

Archdiocese of Washington Algebra Standards

Suggested Learning Objectives

Scaled Score values of 5450 or smaller

Seeing Structure in Expressions	Arithmetic with Polynomials and Rational Expressions	Creating Equations	Reasoning with Equations and Inequalities	Interpreting Functions	Building Functions	Linear and Exponential Models	Trigonometric Functions
<ul style="list-style-type: none"> The learner will evaluate expressions. (*) The learner will create and evaluate algebraic expressions from a given situation. (*) The learner will find the nth term in a sequence. (CCSS.Math.Content.HSF-BF.A.2) 	<ul style="list-style-type: none"> The learner will factor the difference of two squares. (CCSS.Math.Content.HSA-SSE.B.3.a) 	<ul style="list-style-type: none"> The learner will perform conversions between variable expressions and word phrases. (*) The learner will determine the correct equation for a word problem and solve. (CCSS.Math.Content.HSA-CED.A.1) 	<ul style="list-style-type: none"> The learner will explain each step in solving a simple equation. (CCSS.Math.Content.HSA-REI.A.1/CCSS.Math.Content.HSA-REI.B.3) The learner will obtain solutions to one-step linear equations. (CCSS.Math.Content.8.EE.C.7.b/CCSS.Math.Content.HSA-REI.B.3) 	<ul style="list-style-type: none"> The learner will graph exponential functions showing end behavior. (CCSS.Math.Content.HSF-IF.C.7.e) The learner will graph trigonometric functions showing midline. (CCSS.Math.Content.HSF-IF.C.7.e) 	<ul style="list-style-type: none"> The learner will determine a function rule to explain tables of related input-output variables. (CCSS.Math.Content.8.F.A.1) 	<ul style="list-style-type: none"> The learner will solve exponential equations. (*) 	

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<ul style="list-style-type: none"> The learner will view the individual parts of expressions as distinct entities. (CCSS.Math.C content.HSA-SSE.A.1.a/CCSS.Math.Content.HSA-SSE.A.1.b) The learner will combine like terms in order to simplify an expression. (*) The learner will expand quadratic expressions. (*) 		<ul style="list-style-type: none"> The learner will rearrange formulas to better solve for one of the quantities. (CCSS.Math.C content.HSA-CED.A.4) The learner will graph equations of the form $y = c$ and $x = c$. (CCSS.Math.C content.HSA-CED.A.2/CCSS.Math.Content.HSA-REI.D.10) The learner will solve a real-world problem by interpreting the solution to a system of linear inequalities. (*) 	<ul style="list-style-type: none"> The learner will solve rational equations. (CCSS.Math.C content.HSA-REI.A.2) The learner will solve and explain two-step equations involving whole numbers using inverse operations. (CCSS.Math.C content.HSA-REI.A.1) The learner will obtain solutions to multiple-step equations with one variable. (CCSS.Math.Content.8.EE.C.7.b / CCSS.Math.Content.HSA-REI.B.3/MA.PA.AF.1) 	<ul style="list-style-type: none"> The learner will use a table representing a function to find the average rate of change of over a given interval. (CCSS.Math.C content.HSF-IF.B.6) The learner will create a graph given a description or an expression for a situation involving a linear or nonlinear relationship. (MA.PA.AF.8/MA.PA.AF.10) 			

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			<ul style="list-style-type: none"> The learner will solve real-world inequalities. (CCSS.Math.C ontent.HSA-REI.B.3) The learner will solve linear equations in one variable including those with variables for coefficients. (CCSS.Math.C ontent.HSA-REI.B.3) The learner will use inspection to solve quadratic equations. (CCSS.Math.C ontent.HSA-REI.B.4.b) 	<ul style="list-style-type: none"> The learner will graph trigonometric functions showing amplitude. (CCSS.Math.C ontent.HSF-IF.C.7.e) The learner will graph exponential functions. (CCSS.Math.C ontent.HSF-IF.C.7.e) 			

Scaled Score values from 5451 to 5500

Seeing Structure in Expressions	Arithmetic with Polynomials and Rational Expressions	Creating Equations	Reasoning with Equations and Inequalities	Interpreting Functions	Building Functions	Linear and Exponential Models	Trigonometric Functions
<ul style="list-style-type: none"> The learner will simplify exponential expressions. (CCSS.Math.Content.HSA-SSE.B.3.c) The learner will divide radical expressions. (*) 	<ul style="list-style-type: none"> The learner will multiply or divide monomials. (*) The learner will perform addition and/or subtraction of polynomials. (CCSS.Math.Content.HSA-APR.A.1) The learner will multiply two polynomials. (CCSS.Math.Content.HSA-APR.A.1) The learner will multiply two binomials of the first degree resulting in a trinomial. (CCSS.Math.Content.HSA-APR.A.1) 	<ul style="list-style-type: none"> The learner will graph equations to represent the relationship between two quantities. (CCSS.Math.Content.HSA-CED.A.2/MA.PA.AF.9) The learner will use linear equations in one variable to solve problems. (CCSS.Math.Content.HSF-LE.A) 	<ul style="list-style-type: none"> The learner will graphically represent systems of equations and identify the solution from the graph. (CCSS.Math.Content.8.EE.C.8.a/CCSS.Math.Content.8.EE.C.8.b/CCSS.Math.Content.HSA-REI.C.6/CCSS.Math.Content.HSA-REI.D.11/MA.PA.AF.3) The learner will solve a real-world application problem including an exponential function. (CCSS.Math.Content.HSF-LE.A) 	<ul style="list-style-type: none"> The learner will describe a situation involving relationships that matches a given graph. (CCSS.Math.Content.8.F.B.5/MA.PA.AF.8) The learner will graph a polynomial function that represents a real-world application. (*) The learner will graph a polynomial function. (CCSS.Math.Content.HSF-IF.C.7.c) 	<ul style="list-style-type: none"> The learner will write a rule for a sequence to describe a real-world application. (CCSS.Math.Content.HSF-BF.A.1.a) The learner will solve and write the inverse of simple functions. (CCSS.Math.Content.HSF-BF.B.4/CCSS.Math.Content.HSF-BF.B.4.a) The learner will generate a sequence rule. (CCSS.Math.Content.HSF-IF.A.3/CCSS.Math.Content.HSF-BF.A.2) 	<ul style="list-style-type: none"> The learner will recognize situations that have a constant percent growth as its rate of change. (CCSS.Math.Content.HSF-LE.A.1.c) The learner will find a set of ordered pairs to satisfy a given linear numerical pattern (expressed algebraically); then plot the ordered pairs and draw the line. (*) 	<ul style="list-style-type: none"> The learner will understand the basic method of restricting a domain in order to find the inverse of a trigonometric function. (CCSS.Math.Content.HSF-TF.B.6/CCSS.Math.Content.HSF-TF.B.7)

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	<ul style="list-style-type: none"> The learner will simplify rational expressions. (CCSS.Math.C content.HSA-APR.D.6) The learner will multiply a monomial and a polynomial. (CCSS.Math.C content.HSA-APR.A.1) 	<ul style="list-style-type: none"> The learner will write equations based on word problems. (CCSS.Math.C content.HSA-CED.A.2/CCSS.Math.Content.HSF-LE.A.2/MA.PA.AF.7) The learner will create equations in more than one variable to represent relationships between quantities. (CCSS.Math.C content.HSA-CED.A.2) The learner will write linear equations. (CCSS.Math.Content.HSA-CED.A.1/MA.PA.AF.7) 	<ul style="list-style-type: none"> The learner will solve inequalities using basic operations. (CCSS.Math.C content.HSA-REI.B.3) The learner will solve a system of two equations with two variables through substitution. (CCSS.Math.C content.8.EE.C.8.b/CCSS.Math.Content.HSA-REI.C.6/MA.PA.AF.3) The learner will graph inequalities which have two variables. (CCSS.Math.C content.HSA-REI.D.12) 	<ul style="list-style-type: none"> The learner will graph absolute value equations on the coordinate plane. (CCSS.Math.C content.HSF-IF.C.7.b) The learner will interpret function notation in real-world problems. (CCSS.Math.Content.HSF-IF.A.2/CCSS.Math.Content.HSF-IF.B.4) The learner will use the zeros of factored polynomials to graph a function. (CCSS.Math.Content.HSF-IF.C.7.c/CCSS.Math.Content.HSA-APR.B.3) 	<ul style="list-style-type: none"> The learner will complete function tables. (CCSS.Math.C content.8.F.A.1) 	<ul style="list-style-type: none"> The learner will use a given graph to construct a linear function. (CCSS.Math.C content.HSF-LE.A.2) The learner will determine the significance of parameters in a real-world situation that can be represented with an exponential function. (CCSS.Math.C content.HSF-LE.B.5) 	

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		<ul style="list-style-type: none"> The learner will determine the equation to be used in solving a word problem. (CCSS.Math.C ontent.HSA-CED.A.1) The learner will solve a real-world problem by interpreting the solution to a system of linear equations. (CCSS.Math.C ontent.HSA-REI.C.6) 	<ul style="list-style-type: none"> The learner will use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x - p)^2 = q$ that has the same solutions. (CCSS.Math.C ontent.HSA-REI.B.4.a) The learner will solve quadratic equations with two variables by graphing. (CCSS.Math.C ontent.HSF-IF.C.7.a) 	<ul style="list-style-type: none"> The learner will factor polynomial functions to find the zeros and asymptotes. (CCSS.Math.C ontent.HSA-APR.B.3) The learner will determine the significance of the slope and the constant term of a linear function. (CCSS.Math.C ontent.8.F.A.3 /MA.PA.AF.6) 		<ul style="list-style-type: none"> The learner use graphs to identify that exponential functions eventually exceed polynomial functions including linear and quadratic functions. (CCSS.Math.C ontent.HSF-LE.A.3) The learner will use a given description of a relationship to construct a linear function. (CCSS.Math.C ontent.HSF-LE.A.2) 	

Scaled Score values from 5501 to 5550

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<ul style="list-style-type: none"> The learner will multiply radical expressions. (*) The learner will find the nth term in a series. (CCSS.Math.C content.HSA-SSE.B.4) The learner will rationalize the denominator of a rational expression. (CCSS.Math.C content.HSA-APR.D.6) The learner will factor cubic expressions that are the sum and difference of perfect cubes. (*) 	<ul style="list-style-type: none"> The learner will factor a trinomial. (CCSS.Math.C content.HSA-SSE.B.3.a) The learner will divide a polynomial by a monomial (integer coefficients) where the degree of the denominator is less than or equal to the degree of the numerator for all variables. (CCSS.Math.C content.HSA-APR.D.6) The learner will identify the zeros of polynomials. (CCSS.Math.C content.HSA-APR.B.3) 	<ul style="list-style-type: none"> The learner will graph a linear equation. (CCSS.Math.C content.HSF-IF.C.7.a/CCSS.Math.Content.HSA-CED.A.2/CCSS.Math.Content.HSA-REI.D.10/MA.PA.AF.6/MA.PA.AF.9) The learner will solve a real-world problem by writing a system of equations. (CCSS.Math.C content.HSA-CED.A.3) 	<ul style="list-style-type: none"> The learner will solve quadratic equations by applying the quadratic formula. (CCSS.Math.C content.HSA-REI.B.4.b) The learner will solve systems of equations which include one linear equation and one quadratic equation. (CCSS.Math.C content.HSA-REI.C.7) 	<ul style="list-style-type: none"> The learner will show key features of a function presented as a graph. (CCSS.Math.C content.HSF-IF.B.4/CCSS.Math.Content.HSF-IF.C.7) The learner will write a rational function to describe a real-world application. (CCSS.Math.C content.HSF-BF.A.1.a) The learner will show the intercepts of a linear equation. (CCSS.Math.C content.HSF-IF.C.7.a) 	<ul style="list-style-type: none"> The learner will write a rule for a sequence recursively to describe a real-world application. (CCSS.Math.C content.HSF-BF.A.1.a/CCSS.Math.Content.HSF-BF.A.2) The learner will evaluate composite functions. (CCSS.Math.C content.HSF-BF.A.1.c) 	<ul style="list-style-type: none"> The learner use tables to identify that exponential functions eventually exceed polynomial functions including linear and quadratic functions. (CCSS.Math.C content.HSF-LE.A.3) The learner will solve exponential equations with a base of 10, 2, or e. (CCSS.Math.C content.HSF-LE.A.4) 	<ul style="list-style-type: none"> The learner will model periodic applications using trigonometric functions. (CCSS.Math.C content.HSF-TF.B.5/CCSS.Math.Content.HSF-TF.B.7) The learner will prove the addition formula for cosine. (CCSS.Math.C content.HSF-TF.C.9) The learner will find the equivalent trigonometric ratio in Quadrant 1 when given a trigonometric angle in Quadrant 2 - 4. (*)

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	<ul style="list-style-type: none"> The learner will divide rational expressions. (CCSS.Math.C ontent.HSA-APR.D.7) 	<ul style="list-style-type: none"> The learner will solve a system of equations with three equations and three variables. (*) The learner will write linear inequalities to represent a real-world scenario. (CCSS.Math.C ontent.HSA-CED.A.3) The learner will draw the graphic representatio n of a pattern from an equation or from a table of data. (CCSS.Math.C ontent.HSA-REI.D.10/MA.PA.AF.9) 	<ul style="list-style-type: none"> The learner will find the solution to two-variable systems of linear equations. (CCSS.Math.C ontent.8.EE.C. 8.b/CCSS.Mat h.Content.HS A-CED.A.2/CCS S.Math.Conte nt.HSA-REI.C.6) The learner will solve radical equations. (CCSS.Math.C ontent.HSA-REI.A.2) The learner will solve quadratic equations in real-world situations. (CCSS.Math.C ontent.HSF-LE.A) 	<ul style="list-style-type: none"> The learner will graph a quadratic function. (CCSS.Math.C ontent.HSF-IF.C.7.a) The learner will evaluate functions for a given domain. (CCSS.Math.C ontent.HSF-IF.A.2) The learner will graph polynomial functions. (CCSS.Math.C ontent.HSF-IF.C.7.c) The learner will compare two functions. (CCSS.Math.C ontent.8.F.A.2 /CCSS.Math.C ontent.HSF-IF.C.9) 		<ul style="list-style-type: none"> The learner will for a given interval of an exponential function for a real-world application, calculate the growth factor. (*) The learner will use given input-output pairs in or out of a table to construct a linear function. (CCSS.Math.C ontent.HSF-LE.A.2) The learner will recognize situations that have a constant rate of change. (CCSS.Math.C ontent.HSF-LE.A.1.b) 	<ul style="list-style-type: none"> The learner will use special triangles to determine the values of sine, cosine, and tangent for $\pi/3$, $\pi/4$, and $\pi/6$. (CCSS.Math.C ontent.HSF-TF.A.3) The learner will determine values of sine, cosine, and tangent using the unit circle. (CCSS.Math.C ontent.HSF-TF.A.3) The learner will use the Law of Cosines to solve problems. (CCSS.Math.C ontent.HSG-SRT.D.10)

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		<ul style="list-style-type: none"> The learner will obtain solutions to literal equations. (CCSS.Math.C content.HSA-CED.A.4/CCSS.Math.Content.HSA-REI.B.3) The learner will write quadratic inequalities to solve a real-world scenario. (CCSS.Math.C content.HSA-CED.A.1) 	<ul style="list-style-type: none"> The learner will use joint and/or combined variation in solving problems. (*) The learner will graph a system of inequalities and identify the solution set. (CCSS.Math.C content.HSA-REI.D.12) The learner will determine solutions for equations where absolute value is involved. (CCSS.Math.C content.7.NS.A.1.c) 	<ul style="list-style-type: none"> The learner will determine whether a given relationship is a function. (CCSS.Math.C content.HSF-IF.A.1) The learner will graph trigonometric functions. (CCSS.Math.C content.HSF-IF.C.7.e) The learner will graph trigonometric functions showing period. (CCSS.Math.C content.HSF-IF.C.7.e) 		<ul style="list-style-type: none"> The learner will calculate the growth factor of an exponential function. (*) 	<ul style="list-style-type: none"> The learner will understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle. (CCSS.Math.C content.HSF-TF.A.1)

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			<ul style="list-style-type: none"> The learner will take square roots to solve quadratic equations. (CCSS.Math.C ontent.HSA-REI.B.4.b) The learner will solve quadratic equations with complex solutions. (CCSS.Math.C ontent.HSN-CN.C.7/CCSS.Math.Content.HSA-REI.B.4.b) 	<ul style="list-style-type: none"> The learner will describe the graph of an exponential function in terms of intercepts, zeros, domain and range, and end behavior. (CCSS.Math.C ontent.HSF-IF.B.4) The learner will graph cube root functions. (CCSS.Math.C ontent.HSF-IF.C.7.b) 			

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				<ul style="list-style-type: none"> The learner will determine the zeros, extreme values, and symmetry of a quadratic function. (CCSS.Math.C ontent.HSF-IF.C.8.a) The learner will show the maximum or minimum of a quadratic function. (CCSS.Math.C ontent.HSF-IF.C.7.a) The learner will estimate the rate of change given the graph of a polynomial function. (CCSS.Math.C ontent.HSF-IF.B.6) 			

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				<ul style="list-style-type: none"> The learner will write a quadratic function to describe real-world application problem. (CCSS.Math.C content.HSF-BF.A.1.a) The learner will determine intervals within a rational function that are increasing or decreasing. (*) The learner will determine an appropriate domain and range for a rational function in a real-world application. (*) 			

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				<ul style="list-style-type: none"> The learner will graph square root functions. (CCSS.Math.Content.HSF-IF.C.7.b) The learner will find zeros and asymptotes by factoring rational functions. (CCSS.Math.Content.HSF-IF.C.7.d) 			

Scaled Score values from 5551 to 5600

Seeing Structure in Expressions	Arithmetic with Polynomials and Rational Expressions	Creating Equations	Reasoning with Equations and Inequalities	Interpreting Functions	Building Functions	Linear and Exponential Models	Trigonometric Functions
<ul style="list-style-type: none"> The learner will rewrite expressions by identifying the structure of it. (CCSS.Math.C ontent.HSA-SSE.A.2) The learner will complete the square for quadratic expressions. (CCSS.Math.C ontent.HSA-SSE.B.3.b) The learner will find the rule for a series. (CCSS.Math.C ontent.HSA-SSE.B.4) 	<ul style="list-style-type: none"> The learner will divide a polynomial by a linear divisor using long division. (CCSS.Math.C ontent.HSA-APR.D.7) The learner will use polynomial identities to describe numerical relationships. (CCSS.Math.C ontent.HSA-APR.C.4) 	<ul style="list-style-type: none"> The learner will solve rational equations in one variable to solve problems. (CCSS.Math.C ontent.HSA-REI.A.2) The learner will write an exponential function to describe a real-world application. (CCSS.Math.C ontent.HSF-BF.A.1.a) The learner will solve a real-world problem by writing a system of inequalities. (CCSS.Math.C ontent.HSA-CED.A.3) 	<ul style="list-style-type: none"> The learner will solve real-world application problems involving indirect variation. (*) The learner will solve quadratic equations by factoring. (CCSS.Math.C ontent.HSF-IF.C.8.a/CCSS.Math.Content.HSA-REI.B.4.b) The learner will write a matrix equation to represent a system of linear equations. (CCSS.Math.C ontent.HSA-REI.C.8) 	<ul style="list-style-type: none"> The learner will estimate the rate of change given the graph of an exponential function. (CCSS.Math.C ontent.HSF-IF.B.6) The learner will interpret expressions for exponential function including recognizing growth or decay functions. (*) The learner will graph an exponential function that represents a real-world application. (*) 	<ul style="list-style-type: none"> The learner will determine the steps for calculations that represent a given real-world situation. (CCSS.Math.C ontent.HSF-BF.A.1.a) The learner will find the composition of two functions. (CCSS.Math.C ontent.HSF-BF.A.1.c) The learner will recognize the graphs that represent even and odd functions. (*) 	<ul style="list-style-type: none"> The learner will use a given graph to construct an exponential function. (CCSS.Math.C ontent.HSF-LE.A.2) The learner will recognize if an exponential relationship can be used to described a real-world application. (CCSS.Math.C ontent.HSF-LE.A.1.c) 	<ul style="list-style-type: none"> The learner will use the Law of Sines to solve problems. (CCSS.Math.C ontent.HSG-SRT.D.10) The learner will use trigonometric ratios to solve real-world problems. (CCSS.Math.C ontent.HSG-SRT.C.8) The learner will use the trigonometric identity sine squared plus cosine squared = 1 to solve problems. (CCSS.Math.C ontent.HSF-TF.C.8)

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	<ul style="list-style-type: none"> The learner will describe the graph of a polynomial function in terms of intercepts, zeros, domain and range, and end behavior. (CCSS.Math.Content.HSF-IF.B.4) 			<ul style="list-style-type: none"> The learner will determine intervals within a polynomial function that are increasing or decreasing. (*) The learner will describe the graph of a rational function in terms of intercepts, domain and range, and end behavior. (CCSS.Math.Content.HSF-IF.B.4) The learner will graph exponential functions showing intercepts. (CCSS.Math.Content.HSF-IF.C.7.e) 		<ul style="list-style-type: none"> The learner will recognize if a linear relationship can be used to describe a real-world application. (CCSS.Math.Content.HSF-LE.A.1.b) 	

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				<ul style="list-style-type: none"> The learner will graph rational functions showing end behavior. (CCSS.Math.C ontent.HSF-IF.C.7.d) The learner will graph piecewise functions. (CCSS.Math.C ontent.HSF-IF.C.7.b) The learner will graph a rational function that represents a real-world application. (*) 			

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				<ul style="list-style-type: none"> The learner will evaluate functions in function notation for all inputs in their domains. (CCSS.Math.C ontent.HSF-IF.A.2) The learner will graph rational functions. (CCSS.Math.C ontent.HSF-IF.C.7.d) The learner will determine an appropriate domain and range for an exponential function in a real-world application. (*) 			

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				<ul style="list-style-type: none"> The learner will use zeros and asymptotes to graph a rational function. (CCSS.Math.Content.HSF-IF.B.4/CCSS.Math.Content.HSF-IF.C.7.d) The learner will determine whether a function is periodic. (*) The learner will state the domain and/or range of a given relation. (*) 			

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Scaled Score values from 5601 to 5650

Seeing Structure in Expressions	Arithmetic with Polynomials and Rational Expressions	Creating Equations	Reasoning with Equations and Inequalities	Interpreting Functions	Building Functions	Linear and Exponential Models	Trigonometric Functions
<ul style="list-style-type: none"> The learner will simplify radical expressions. (*) The learner will use factoring to reveal the zeros of the function represented by the expression. (*) The learner will use the formula for the sum of a finite geometric series to solve real-world application problems. (CCSS.Math.C content.HSA-SSE.B.4) 	<ul style="list-style-type: none"> The learner will divide a polynomial by binomial using long division. (CCSS.Math.C content.HSA-APR.D.7) The learner will use the Binomial Theorem to expand $(x + y)^n$. (CCSS.Math.C content.HSA-APR.C.5) The learner will multiply rational expressions. (CCSS.Math.C content.HSA-APR.D.7) 	<ul style="list-style-type: none"> The learner will write a polynomial function to describe a real-world application. (CCSS.Math.C content.HSF-BF.A.1.a) 	<ul style="list-style-type: none"> The learner will give examples where extraneous solutions arise from rational equations. (CCSS.Math.C content.HSA-REI.A.2) 	<ul style="list-style-type: none"> The learner will determine an appropriate domain and range for a polynomial function in a real-world application. (*) The learner will use factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context. (CCSS.Math.C content.HSF-IF.C.8.a) 	<ul style="list-style-type: none"> The learner will find the inverse of an exponential function. (CCSS.Math.C content.HSF-BF.B.4/CCSS.Math.Content.HSF-BF.B.5) The learner will find the inverse of a polynomial function. (CCSS.Math.C content.HSF-BF.B.4) 		<ul style="list-style-type: none"> The learner will prove the subtraction formula for cosine. (CCSS.Math.C content.HSF-TF.C.9) The learner will explain the relationship between the unit circle and trigonometric functions. (CCSS.Math.C content.HSF-TF.A.2)

*not in District of Columbia Archdiocese of Washington Standards 2017 (Mathematics) or Common Core State Standards 2010 (Mathematics)

Seeing Structure in Expressions	Arithmetic with Polynomials and Rational Expressions	Creating Equations	Reasoning with Equations and Inequalities	Interpreting Functions	Building Functions	Linear and Exponential Models	Trigonometric Functions
<ul style="list-style-type: none"> The learner will interpret parts of an expression, such as terms, factors, and coefficients. (CCSS.Math.C ontent.HSA-SSE.A.1.a) 				<ul style="list-style-type: none"> The learner will graph logarithmic functions. (CCSS.Math.C ontent.HSF-IF.C.7.e) The learner will understand function notation in that each input corresponds to an output. (CCSS.Math.C ontent.HSF-IF.A.1) The learner will determine intervals within an exponential function that are increasing or decreasing. (*) 	<ul style="list-style-type: none"> The learner will use the inverse relationship between exponents and logarithms to solve logarithmic problems. (CCSS.Math.C ontent.HSF-BF.B.5) The learner will perform transformations on the graph of functions. (CCSS.Math.C ontent.HSF-BF.B.3) 		

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Seeing Structure in Expressions	Arithmetic with Polynomials and Rational Expressions	Creating Equations	Reasoning with Equations and Inequalities	Interpreting Functions	Building Functions	Linear and Exponential Models	Trigonometric Functions
					<ul style="list-style-type: none"> The learner will use the inverse relationship between exponents and logarithms to solve exponential problems. (CCSS.Math.Content.HSF-BF.B.5/CCSS.Math.Content.HSF-LE.A.4) 		

Scaled Score values from 5651 to 5700

Seeing Structure in Expressions	Arithmetic with Polynomials and Rational Expressions	Creating Equations	Reasoning with Equations and Inequalities	Interpreting Functions	Building Functions	Linear and Exponential Models	Trigonometric Functions
	<ul style="list-style-type: none"> The learner will use the Remainder Theorem to evaluate a function for a given value for x. (CCSS.Math.C ontent.HSA-APR.B.2) The learner will add and subtract rational expressions. (CCSS.Math.C ontent.HSA-APR.D.7) 	<ul style="list-style-type: none"> The learner will determine values of inverse functions from a graph or table. (CCSS.Math.C ontent.HSF-BF.B.4/CCSS. Math.Content. HSF-BF.B.4.c) 		<ul style="list-style-type: none"> The learner will determine the average rate of change when given an interval for a polynomial function. (CCSS.Math.C ontent.HSF-IF.B.6) The learner will determine the average rate of change when given an interval for a rational function. (CCSS.Math.C ontent.HSF-IF.B.6) 	<ul style="list-style-type: none"> The learner will generate a sequence rule recursively. (CCSS.Math.C ontent.HSF-BF.A.2) 	<ul style="list-style-type: none"> The learner will prove that linear functions grow by equal differences over equal intervals. (CCSS.Math.C ontent.HSF-LE.A.1.a) 	

Scaled Score values from 5701 to 5750

Seeing Structure in Expressions	Arithmetic with Polynomials and Rational Expressions	Creating Equations	Reasoning with Equations and Inequalities	Interpreting Functions	Building Functions	Linear and Exponential Models	Trigonometric Functions
			<ul style="list-style-type: none"> The learner will find the inverse of a matrix. (CCSS.Math.C ontent.HSA-REI.C.9) The learner will give examples where extraneous solutions arise from radical equations. (CCSS.Math.C ontent.HSA-REI.A.2) 	<ul style="list-style-type: none"> The learner will estimate the rate of change given the graph of a rational function. (CCSS.Math.C ontent.HSF-IF.B.6) 	<ul style="list-style-type: none"> The learner will produce an invertible function from a non-invertible function by restricting the domain. (CCSS.Math.C ontent.HSF-BF.B.4.d) 	<ul style="list-style-type: none"> The learner will prove that exponential functions grow by equal factors over equal intervals. (CCSS.Math.C ontent.HSF-LE.A.1.a) 	

Scaled Score values of 5751 or larger

Seeing Structure in Expressions	Arithmetic with Polynomials and Rational Expressions	Creating Equations	Reasoning with Equations and Inequalities	Interpreting Functions	Building Functions	Linear and Exponential Models	Trigonometric Functions
		<ul style="list-style-type: none"> The learner will solve linear programming problems. (*) 					

*not in District of Columbia Archdiocese of Washington Standards 2017 (Mathematics) or Common Core State Standards 2010 (Mathematics)