Standard ID	Standard Text	Edgenuity Lesson Name
N	Number & Quantity	
N-CN	The Complex Number System	
N-CN.C	Use complex numbers in polynomial identities and equations.	
N-CN.C.8	(+) Extend polynomial identities to the complex numbers. For example, rewrite x^2 + 4 as (x + 2i)(x - 2i).	Quadratic in Form Polynomials The Fundamental Theorem of Algebra
N-CN.C.9	(+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials.	The Fundamental Theorem of Algebra Writing Polynomial Functions from Complex Roots
A	Algebra	
A-SSE	Seeing Structure in Expressions	
A-SSE.A	Interpret the structure of expressions.	
A-SSE.A.1	Interpret expressions that represent a quantity in terms of its context.	
A-SSE.A.1a	Interpret parts of an expression, such as terms, factors, and coefficients.	Adding and Subtracting Rational Expressions Factoring Polynomials Completely Multiplying and Dividing Rational Expressions Simplifying Polynomial Expressions Simplifying Rational Expressions
A-SSE.A.1b	Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret P(1+r)^n as the product of P and a factor not depending on P.	Factoring Polynomials Completely Modeling with Functions Simplifying Polynomial Expressions Solving Exponential Equations by Rewriting the Base
A-SSE.A.2	Use the structure of an expression to identify ways to rewrite it. For example, see x^4 - y^4 as (x^2)^2 - (y^2)^2, thus recognizing it as a difference of squares that can be factored as (x^2 - y^2)(x^2 + y^2).	Quadratic in Form Polynomials
A-SSE.B	Write expressions in equivalent forms to solve problems.	
A-SSE.B.4	Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments.	Geometric Series

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A-APR	Arithmetic with Polynomials and Rational Functions	
A-APR.A	Perform arithmetic operations on polynomials.	
A-APR.A.1	Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.	Addition and Subtraction of Polynomials Division of Polynomials Multiplication of Polynomials
A-APR.B	Understand the relationship between zeros and factors of polynomials.	
A-APR.B.2	Know and apply the Remainder Theorem: For a polynomial p(x) and a number a, the remainder on division by x - a is p(a), so p(a) = 0 if and only if (x - a) is a factor of p(x).	Synthetic Division and the Remainder Theorem Writing Polynomial Functions from Complex Roots
A-APR.B.3	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.	The Rational Roots Theorem
A-APR.C	Use polynomial identities to solve problems.	
A-APR.C.4	Prove polynomial identities and use them to describe numerical relationships. For example, the polynomial identity (x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2 can be used to generate Pythagorean triples.	Sum and Difference of Two Cubes The Binomial Theorem
A-APR.C.5	(+) Know and apply the Binomial Theorem for the expansion of (x + y)^n in powers of x and y for a positive integer n, where x and y are any numbers, with coefficients determined for example by Pascal's Triangle.	The Binomial Theorem
A-APR.D	Rewrite rational expressions.	
A-APR.D.6	Rewrite simple rational expressions in different forms; write a(x)/b(x) in the form q(x) + r(x)/b(x), where a(x), b(x), q(x), and r(x) are polynomials with the degree of r(x) less than the degree of b(x), using inspection, long division, or, for the more complicated examples, a computer algebra system.	Division of Polynomials Simplifying Rational Expressions

Standard ID	Standard Text	Edgenuity Lesson Name
A-APR.D.7	(+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.	
		Adding and Subtracting Rational Expressions
		Multiplying and Dividing Rational Expressions
A-CED	Creating Equations	
A-CED.A	Create equations that describe numbers or relationships.	
A-CED.A.1	Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.	
		Absolute Value Inequalities
		Inequalities
		Radical Equations and Extraneous Roots
		Solving Equations Containing Two Radicals
A-CED.A.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	
		Joint and Combined Variation
		Modeling with Functions
		Modeling with Periodic Functions
A-CED.A.3	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.	
		Linear Programming
		Radical Equations and Extraneous Roots
		Solving Equations Containing Two Radicals
		Solving Exponential Equations by Rewriting the Base
		Solving Linear Systems by Elimination
		Solving Linear Systems Graphically
A-CED.A.4	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law V = IR to highlight resistance R.	
		Literal Equations

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A-REI	Reasoning with Equations and Inequalities	
A-REI.A	Understand solving equations as a process of reasoning and explain the reasoning.	
A-REI.A.2	Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.	
		Radical Equations and Extraneous Roots
		Rational Equations
		Solving Equations Containing Two Radicals
A-REI.D	Represent and solve equations and inequalities graphically.	
A-REI.D.11	Explain why the x-coordinates of the points where the graphs of the equations y = f(x) and y = g(x) intersect are the solutions of the equation f(x) = g(x); find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where f(x) and/or g(x) are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.	
		Absolute Value Functions
		Rational Equations
		Solving Exponential and Logarithmic Equations
		Solving Logarithmic Equations using Technology
		Solving One-Variable Equations with Systems
		Solving Polynomial Equations using Technology
F	Functions	
F-IF	Interpreting Functions	
F-IF.B	Interpret functions that arise in applications in terms of the context.	
F-IF.B.4	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.	
		Absolute Value Functions
		Domain and Range
		Graphing Exponential Functions
		Graphing Logarithmic Functions
		Graphing Radical Functions
		Graphing Sine and Cosine

Standard ID	Standard Text	Edgenuity Lesson Name
F-IF.B.4	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity. *(Cont'd)*	Joint and Combined Variation Modeling with Exponential and Logarithmic Equations Modeling with Functions Modeling with Periodic Functions Performance Task: Production Schemes Piecewise Defined Functions Square Root Functions Step Functions Transformations of Functions
F-IF.B.5	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.	Absolute Value Functions Analyzing Compositions of Functions Domain and Range Graphing Exponential Functions Graphing Logarithmic Functions Graphing Radical Functions Graphing Sine and Cosine Modeling with Periodic Functions Performance Task: Production Schemes Piecewise Defined Functions Square Root Functions Step Functions
F-IF.B.6	Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.	Rate of Change

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F-IF.C	Analyze functions using different representations.	
F-IF.C.7	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.	
F-IF.C.7b	Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.	
		Absolute Value Functions
		Graphing Radical Functions
		Performance Task: Production Schemes
		Piecewise Defined Functions
		Square Root Functions
		Step Functions
F-IF.C.7c	Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.	
		Graphing Polynomial Functions
F-IF.C.7e	Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.	
		Base e
		Graphing Exponential Functions
		Graphing Logarithmic Functions
		Graphing Sine and Cosine
		Modeling with Exponential and Logarithmic Equations
F-IF.C.8	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.	
F-IF.C.8a	Use the process of 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.	
		Completing the Square
		Modeling with Quadratic Equations
		Solving Quadratic Equations by Factoring
F-IF.C.8b	Use the properties of exponents to interpret expressions for exponential functions. For example, identify percent rate of change in functions such as y = (1.02)^t, y = (0.97)^t, y = (1.01)^12t, y = (1.2)^t/10, and classify them as representing exponential growth or decay.	
		Negative Exponents
		Rewriting Exponential Functions

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F-IF.C.9	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.	Modeling with Functions
F-BF	Building Functions	
F-BF.A	Build a function that models a relationship between two quantities.	
F-BF.A.1	Write a function that describes a relationship between two quantities.	
F-BF.A.1b	Combine standard function types using arithmetic operations. For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.	Function Operations
F-BF.B	Build new functions from existing functions.	
F-BF.B.3	Identify the effect on the graph of replacing f(x) by f(x) + k, k f(x), f(kx), and f(x + k) for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.	Absolute Value Functions Graphing Exponential Functions Graphing Logarithmic Functions Graphing Radical Functions Graphing Sine and Cosine Square Root Functions Transformations of Functions
F-BF.B.4	Find inverse functions.	
F-BF.B.4a	Solve an equation of the form f(x) = c for a simple function f that has an inverse and write an expression for the inverse. For example, f(x) =2 x^3 for x > 0 or f(x) = (x+1)/(x-1) for x ≠ 1.	Function Inverses Square Root Functions

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F-LE	Linear, Quadratic, and Exponential Models	
F-LE.A	Construct and compare linear and exponential models and solve problems.	
F-LE.A.4	For exponential models, express as a logarithm the solution to ab^ct = d where a, c, and d are numbers and the base b is 2, 10, or e; evaluate the logarithm using technology.	
		Evaluating Logarithmic Expressions
		Properties of Logarithms
		Solving Equations using Properties of Logarithms
		Solving Exponential and Logarithmic Equations
		Solving Logarithmic Equations using Technology
F-TF	Trigonometric Functions	
F-TF.A	Extend the domain of trigonometric functions using the unit circle.	
F-TF.A.1	Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.	
		Angles in Standard Position
		Radian Measure
F-TF.A.2	Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.	
		Evaluating the Six Trigonometric Functions
		The Unit Circle
F-TF.B	Model periodic phenomena with trigonometric functions.	
F-TF.B.5	Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.	
		Graphing Sine and Cosine
		Modeling with Periodic Functions
G	Geometry	
G-SRT	Similarity, Right Triangles, and Trigonometry	
G-SRT.D	Apply trigonometry to general triangles	
G-SRT.D.9	(+) Derive the formula A = 1/2 ab sin(C) for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.	
		Area and Perimeter of Triangles
G-SRT.D.10	(+) Prove the Laws of Sines and Cosines and use them to solve problems.	
		Law of Cosines
		Law of Sines

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G-SRT.D.11	(+) Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).	
		Law of Cosines
		Law of Sines
G-GMD	Geometric Measurement and Dimension	
G-GMD.B	Visualize the relation between two-dimensional and three-dimensional objects	
G-GMD.B.4	Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.	
		Three-Dimensional Figures and Cross Sections
G-MG	Modeling with Geometry	
G-MG.A	Apply geometric concepts in modeling situations	
G-MG.A.1	Use geometric shapes, their measures and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).	
		Area of Composite Figures
		Trapezoids and Kites
		Volume of Prisms
G-MG.A.2	Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).	
		Density and Design Problems
		Volume of Prisms
G-MG.A.3	Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy constraints or minimize cost; working with typographic grid systems based on ratios).	
		Density and Design Problems
		Volume of Prisms
S	Statistics & Probability	
S-ID	Interpreting Categorical and Quantitative Data	
S-ID.A	Summarize, represent, and interpret data on a single count or measurement variable	
S-ID.A.4	Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets and tables to estimate areas under the normal curve.	
		Applications with Standard Normal Distribution
		Introduction to Normal Distributions
		Properties of Probability Distributions
		Standard Deviation

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S-IC	Making Inferences and Justifying Conclusions	
S-IC.A	Understand and evaluate random processes underlying statistical experiments	
S-IC.A.1	Understand that statistics is a process for making inferences about population parameters based on a random sample from that population.	
		Designing a Study
		Representing Data
S-IC.A.2	Decide if a specified model is consistent with results from a given data-generating process, e.g. using simulation. For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?	
		Statistical Inferences
S-IC.B	Make inferences and justify conclusions from sample surveys, experiments and observational studies	
S-IC.B.3	Recognize the purposes of and differences among sample surveys, experiments and observational studies; explain how randomization relates to each.	
		Designing a Study
S-IC.B.4	Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.	
		Standard Deviation
S-IC.B.5	Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.	
		Hypothesis Testing
S-IC.B.6	Evaluate reports based on data.	
		Representing Data
S-MD	Using Probability to Make Decisions	
S-MD.B	Use probability to evaluate outcomes of decisions	
S-MD.B.6	(+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).	
		Expected Value
S-MD.B.7	(+) Analyze decisions and strategies using probability concepts (e.g. product testing, medical testing, pulling a hockey goalie at the end of a game).	
		Expected Value