified in 2012 TEKS (● Stay) (●+Addition) (⭘ Deletion) Content that is new in 2012 TEKS +

	Old TEKS: Foundations for functions	Current TEKS (2012)	Supporting Information	Notes
●+	A(2)(D) **Foundations for functions.** The student uses the properties and attributes of functions. **The student is expected to collect and organize data, make and interpret scatterplots (including recognizing positive, negative, or no correlation for data approximating linear situations), and model, predict, and make decisions and critical judgments in problem situations.**	A(4)(A) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards to formulate statistical relationships and evaluate their reasonableness based on real-world data. **The student is expected to calculate, using technology, the correlation coefficient between two quantitative variables and interpret this quantity as a measure of the strength of the linear association.**	Students will calculate, using technology, and interpret the correlation coefficient as a measure of the strength of linear association. Students may still be expected to use the language of positive, negative, and no correlation as they describe the strength of the linear association.	
		A(4)(B) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards to formulate statistical relationships and evaluate their reasonableness based on real-world data. **The student is expected to compare and contrast association and causation in real-world problems.**	Students are expected to compare and contrast associations within real-world situations and to compare and contrast causation and association.	
		A(4)(C) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards to formulate statistical relationships and evaluate their reasonableness based on real-world data. **The student is expected to write, with and without technology, linear functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems.**	In grade 8, students begin constructing and interpreting scatterplots of bivariate data as linear, non-linear, and having no association: *Measurement and data* 8(11)(A) When paired with mathematical process standards A(1)(A) and A(1)(E), the expectation is that students collect data in order to formulate lines of best fit. Writing linear functions with technology may include use of the calculator paired with the knowledge of linear transformations to model data or use of functionality that determines linear regression.	
–	A(3)(A) **Foundations for functions.** The student understands how algebra can be used to express generalizations and recognizes and uses the power of symbols to represent situations. **The student is expected to use symbols to represent unknowns and variables.**		The content of this SE was moved to several SEs in grades 5 through 8 including: *Algebraic reasoning* 5(4)(B) *Expressions, equations, and relationships* 6(6)(B) 6(6)(C) 7(10)(A) 7(11)(C) 8(8)(A)	

	Old TEKS: Foundations for functions	Current TEKS (2012)	Supporting Information	Notes
●+	A(3)(B) **Foundations for functions.** The student understands how algebra can be used to express generalizations and recognizes and uses the power of symbols to represent situations. **The student is expected to look for patterns and represent generalizations algebraically.**	A(12)(C) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to write, solve, analyze, and evaluate equations, relations and functions. **The student is expected to identify terms of arithmetic and geometric sequences when the sequences are given in function form using recursive processes.**	The revised SE extends to include functional representations and a recursive process to identify terms of arithmetic and geometric sequences.	
		A(12)(D) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to write, solve, analyze, and evaluate equations, relations and functions. **The student is expected to write a formula for the n^{th} term of arithmetic**	Specificity has been added to indicate writing "a formula for the n^{th} term" of sequences. A minimum of four terms of a sequence should be provided from which to generalize a formula. When paired with mathematical process standards A(1)(F) and A(1)(B), the expectation is that students look for patterns within and between paired values.	
		and geometric	The revised SE extends to include geometric sequences.	
		sequences, given the value of several of their terms.		
●+	A(4)(A) **Foundations for functions.** 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. **The student is expected to find specific function values, simplify polynomial expressions, transform and solve equations, and factor as necessary in problem situations.**	A(10)(A) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to rewrite in equivalent forms, and perform operations on, polynomial expressions. **The student is expected to add and subtract polynomials of degree one and degree two.**	Specificity has been added for simplifying polynomial expressions by differentiating by operations into A(10)(A), A(10)(B), and A(10)(C). Addition, subtraction, and multiplication of polynomials is limited to polynomials of degree one and degree two.	
		A(10)(B) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to rewrite in equivalent forms, and perform operations on, polynomial expressions. **The student is expected to multiply polynomials of degree one and degree two.**		

	Old TEKS: Foundations for functions	Current TEKS (2012)	Supporting Information	Notes
●+	A(4)(A) **Foundations for functions.** 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. **The student is expected to find specific function values, simplify polynomial expressions, transform and solve equations, and factor as necessary in problem situations.**	A(10)(C) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to rewrite in equivalent forms, and perform operations on, polynomial expressions. **The student is expected to determine the quotient of a polynomial of degree one and polynomial of degree two when divided by a polynomial of degree one and polynomial of degree two when the degree of the divisor does not exceed the degree of the dividend.**	Polynomial operations include division of polynomials limited to polynomials of degree one and degree two. The degree of the divisor may not exceed the degree of the dividend.	
		A(10)(D) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to rewrite in equivalent forms, and perform operations on, polynomial expressions. **The student is expected to rewrite polynomial expressions of degree one and degree two in equivalent forms using the distributive property.**	Specificity has been added describing application of the distributive property as a means of factoring. When paired with A(1)(C), students are expected to factor as necessary in problem situations. The degrees of the polynomial expressions have been limited to one and two degrees.	
		A(10)(E) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to rewrite in equivalent forms, and perform operations on, polynomial expressions. **The student is expected to factor, if possible, trinomials with real factors in the form $ax^2 + bx + c$, including perfect square trinomials of degree two.**	Students may be presented with a trinomial that cannot be factored. Factors should be real.	
		A(10)(F) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to rewrite in equivalent forms, and perform operations on, polynomial expressions. **The student is expected to decide if a binomial can be written as the difference of two squares and, if possible, use the structure of a difference of two squares to rewrite the binomial**.	Specificity has been added to include specific factored forms. The expectation is that students factor the greatest common factor from a polynomial, factor trinomials of the form ax^2+bx+c with real factors, factor perfect square trinomials, and factor binomials representing the difference of two squares.	

	Old TEKS: Foundations for functions	Current TEKS (2012)	Supporting Information	Notes
●+	A(4)(A) **Foundations for functions.** 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. **The student is expected to find specific function values, simplify polynomial expressions, transform and solve equations, and factor as necessary in problem situations**	A(12)(B) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to write, solve, analyze, and evaluate equations, relations, and functions. **The student is expected to evaluate functions, expressed in function notation, given one or more elements in their domains.**	Algebra I is the students' first exposure to function notation. Specificity was added to include that the relation will be expressed in function notation with one or more elements of the domain provided.	
		A(12)(E) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to write, solve, analyze, and evaluate equations, relations, and functions. **The student is expected to solve mathematic and scientific formulas, and other literal equations, for a specified variable.**	Specificity was added to include solving mathematic and scientific formulas and literal equations. The expectation is that students solve these equations for any of the variables within the equation. Transforming equations is subsumed within "solving."	
–	A(4)(B) **Foundations for functions.** 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. **The student is expected to use the commutative, associative, and distributive properties to simplify algebraic expressions.**		The content of this SE was moved to grade 6: *Expressions, equations, and relationships* 6(7)(D)	
–	A(4)(C) **Foundations for functions.** 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. **The student is expected to connect equation notation with function notation, such as $y = x + 1$ and $f(x) = x + 1$.**		When content standards related to functions and graphical representations are paired with mathematical process standard A(1)(D), the expectation is that students connect equation notation with function notation to communicate mathematical ideas. An example of a mathematical idea may be that when $f(x) = x+1$ is graphed, the ordered pair (2, 3) is equivalent to the representation $f(2)=3$.	

	Old TEKS: Linear functions	Current TEKS (2012)	Supporting Information	Notes
–	A(5)(A) **Linear functions.** The student understands that linear functions can be represented in different ways and translates among their various representations. **The student is expected to determine whether or not given situations can be represented by linear functions.**		The content of this SE was moved to grade 8: *Mathematical process standards* 8(1)(A) 8(1)(F) *Proportionality* 8(5)(C)	
●	A(5)(B) **Linear functions.** The student understands that linear functions can be represented in different ways and translates among their various representations. **The student is expected to determine the domain and range for linear functions in given situations.**	A(2)(A) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to determine the domain and range of a linear function in mathematical problems, determine reasonable domain and range values for real-world situations, both continuous and discrete and represent domain and range using inequalities.**	Specificity has been added for representations of domain and range. The expectation is that students represent domain and range using inequalities. Notation for domain and range is extended in Algebra II to include interval and set notation: *Number and algebraic methods* 2A(7)(I)	
–	A(5)(C) **Linear functions.** The student understands that linear functions can be represented in different ways and translates among their various representations. **The student is expected to use, translate, and make connections among algebraic, tabular, graphical, or verbal descriptions of linear functions.**		Expectations for student use of representations are described in the mathematical process standards. The expectation is that students use these representations to acquire and demonstrate mathematical understanding: A(1)(D), A(1)(E), and A(1)(G) A verbal description may be a mathematical description. When paired with the mathematical process standards, the verbal description may be a description of a real-world context.	

	Old TEKS: Linear functions	Current TEKS (2012)	Supporting Information	Notes
●	A(6)(A) **Linear functions.** The student understands the meaning of the slope and intercepts of the graphs of linear functions and zeros of linear functions and interprets and describes the effects of changes in parameters of linear functions in real-world and mathematical situations. **The student is expected to develop the concept of slope as rate of change and determine slopes from graphs, tables, and algebraic representations.**	A(3)(A) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. **The student is expected to determine the slope of a line given a table of values, a graph, two points on the line, and an equation written in various forms including $y = mx + b$, $Ax + By = C$, and $y - y_1 = m(x - x_1)$.**	Slope is introduced in grade 8 through the use of proportionality using similar triangles, making connections between slope and proportional relationships, and determining slope from tables and graphs in 8(4)(A), 8(4)(B), and 8(4)(C). Specificity has been added through identified specific forms of linear functions. Although specific forms are provided, the expectation is that students be able to manipulate any linear equation to identify key characteristics, such as slope and *y*-intercept. Specificity has been added regarding student demonstration of understanding of rate of change and its connection to slope through multiple representations.	
●		A(3)(B) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. **The student is expected to calculate the rate of change of a linear function represented tabularly, graphically, or algebraically in context of mathematical and real-world problems.**		
●	A(6)(B) **Linear functions.** The student understands the meaning of the slope and intercepts of the graphs of linear functions and zeros of linear functions and interprets and describes the effects of changes in parameters of linear functions in real-world and mathematical situations. **The student is expected to interpret the meaning of slope and intercepts in situations using data, symbolic representations, or graphs.**	A(3)(B) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. **The student is expected to calculate the rate of change of a linear function represented tabularly, graphically, and algebraically over a specified interval within mathematical and real-world problems.**	The revised SE focuses on calculating the rate of change and interpreting the rate of change for a linear function. When the revised SE is paired with the mathematical process standard A(1)(A), the expectation is that students interpret of the meaning of the intercepts of linear functions. The specified interval referenced in the revised SE refers to the limitations that may arise from the context of the problem. Piece-wise linear graphs could be provided for students to calculate and compare the rate of change over specified intervals of the graph. Students are not expected to write functions to represent these piece-wise linear graphs.	

	Old TEKS: Linear Functions	Current TEKS (2012)	Supporting Information	Notes
●+	A(6)(C) **Linear functions.** The student understands the meaning of the slope and intercepts of the graphs of linear functions and zeros of linear functions and interprets and describes the effects of changes in parameters of linear functions in real-world and mathematical situations. **The student is expected to investigate, describe, and predict the effects of changes in *m* and *b* on the graph of *y = mx + b*.**	A(3)(E) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. **The student is expected to determine the effects on the graph of the parent function *f(x) = x* when *f(x)* is replaced by *af(x)*, *f(x) + d*,**	The revised SE continues to address the effects of changes in the slope and *y*-intercept of a linear function but transitions students to examining linear function from the transformational approach that is used later in Algebra I with quadratic functions and extensively in Algebra II. The effect of changes in *m* has been replaced by *af*(*x*). The effect of changes in *b* has been replaced by *f*(*x*) + *d*. The expectation is that students apply combinations of transformation, such as *af*(*x*) + *d*, to the linear parent function.	
		***f(x – c)*, *f(bx)* for specific values of *a*, *b*, *c* and *d*.**	Recognizing the effects of the horizontal parameter changes of a linear function represented with function notation is new to Algebra I. The transformational approach to graphing functions is introduced in Algebra I with linear and quadratic and extended to additional functions in Algebra II.	
●+	A(6)(D) **Linear functions.** The student understands the meaning of the slope and intercepts of the graphs of linear functions and zeros of linear functions and interprets and describes the effects of changes in parameters of linear functions in real-world and mathematical situations. **The student is expected to graph and write equations of lines given characteristics such as two points, a point and a slope, or a slope and *y*-intercept.**	A(2)(B) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to write linear equations in two variables in various forms, including *y = mx + b*, *Ax + By = C*, and *y – y_1 = m(x – x_1)*, given one point and the slope and given two points.**	Specificity has been added regarding the forms of linear equations. When writing linear equations, students are expected to use the form which makes the most sense for the given information. Students are also expected to be able to manipulate the results to the other forms. For example, when provided a point and the slope of the line, using the form $y - y_1 = m(x - x_1)$ may be more efficient. The slope of the line and a point on the line could be provided explicitly or implicitly.	

	Old TEKS: Linear functions	Current TEKS (2012)	Supporting Information	Notes
●+	A(6)(D) **Linear functions.** The student understands the meaning of the slope and intercepts of the graphs of linear functions and zeros of linear functions and interprets and describes the effects of changes in parameters of linear functions in real-world and mathematical situations. **The student is expected to graph and write equations of lines given characteristics such as two points, a point and a slope, or a slope and *y*-intercept.**	A(2)(C) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to write linear equations in two variables given a table of values, a graph, and a verbal description.**	For example, providing both the *x*- and *y*-intercept is sufficient to write the equation of the line, as the values needed to determine slope and a point on the line are implicit within the intercepts.	
		A(2)(E) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to write the equation of a line that contains a given point and is parallel to a given line.**	The revised SEs extend to include the use of parallel and perpendicular relationships between the slopes as a means for determining the slope of a line. In previous grades, students were introduced to slope and the meaning of parallel and perpendicular. The relationship between the slopes of two lines that are parallel or perpendicular will be new. The revised SEs build to G(2)(B), where students verify geometric relationships, including parallel and perpendicular lines of geometric figures on a coordinate plane. The revised SE explicitly states to include lines parallel and perpendicular to lines with a slope of zero or an undefined slope.	
		A(2)(F) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to write the equation of a line that contains a given point and is perpendicular to a given line.**		
		A(2)(G) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to write an equation of a line that is parallel or perpendicular to the *x*- or *y*-axis, and determine whether the slope of the line is zero or undefined.**		

	Old TEKS: Linear functions	Current TEKS (2012)	Supporting Information	Notes
●	A(6)(E) **Linear functions.** The student understands the meaning of the slope and intercepts of the graphs of linear functions and zeros of linear functions and interprets and describes the effects of changes in parameters of linear functions in real-world and mathematical situations. **The student is expected to determine the intercepts of the graphs of linear functions and zeros of linear functions from graphs, tables, and algebraic representations.**	A(3)(C) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. **The student is expected to graph linear functions on the coordinate plane and identify key features including *x*-intercept, *y*-intercept, zeros, and slope in mathematical and real-world problems.**	When paired with mathematical process standards A(1)(D) and A(1)(E), the expectation is that students graph linear functions from each of the multiple representations, including tables and algebraic representations, and to connect the key features to the multiple representations.	
●	A(6)(F) **Linear functions.** The student understands the meaning of the slope and intercepts of the graphs of linear functions and zeros of linear functions and interprets and describes the effects of changes in parameters of linear functions in real-world and mathematical situations. **The student is expected to interpret and predict the effects of changing slope and y-intercept in applied situations.**	A(3)(E) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. **The student is expected to determine the effects on the graph of the parent function $f(x) = x$ when $f(x)$ is replaced by $af(x)$, $f(x) + d$, $f(x - c)$, and $f(bx)$ for specific values of a, b, c, and d.**	With the revised SE, the expectation is that students determine changes in slope and y-intercept using a transformational approach and function notation. When paired with mathematical process standard A(1)(A) and A(1)(D), students are expected to examine the effects of parameter changes on graphs representing applied situations as well as the effects of parameter changes depicted through multiple representations. Interpreting and predicting have been subsumed with determining.	
●	A(6)(G) **Linear functions.** The student understands the meaning of the slope and intercepts of the graphs of linear functions and zeros of linear functions and interprets and describes the effects of changes in parameters of linear functions in real-world and mathematical situations. **The student is expected to relate direct variation to linear functions and solve problems involving proportional change.**	A(2)(D) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to write and solve equations involving direct variation.**	The expectation is that students represent and solve problems involving proportional relationships including finding the constant of proportionality in grade 7: *Proportionality* 7(4)(A) 7(4)(B) 7(4)(C) 7(4)(D)	

	Old TEKS: Linear functions	Current TEKS (2012)	Supporting Information	Notes
–	A(7)(A) **Linear functions.** The student formulates equations and inequalities based on linear functions, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation. **The student is expected to analyze situations involving linear functions and formulate linear equations or inequalities to solve problems.**		The content of this SE was moved to grade 8: *Patterns, relationships, and algebraic thinking* 8(5)(A) 8(5)(B) 8(5)(I) *Expressions, equations, and relationships* 8(8)(A) 8(8)(B)	
●	A(7)(B) **Linear functions.** The student formulates equations and inequalities based on linear functions, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation. **The student is expected to investigate methods for solving linear equations and inequalities using concrete models, graphs, and the properties of equality, select a method, and solve the equations and inequalities.**	A(3)(D) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. **The student is expected to graph the solution set of linear inequalities in two variables on the coordinate plane.**	The expectation is that students determine the region of the graph that represents the solution of inequalities. The expectation is that students determine if a point satisfies the inequality.	
		A(5)(A) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards to solve, with and without technology, linear equations and evaluate the reasonableness of their solutions. **The student is expected to solve linear equations in one variable, including those for which the application of the distributive property is necessary and includes variables on both sides.**	The revised SE separates the inequalities and the equations into two different SEs. The expectation is that students use the distributive property to generate equivalent expressions in grade 6. *Expressions, equations, and relationships* 6(7)(D) The expectation is that students solve linear equations with variables on both sides in grade 8.	

	Old TEKS: Linear functions	Current TEKS (2012)	Supporting Information	Notes
		A(5)(B) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards to solve, with and without technology, linear equations and evaluate the reasonableness of their solutions. **The student is expected to solve linear inequalities in one variable, including those for which the application of the distributive property is necessary and for which variables are included on both sides.**	*Expressions, equations, and relationships* 8(8)(C) The revised SE builds on solving linear equations from grades 6, 7, and 8: *Expressions, equations, and relationships* 6(10)(A) 7(10)(A) 7(10)(B) 7(10)(C) 8(8)(A) 8(8)(B) 8(8)(C) The revised SE does not specify the methods for solving equations and inequalities. When paired with the mathematical process standards A(1)(C) and A(1)(D), students are expected to use manipulatives, concrete models, graphs, and properties of equality to solve linear equations and inequalities.	
–	A(7)(C) **Linear functions.** The student formulates equations and inequalities based on linear functions, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation. **The student is expected to interpret and determine the reasonableness of solutions to linear equations and inequalities.**		Though the content of this SE is explicitly removed, it is implicitly addressed through A(1)(B) and A(1)(G). When instruction integrates A(1)(B) and A(1)(G) with other content standards, students may be asked to evaluate a solution for reasonableness.	
●	A(8)(A) **Linear functions.** The student formulates systems of linear equations from problem situations, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation. **The student is expected to analyze situations and formulate systems of linear equations in two unknowns to solve problems.**	A(2)(I) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to write systems of two linear equations given a table of values, a graph, and a verbal description.**	The revised SE builds on writing linear equations in grade 8. *Proportionality* 8(5)(I) When paired with the mathematical process standard A(1)(A), the expectation is that students analyze situations to solve problems involving systems of two linear equations. Writing systems of equations is extended to writing a system of inequalities in two variables and writing systems of equations with three variables in Algebra II.	

	Old TEKS: Linear functions	Current TEKS (2012)	Supporting Information	Notes
		A(3)(F) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. **The student is expected to graph systems of two linear equations in two variables on the coordinate plane and determine the solutions if they exist.**	The revised SE builds on recognizing the point of intersection as a point which satisfies both of the graphed linear equations in grade 8. *Expressions, equations, and relationships* 8(9)(A)	
●	A(8)(B) **Linear functions.** The student formulates systems of linear equations from problem situations, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation. **The student is expected to solve systems of linear equations using concrete models, graphs, tables, and algebraic methods.**	A(3)(G) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. **The student is expected to estimate graphically the solutions to systems of two linear equations with two variables in real-world problems.**	Students are expected to use the scales on the graph and estimate the solution. The coordinates of the solution may be rational numbers. Scales on the graphs may include rational numbers.	
●	A(8)(B) **Linear functions.** The student formulates systems of linear equations from problem situations, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation. **The student is expected to solve systems of linear equations using concrete models, graphs, tables, and algebraic methods.**	A(5)(C) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards to solve, with and without technology, linear equations and evaluate the reasonableness of their solutions. **The student is expected to solve systems of two linear equations with two variables for mathematical and real-world problems.**	The revised SE builds on solving linear equations from grades 6, 7, and 8. *Expressions, equations, and relationships* 6(10)(A) 7(10)(A) 7(10)(B) 7(10)(C) 8(8)(A) 8(8)(B) 8(8)(C) Solution methods may include substitution, elimination, and graphing. When paired with the mathematical process standard A(1)(B), students are expected to verify their solution. When paired with the mathematical process standard A(1)(C), students are expected to use tools such as concrete models to solve the problems. When paired with A(1)(G), students are expected to justify their solution.	

	Old TEKS: Linear functions	Current TEKS (2012)	Supporting Information	Notes
–	A(8)(C) **Linear functions.** The student formulates systems of linear equations from problem situations, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation. **The student is expected to interpret and determine the reasonableness of solutions to systems of linear equations.**		Though the content of this SE is explicitly removed, it is implicitly addressed through A(1)(B) and A(1)(G). When instruction integrates A(1)(B) and A(1)(G) with other content standards, students may be asked to evaluate a solution for reasonableness.	
+		A(2)(H) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using properties of linear functions to write and represent in multiple ways, with and without technology, linear equations, inequalities, and systems of equations. **The student is expected to write linear inequalities in two variables given a table of values, a graph, and a verbal description.**	The revised SE extends using one-variable inequalities to solve problems from grade 8. *Expressions, equations, and relationships* 8(8)(A) 8(8)(B) When paired with mathematical process standard A(1)(A), the expectation is that students write linear inequalities for real-world contexts. Verbal descriptions may include mathematical descriptions. A table could consist of points which satisfy the inequality and points which do not. There is the potential for multiple correct answers.	
+		A(3)(H) **Linear functions, equations, and inequalities.** The student applies the mathematical process standards when using graphs of linear functions, key features, and related transformations to represent in multiple ways and solve, with and without technology, equations, inequalities, and systems of equations. **The student is expected to graph the solution set of systems of two linear inequalities in two variables on the coordinate plane.**	The expectation is that students determine the region of the graph that represents the solution to the systems of inequalities. The expectation is that students determine if a point satisfies the system of inequalities. The revised SE extends to formulating a system of inequalities for a given situation in Algebra II.	

	Old TEKS: Quadratic and other nonlinear functions	Current TEKS (2012)	Supporting Information	Notes
●	A(9)(A) **Quadratic and other nonlinear functions.** The student understands that the graphs of quadratic functions are affected by the parameters of the function and can interpret and describe the effects of changes in the parameters of quadratic functions. **The student is expected to determine the domain and range for quadratic functions in given situations.**	A(6)(A) **Quadratic functions and equations.** The student applies the mathematical process standards when using properties of quadratic functions to write and represent in multiple ways, with and without technology, quadratic equations. **The student is expected to determine the domain and range of quadratic functions and represent the domain and range using inequalities.**	When paired with the mathematical process standard A(1)(A), students will determine the domain and range of a quadratic function for a given situation. Specificity has been provided with writing the domain and range as inequalities. Notation is extended to include interval notation and set notation in Algebra II.	
●+	A(9)(B) **Quadratic and other nonlinear functions.** The student understands that the graphs of quadratic functions are affected by the parameters of the function and can interpret and describe the effects of changes in the parameters of quadratic functions. **The student is expected to investigate, describe, and predict the effects of changes in *a* on the graph of $y = ax^2 + c$.**	A(7)(C) **Quadratic functions, and equations.** The student applies the mathematical process standards when using graphs of quadratic functions and their related transformations to represent in multiple ways and determine, with and without technology, the solutions to equations. **The student is expected to determine the effects on the graph of the parent function $f(x) = x^2$ when $f(x)$ is replaced by $af(x)$, $f(x) + d$,**	The effect of changes in *a* has been replaced by $af(x)$. The use of function notation and transformations builds the foundation for transformations of other functions in Algebra II.	
	A(9)(C) **Quadratic and other nonlinear functions.** The student understands that the graphs of quadratic functions are affected by the parameters of the function and can interpret and describe the effects of changes in the parameters of quadratic functions. **The student is expected to investigate, describe, and predict the effects of changes in c on the graph of $y = ax^2 + c$.**	**$f(x - c)$, $f(bx)$ for specific values of *a*, *b*, *c* and *d*.**	The revised SE continues to address the effects of changes of a and c, and transitions students to examining quadratic functions from the transformational approach, that is used later in Algebra II with other functions. The revised SE is an extension of the current SE related to transformations of quadratic functions. The expectation is that students analyze quadratic functions from a transformational perspective, comparing the effects af(x) and f(bx) in the different representations of the function. Graphs may include horizontal and vertical shifts, horizontal and vertical stretches and compressions, and reflections. Transformations with quadratic functions are not explicitly addressed in Algebra II TEKS. Algebra II will extend transformations to other functions.	

	Old TEKS: Quadratic and other nonlinear functions	Current TEKS (2012)	Supporting Information	Notes
●	A(9)(D) **Quadratic and other nonlinear functions.** The student understands that the graphs of quadratic functions are affected by the parameters of the function and can interpret and describe the effects of changes in the parameters of quadratic functions. **The student is expected to analyze graphs of quadratic functions and draw conclusions.**	A(7)(A) **Quadratic functions and equations.** The student applies the mathematical process standards when using graphs of quadratic functions and their related transformations to represent in multiple ways and determine, with and without technology, the solutions to equations. **The student is expected to graph quadratic functions on the coordinate plane and use the graph to identify key attributes, if possible, including *x*-intercept, *y*-intercept, zeros, maximum value, minimum values,**	Specificity has been added by listing some of the attributes of a quadratic function. When mathematical process standards A(1)(E) and A(1)(F) are paired with other content standards, students are expected to analyze graphs of quadratic functions to draw conclusions. The graphing of a quadratic function may occur as a result of a transformation.	
		vertex, and the equation of the axis of symmetry.	Students could be given points or attributes to define a quadratic function and be asked to identify additional attributes of that quadratic function.	
●	A(10)(A) **Quadratic and other nonlinear functions.** The student understands there is more than one way to solve a quadratic equation and solves them using appropriate methods. **The student is expected to solve quadratic equations using concrete models, tables, graphs, and algebraic methods.**	A(8)(A) **Quadratic functions, and equations.** The student applies the mathematical process standards to solve, with and without technology, quadratic equations and evaluate the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. **The student is expected to solve quadratic equations having real solutions by factoring, taking square roots, completing the square, and applying the quadratic formula.**	Specificity has been provided with the algebraic methods used to solve quadratic equations. When paired with mathematical process standards A(1)(C) and A(1)(D), students are expected to solve quadratic equations using concrete models, tables, and graphs. The revised SE extends to include imaginary solutions and quadratic inequalities in Algebra II.	

	Old TEKS: Quadratic and other nonlinear functions	Current TEKS (2012)	Supporting Information	Notes
●	A(10)(B) **Quadratic and other nonlinear functions.** The student understands there is more than one way to solve a quadratic equation and solves them using appropriate methods. **The student is expected to make connections among the solutions (roots) of quadratic equations, the zeros of their related functions, and the horizontal intercepts (x-intercepts) of the graph of the function.**	A(7)(B) **Quadratic functions, and equations.** The student applies the mathematical process standards when using graphs of quadratic functions and their related transformations to represent in multiple ways and determine, with and without technology, the solutions to equations. **The student is expected to describe the relationship between the linear factors of quadratic expressions and the zeros of their associated quadratic functions.**	Academic language now includes "linear factors." When paired with mathematical process standards A(1)(D), A(1)(E), and A(1)(F), the expectation is that students use multiple representations to describe the connections between the linear factors and the zeros of the associated quadratic functions.	
●+	A(11)(A) **Quadratic and other nonlinear functions.** The student understands there are situations modeled by functions that are neither linear nor quadratic and models the situations. **The student is expected to use patterns to generate the laws of exponents and apply them in problem-solving situations.**	A(11)(B) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to rewrite algebraic expressions into equivalent forms. **The student is expected to simplify numeric and algebraic expressions using the laws of exponents, including integral and rational exponents.**	Simplifying expressions involving exponents has been moved to the Number and Algebraic Methods strand. When paired with mathematical process standards A(1)(A), apply the laws of exponents in problem-solving situations. Specificity regarding the types of exponents has been provided. The revised SE extends to solving equations with rational exponents in Algebra II.	
–	A(11)(B) **Quadratic and other nonlinear functions.** The student understands there are situations modeled by functions that are neither linear nor quadratic and models the situations. **The student is expected to analyze data and represent situations involving inverse variation using concrete models, tables, graphs, or algebraic methods.**		The content of this SE was moved to Algebra II and is subsumed within: *Cubic, cube root, absolute value and rational functions, equations, and inequalities* 2A(6)(G) 2A(6)(L)	

	Old TEKS: Quadratic and other nonlinear functions	Current TEKS (2012)	Supporting Information	Notes
		A(9)(B) **Exponential functions and equations.** The student applies the mathematical process standards when using properties of exponential functions and their related transformations to write, graph, and represent in multiple ways exponential equations and evaluate, with and without technology, the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. **The student is expected to interpret the meaning of the values of *a* and *b* in exponential functions of the form $f(x) = ab^x$ in real-world problems.**	The content of the current SE has been split into four SEs.	
●	A(11)(C) **Quadratic and other nonlinear functions.** The student understands there are situations modeled by functions that are neither linear nor quadratic and models the situations. **The student is expected to analyze data and represent situations involving exponential growth and decay using concrete models, tables, graphs, or algebraic methods.**	A(9)(C) **Exponential functions and equations.** The student applies the mathematical process standards when using properties of exponential functions and their related transformations to write, graph, and represent in multiple ways exponential equations and evaluate, with and without technology, the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. **The student is expected to write exponential functions in the form $f(x) = ab^x$ (where *b* is a rational number) to describe problems arising from mathematical and real-world situations, including growth and decay.**	Specificity has been added to "algebraic methods" to include interpreting the meaning of the values of *a* and *b* as well as writing functions in the form $f(x)=ab^x$ (where *b* is a rational number).	
		A(9)(D) **Exponential functions, and equations.** The student applies the mathematical process standards when using properties of exponential functions and their related transformations to write, graph, and represent in multiple ways exponential equations and evaluate, with and without technology, the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. **The student is expected to graph exponential functions that model growth and decay and identify key features, including *y*-intercept and asymptote, in mathematical and real-world problems.**	Specificity has been added to graphical representations of exponential growth and decay to include key features such as the *y*-intercept and asymptote. Specificity has been provided to use technology to write exponential functions.	

	Old TEKS: Quadratic and other nonlinear functions	Current TEKS (2012)	Supporting Information	Notes
●	A(11)(C) **Quadratic and other nonlinear functions.** The student understands there are situations modeled by functions that are neither linear nor quadratic and models the situations. **The student is expected to analyze data and represent situations involving exponential growth and decay using concrete models, tables, graphs, or algebraic methods.**	A(9)(E) **Exponential functions and equations**. The student applies the mathematical process standards when using properties of exponential functions and their related transformations to write, graph, and represent in multiple ways exponential equations and evaluate, with and without technology, the reasonableness of their solutions. The student formulates statistical relationships and evaluates their reasonableness based on real-world data. **The student is expected to write, using technology, exponential functions that provide a reasonable fit to data and make predictions for real-world problems.**	The revised SE extends to solving exponential equations algebraically in Algebra II. When paired with mathematical process standards A(1)(C) and A(1)(D), the expectation is that students use concrete models and tables as problem-solving tools.	
+		A(6)(B) **Quadratic functions and equations.** The student applies the mathematical process standards when using properties of quadratic functions to write and represent in multiple ways, with and without technology, quadratic equations. **The student is expected to write equations of quadratic functions given the vertex and another point on the graph, write the equation in vertex form ($f(x) = a(x - h)^2 + k$), and rewrite the equation from vertex form to standard form ($f(x) = ax^2 + bx + c$).**	The revised SE does not expect students to complete the square to rewrite a quadratic equation from standard form to vertex form. The revised SE extends to rewriting from standard form to vertex form in Algebra II.	
+		A(6)(C) **Quadratic functions and equations.** The student applies the mathematical process standards when using properties of quadratic functions to write and represent in multiple ways, with and without technology, quadratic equations. **The student is expected to write quadratic functions when given real solutions and graphs of their related equations.**	The revised SE is closely related to revised SE A(7)(B). Both the real solutions and the graph are required to determine a unique quadratic function. The revised SE extends to writing quadratic functions from any three points in Algebra II.	
+		A(11)(A) **Number and algebraic methods.** The student applies the mathematical process standards and algebraic methods to rewrite algebraic expressions into equivalent forms. **The student is expected to simplify numerical radical expressions involving square roots.**	The revised SE extends to simplifying algebraic expressions involving radical functions in Algebra II.	

Old TEKS	Current TEKS (2012): Mathematical process standards	Supporting Information	Notes
+	A(1)(A) **Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. **The student is expected to apply mathematics to problems arising in everyday life, society, and the workplace.**	The focus is on application in three areas: everyday life, society, and the workplace. This SE, when paired with a revised content SE, allows for increased relevance through connections within and outside mathematics. *Example*: When paired with revised content SE A(4)(B), the expectation is that students analyze data to compare and contrast association and causation in real-world situations as well as mathematical situations.	
+	A(1)(B) **Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. **The student is expected to use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution**.	This process standard provides continuity through application of the same problem-solving model included in the TEKS for kindergarten through grade 8.	
+	A(1)(C) **Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. **The student is expected to select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.**	The phrase "as appropriate" indicates that students are assessing which tool and techniques to apply rather than trying only one or all of those listed. *Example*: When paired with revised content SE A(5)(C), the student is expected to choose an appropriate tool and technique to solve a system of equations.	

Old TEKS	Current TEKS (2012): Mathematical process standards	Supporting Information	Notes
+	A(1)(D) **Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. **The student is expected to communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.**	Student communication is expected to address three areas: mathematical ideas, reasoning, and implications of these ideas and reasoning. Specificity is added to the means of communication. Communication can be through the use of symbols, diagrams, graphs, or language. The phrase "as appropriate" implies that students are assessing which communication tool to apply rather than trying only one or all of those listed. The use of multiple representations includes translating and making connections among the representations. *Example*: When paired with revised content SE A(7)(B), the student is expected to communicate the relationship between linear factors of quadratic expressions and the zeros of their associated quadratic functions using symbols, graphs, and language as appropriate.	
+	A(1)(E) **Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. **The student is expected to create and use representations to organize, record, and communicate mathematical ideas.**	The expectation is that students use representations for three purposes: to organize, record, and communicate mathematical ideas. Representations include verbal, graphical, tabular, and algebraic representations As students create and use representations, they will evaluate the effectiveness of their representations to ensure that they are communicating mathematical ideas with clarity. *Example*: When paired with revised SE A(4)(C), the expectation is that students create and use tables or graphs in order to organize data, determine an algebraic model that fits the data, and communicate the implications of the data and their model.	

Old TEKS	Current TEKS (2012): Mathematical process standards	Supporting Information	Notes
+	A(1)(F) **Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. **The student is expected to analyze mathematical relationships to connect and communicate mathematical ideas.**	The expectation is that students analyze relationships and form connections with mathematical ideas. Students may form conjectures about mathematical representations based on patterns or sets of examples and non-examples. Forming connections with mathematical ideas extends past conjecturing to include verification through a deductive process. *Example*: When paired with revised SE A(12)(D), the expectation is that students look for the mathematical relationship between the terms of a sequence to determine patterns that connect to mathematical ideas and algebraic generalizations.	
+	A(1)(G) **Mathematical process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. **The student is expected to display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.**	The expectation is that students speak and write with precise mathematical language to explain and justify their thinking. This includes justifying a solution. *Example*: When paired with revised SE A(7)(C), the expectation is that students will write or discuss the mathematical relationship between linear factors of quadratic expressions and the zeros of their associated quadratic functions using precise mathematical language.	