Standard ID	Standard Text	Edgenuity Lesson Name
CCSS.HSN-RN	The Real Number System	
CCSS.HSN-RN.A	Extend the properties of exponents to rational exponents.	
CCSS.HSN-RN.A.1	Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. For example, we define 5^1/3 to be the cube root of 5 because we want (5^1/3)^3 = 5^(1/3)^3 to hold, so (5^1/3)^3 must equal 5.	Exponential Functions with Radical Bases
CCSS.HSN-RN.A.2	Rewrite expressions involving radicals and rational exponents using the properties of exponents.	Exponential Functions with Radical Bases
CCSS.HSN-RN.B	Use properties of rational and irrational numbers.	
CCSS.HSN-RN.B.3	Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.	Solving Quadratic Equations: Completing the Square
CCSS.HSN-CN	The Complex Number System	
CCSS.HSN-CN.A	Perform arithmetic operations with complex numbers.	
CCSS.HSN-CN.A.1	Know there is a complex number i such that i^2 = -1, and every complex number has the form a + bi with a and b real.	Complex Numbers
CCSS.HSN-CN.A.2	Use the relation i^2 = -1 and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.	Operations with Complex Numbers
CCSS.HSN-CN.C	Use complex numbers in polynomial identities and equations.	
CCSS.HSN-CN.C.7	Solve quadratic equations with real coefficients that have complex solutions.	Completing the Square The Quadratic Formula
CCSS.HSN-CN.C.8	(+) Extend polynomial identities to the complex numbers. For example, rewrite x^2 + 4 as (x + 2i)(x - 2i).	The Fundamental Theorem of Algebra

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CCSS.HSN-CN.C.9	(+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials.	Completing the Square The Quadratic Formula The Fundamental Theorem of Algebra Writing Polynomial Functions from Complex Roots
CCSS.HSA-SSE	Seeing Structure in Expressions	
CCSS.HSA-SSE.A	Interpret the structure of expressions.	
CCSS.HSA-SSE.A.1	Interpret expressions that represent a quantity in terms of its context.	
CCSS.HSA-SSE.A.1a	Interpret parts of an expression, such as terms, factors, and coefficients.	Multiplying Polynomials and Simplifying Expressions
CCSS.HSA-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: GCF
CCSS.HSA-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).	Factoring Polynomials: GCF Factoring Polynomials: Double Grouping Factoring Trinomials: a = 1 Factoring Trinomials: a > 1
CCSS.HSA-SSE.B	Write expressions in equivalent forms to solve problems.	
CCSS.HSA-SSE.B.3	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.	
CCSS.HSA-SSE.B.3a	Factor a quadratic expression to reveal the zeros of the function it defines.	Quadratic Functions: Standard Form
CCSS.HSA-SSE.B.3b	Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.	Completing the Square (Continued)
CCSS.HSA-SSE.B.3c	Use the properties of exponents to transform expressions for exponential functions. For example the expression 1.15^t can be rewritten as (1.15^(1/12))^12t â‰ˆ 1.012^12t to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.	Exponential Functions with Radical Bases

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CCSS.HSA-APR	Arithmetic with Polynomials and Rational Functions	
CCSS.HSA-APR.A	Perform arithmetic operations on polynomials.	
CCSS.HSA-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.	Adding and Subtracting Polynomials Multiplying Monomials and Binomials Multiplying Polynomials and Simplifying Expressions
CCSS.HSA-CED	Creating Equations	
CCSS.HSA-CED.A	Create equations that describe numbers or relationships.	
CCSS.HSA-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.	Quadratic Inequalities
CCSS.HSA-CED.A.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	
CCSS.HSA-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
CCSS.HSA-REI	Reasoning with Equations and Inequalities	
CCSS.HSA-REI.B	Solve equations and inequalities in one variable.	
CCSS.HSA-REI.B.4	Solve quadratic equations in one variable.	
CCSS.HSA-REI.B.4a	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. Derive the quadratic formula from this form.	Solving Quadratic Equations: Completing the Square Solving Quadratic Equations: Completing the Square (Continued) Introduction to the Quadratic Formula

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CCSS.HSA-REI.B.4b	Solve quadratic equations by inspection (e.g., for x^2 = 49), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as a plus-minus bi for real numbers a and b.	Solving Quadratic Equations: Zero Product Property Solving Quadratic Equations: Factoring Solving Quadratic Equations: Completing the Square Solving Quadratic Equations: Completing the Square (Continued) Introduction to the Quadratic Formula Solving Quadratic Equations: Quadratic Formula
CCSS.HSA-REI.C	Solve systems of equations.	
CCSS.HSA-REI.C.7	Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line y = -3x and the circle x^2 + y^2 = 3.	
CCSS.HSF-IF	Interpreting Functions	
CCSS.HSF-IF.B	Interpret functions that arise in applications in terms of the context.	
CCSS.HSF-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.	Introduction to Quadratic Functions Quadratic Functions: Factored Form Quadratic Functions: Vertex Form Completing the Square (Continued)
CCSS.HSF-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.	Quadratic Functions: Standard Form Quadratic Functions: Factored Form
CCSS.HSF-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.	Introduction to Quadratic Functions

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CCSS.HSF-IF.C	Analyze functions using different representations.	
CCSS.HSF-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.	
CCSS.HSF-IF.C.7a	Graph linear and quadratic functions and show intercepts, maxima, and minima.	Introduction to Quadratic Functions Quadratic Functions: Standard Form Quadratic Functions: Factored Form Quadratic Functions: Vertex Form Completing the Square (Continued)
CCSS.HSF-IF.C.7b	Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.	Linear Piecewise Defined Functions Step Functions Absolute Value Functions and Translations The Square Root Function
CCSS.HSF-IF.C.8	Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.	
CCSS.HSF-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 (Continued)
CCSS.HSF-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.	Rewriting Exponential Functions
CCSS.HSF-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.	Quadratic Functions: Factored Form

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CCSS.HSF-BF	Building Functions	
CCSS.HSF-BF.A	Build a function that models a relationship between two quantities.	
CCSS.HSF-BF.A.1	Write a function that describes a relationship between two quantities.	
CCSS.HSF-BF.A.1a	Determine an explicit expression, a recursive process, or steps for calculation from a context.	Completing the Square (Continued)
CCSS.HSF-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.	Translations of Exponential Functions
CCSS.HSF-BF.B	Build new functions from existing functions.	
CCSS.HSF-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.	Quadratic Functions: Vertex Form
CCSS.HSF-BF.B.4	Find inverse functions.	
CCSS.HSF-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 â‰ 1.	Evaluating Functions
CCSS.HSF-LE	Linear, Quadratic, and Exponential Models	
CCSS.HSF-LE.A	Construct and compare linear and exponential models and solve problems.	
CCSS.HSF-LE.A.3	Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.	

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CCSS.HSF-TF	Trigonometric Functions	
CCSS.HSF-TF.C	Prove and apply trigonometric identities.	
CCSS.HSF-TF.C.8	Prove the Pythagorean identity sin^2(Î¸) + cos^2(Î¸) = 1 and use it to find sin(Î¸), cos(Î¸), or tan(Î¸) given sin(Î¸), cos(Î¸), or tan(Î¸) and the quadrant of the angle.	Evaluating the Six Trigonometric Functions
CCSS.HSG-CO	Congruence	
CCSS.HSG-CO.C	Prove geometric theorems	
CCSS.HSG-CO.C.9	Prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.	Parallel and Perpendicular Lines Lines Cut by a Transversal Proving Lines Parallel
CCSS.HSG-CO.C.10	Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180Â°; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.	Triangle Angle Theorems Triangles and Their Side Lengths Isosceles Triangles
CCSS.HSG-CO.C.11	Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other and conversely, rectangle are parallelograms with congruent diagonals.	Classifying Quadrilaterals Parallelograms Proving a Quadrilateral Is a Parallelogram
CCSS.HSG-SRT	Similarity, Right Triangles, and Trigonometry	
CCSS.HSG-SRT.A	Understand similarity in terms of similarity transformations	
CCSS.HSG-SRT.A.1	Verify experimentally the properties of dilations given by a center and a scale factor:	
CCSS.HSG-SRT.A.1a	A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.	Dilations Similar Figures
CCSS.HSG-SRT.A.1b	The dilation of a line segment is longer or shorter in the ratio given by the scale factor.	Dilations Similar Figures

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CCSS.HSG-SRT.A.2	Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.	Similar Figures Triangle Similarity: AA
CCSS.HSG-SRT.A.3	Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.	Triangle Similarity: AA
CCSS.HSG-SRT.B	Prove theorems involving similarity	
CCSS.HSG-SRT.B.4	Prove theorems about triangles. Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean theorem proved using triangle similarity.	Triangle Similarity: SSS and SAS Using Triangle Similarity Theorems Right Triangle Similarity
CCSS.HSG-SRT.B.5	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.	Triangle Similarity: SSS and SAS Using Triangle Similarity Theorems Right Triangle Similarity
CCSS.HSG-SRT.C	Define trigonometric ratios and solve problems involving right triangles	
CCSS.HSG-SRT.C.6	Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.	Trigonometric Ratios
CCSS.HSG-SRT.C.7	Explain and use the relationship between the sine and cosine of complementary angles.	Trigonometric Ratios
CCSS.HSG-SRT.C.8	Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.	Solving for Side Lengths of Right Triangles
CCSS.HSG-GPE	Expressing Geometric Properties with Equations	
CCSS.HSG-GPE.A	Translate between the geometric description and the equation for a conic section	
CCSS.HSG-GPE.A.1	Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.	Equation of a Circle
CCSS.HSG-GPE.A.2	Derive the equation of a parabola given a focus and directrix.	Parabolas

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CCSS.HSG-GPE.B	Use coordinates to prove simple geometric theorems algebraically	
CCSS.HSG-GPE.B.4	Use coordinates to prove simple geometric theorems algebraically. For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point (1,âˆš3) lies on the circle centered at the origin and containing the point (0, 2).	Equation of a Circle
CCSS.HSG-GPE.B.6	Find the point on a directed line segment between two given points that divide the segment in a given ratio.	Directed Line Segments and Modeling
CCSS.HSG-GMD	Geometric Measurement and Dimension	
CCSS.HSG-GMD.A	Explain volume formulas and use them to solve problems	
CCSS.HSG-GMD.A.1	Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. Use dissection arguments, Cavalieri's principle, and informal limit arguments.	Circumference and Arc Length Area of a Circle and a Sector Volume of Pyramids Volume of Cylinders, Cones, and Spheres
CCSS.HSG-GMD.A.3	Use volume formulas for cylinders, pyramids, cones and spheres to solve problems.	Volume of Pyramids Volume of Cylinders, Cones, and Spheres
CCSS.HSS-CP	Conditional Probability and the Rules of Probability	
CCSS.HSS-CP.A	Understand independence and conditional probability and use them to interpret data	
CCSS.HSS-CP.A.1	Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (''or,'' ''and,'' ''not'').	Sets and Venn Diagrams Finding Outcomes Theoretical and Experimental Probability
CCSS.HSS-CP.A.2	Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.	Independent and Mutually Exclusive Events
CCSS.HSS-CP.A.3	Understand the conditional probability of A given B as P(A and B)/P(B), and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.	Conditional Probability

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CCSS.HSS-CP.A.4	Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.	Probability and Two-Way Tables
CCSS.HSS-CP.A.5	Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.	Conditional Probability Probability and Two-Way Tables
CCSS.HSS-CP.B	Use the rules of probability to compute probabilities of compound events in a uniform probability model	
CCSS.HSS-CP.B.6	Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A and interpret the answer in terms of the model.	Conditional Probability Probability and Two-Way Tables
CCSS.HSS-CP.B.7	Apply the Addition Rule, P(A or B) = P(A) + P(B) - P(A and B), and interpret the answer in terms of the model.	Independent and Mutually Exclusive Events
CCSS.HSS-CP.B.8	(+) Apply the general Multiplication Rule in a uniform probability model, P(A and B) = P(A)P(B|A) = P(B)P(A|B), and interpret the answer in terms of the model.	Conditional Probability
CCSS.HSS-CP.B.9	(+) Use permutations and combinations to compute probabilities of compound events and solve problems.	Probability with Combinations and Permutations
CCSS.HSS-MD	Using Probability to Make Decisions	
CCSS.HSS-MD.B	Use probability to evaluate outcomes of decisions	
CCSS.HSS-MD.B.6	(+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).	
CCSS.HSS-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).	

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CCSS.HSG-C	Circles	
CCSS.HSG-C.A	Understand and apply theorems about circles	
CCSS.HSG-C.A.1	Prove that all circles are similar.	Introduction to Circles
CCSS.HSG-C.A.2	Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.	Central Angles Inscribed Angles Secants, Tangents, and Angles Angle Relationships
CCSS.HSG-C.A.3	Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.	Inscribed Angles
CCSS.HSG-C.A.4	(+) Construct a tangent line from a point outside a given circle to the circle.	
CCSS.HSG-C.B	Find arc lengths and areas of sectors of circles	
CCSS.HSG-C.B.5	Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.	Circumference and Arc Length Area of a Circle and a Sector