

Standard ID	Standard Text	Edgenuity Lesson Name
P.1.	Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:	
P.1 (A)	Apply mathematics to problems arising in everyday life, society, and the workplace.	Graphing Sine and Cosine Graphs and Transformations Law of Cosines Law of Sines Linear and Angular Velocity Modeling with Periodic Functions
P.1 (B)	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.	Applications of Equations Linear and Angular Velocity Modeling with Periodic Functions
P.1 (C)	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.	Double-Angle and Half-Angle Identities Locating Zeros of Polynomial Function Modeling with Periodic Functions Sum and Difference Identities
P.1 (D)	Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.	Families of Graphs Functions and Their Properties Perpendicular Vectors
P.1 (E)	Create and use representations to organize, record, and communicate mathematical ideas.	Applications of Equations Arithmetic Sequences and Series Geometric Sequences and Series Step Functions Twelve Basic Functions
P.1 (F)	Analyze mathematical relationships to connect and communicate mathematical ideas.	Radicals and Rational Exponents The Binomial Theorem

Standard ID	Standard Text	Edgenuity Lesson Name
P.1 (G)	Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.	Graphing Cosecant and Secant Functions Graphing Sine and Cosine Graphing Tangent and Cotangent
P.2.	Functions. The student uses process standards in mathematics to explore, describe, and analyze the attributes of functions. The student makes connections between multiple representations of functions and algebraically constructs new functions. The student analyzes and uses functions to model real-world problems. The student is expected to:	
P.2 (A)	Use the composition of two functions to model and solve real-world problems.	Modeling Using Function Notation Operations with Functions
P.2 (B)	Demonstrate that function composition is not always commutative.	Operations with Functions
P.2 (C)	Represent a given function as a composite function of two or more functions.	Operations with Functions
P.2 (D)	Describe symmetry of graphs of even and odd functions.	Symmetry and Coordinate Graphs
P.2 (E)	Determine an inverse function, when it exists, for a given function over its domain or a subset of its domain and represent the inverse using multiple representations.	Inverse Functions and Relations Logarithmic Functions and Their Graphs Trigonometric Inverses and Their Graphs
P.2 (F)	Graph exponential, logarithmic, rational, polynomial, power, trigonometric, inverse trigonometric, and piecewise defined functions, including step functions.	Changes in Period and Phase Shift of Sine and Cosine Functions Exponential and Logistic Functions Graphing Cosecant and Secant Functions Graphing Rational Functions Graphing Sine and Cosine Graphing Tangent and Cotangent Graphs of Polynomial Functions Graphs of Rational Functions Logarithmic Functions and Their Graphs

Standard ID	Standard Text	Edgenuity Lesson Name
P.2 (F)	Graph exponential, logarithmic, rational, polynomial, power, trigonometric, inverse trigonometric, and piecewise defined functions, including step functions. <i>(cont'd)</i>	Monomial Functions Piecewise Defined Functions Step Functions The Number e
P.2 (G)	Graph functions, including exponential, logarithmic, sine, cosine, rational, polynomial, and power functions and their transformations, including $af(x)$, $f(x)+d$, $f(x-c)$, $f(bx)$ for specific values of a, b, c, and d, in mathematical and real-world problems.	Changes in Period and Phase Shift of Sine and Cosine Functions Exponential and Logistic Functions Graphing Rational Functions Graphs of Polynomial Functions Graphs of Rational Functions Logarithmic Functions and Their Graphs Monomial Functions
P.2 (H)	Graph $\arcsin x$ and $\arccos x$ and describe the limitations on the domain.	Trigonometric Inverses and Their Graphs
P.2 (I)	Determine and analyze the key features of exponential, logarithmic, rational, polynomial, power, trigonometric, inverse trigonometric, and piecewise defined functions, including step functions such as domain, range, symmetry, relative maximum, relative minimum, zeros, asymptotes, and intervals over which the function is increasing or decreasing.	Changes in Period and Phase Shift of Sine and Cosine Functions Exponential and Logistic Functions Graphing Cosecant and Secant Functions Graphing Rational Functions Graphing Sine and Cosine Graphing Tangent and Cotangent Graphs of Polynomial Functions Graphs of Rational Functions Locating Zeros of Polynomial Function Logarithmic Functions and Their Graphs

Standard ID	Standard Text	Edgenuity Lesson Name
P.2 (I)	Determine and analyze the key features of exponential, logarithmic, rational, polynomial, power, trigonometric, inverse trigonometric, and piecewise defined functions, including step functions such as domain, range, symmetry, relative maximum, relative minimum, zeros, asymptotes, and intervals over which the function is increasing or decreasing. <i>(cont'd)</i>	Monomial Functions Piecewise Defined Functions Step Functions Trigonometric Inverses and Their Graphs
P.2 (J)	Analyze and describe end behavior of functions, including exponential, logarithmic, rational, polynomial, and power functions, using infinity notation to communicate this characteristic in mathematical and real-world problems.	Exponential and Logistic Functions Functions and Their Properties Graphing Rational Functions Graphs of Polynomial Functions Graphs of Rational Functions Monomial Functions
P.2 (K)	Analyze characteristics of rational functions and the behavior of the function around the asymptotes, including horizontal, vertical, and oblique asymptotes.	Graphing Rational Functions Graphs of Rational Functions
P.2 (L)	Determine various types of discontinuities in the interval $(-\infty, \infty)$	Graphing Rational Functions Graphs of Rational Functions Piecewise Defined Functions
P.2 (M)	Describe the left-sided behavior and the right-sided behavior of the graph of a function around discontinuities.	Graphs of Rational Functions
P.2 (N)	Analyze situations modeled by functions, including exponential, logarithmic, rational, polynomial, and power functions, to solve real-world problems.	Applications of Equations Graphs of Polynomial Functions Graphs of Rational Functions Monomial Functions Piecewise Defined Functions

Standard ID	Standard Text	Edgenuity Lesson Name
P.2 (N)	Analyze situations modeled by functions, including exponential, logarithmic, rational, polynomial, and power functions, to solve real-world problems. (<i>cont'd</i>)	Solving Exponential and Logarithmic Equations Step Functions
P.2 (O)	Develop and use a sinusoidal function that models a situation in mathematical and real-world problems.	Modeling with Periodic Functions
P.2 (P)	Determine the values of the trigonometric functions at the special angles and relate them in mathematical and real world problems.	Evaluating the Six Trigonometric Functions Modeling with Periodic Functions Reciprocal Trigonometric Functions Right Triangle Trigonometry The Unit Circle
P.3.	Relations and geometric reasoning. The student uses the process standards in mathematics to model and make connections between algebraic and geometric relations. The student is expected to:	
P.3 (A)	Graph a set of parametric equations.	Vectors and Parametric Equations
P.3 (B)	Convert parametric equations into rectangular relations and convert rectangular relations into parametric equations.	Vectors and Parametric Equations
P.3 (C)	Use parametric equations to model and solve mathematical and real-world problems.	Vectors and Parametric Equations
P.3 (D)	Graph points in the polar coordinate system and convert between rectangular coordinates and polar coordinates.	Polar Coordinates
P.3 (E)	Graph polar equations by plotting points and using technology.	Graphs of Polar Equations
P.3 (F)	Determine the conic section formed when a plane intersects a double-napped cone.	Equations of Hyperbolas (continued)
P.3 (G)	Make connections between the locus definition of conic sections and their equations in rectangular coordinates.	Circles and Parabolas Equations of Ellipses Equations of Hyperbolas Equations of Hyperbolas (continued)

Standard ID	Standard Text	Edgenuity Lesson Name
P.3 (H)	Use the characteristics of an ellipse to write the equation of an ellipse with center (h, k) .	Equations of Ellipses
P.3 (I)	Use the characteristics of a hyperbola to write the equation of a hyperbola with center (h, k) .	Equations of Hyperbolas Equations of Hyperbolas (continued)
P.4.	Number and measure. The student uses process standards in mathematics to apply appropriate techniques, tools, and formulas to calculate measures in mathematical and real-world problems. The student is expected to:	
P.4 (A)	Determine the relationship between the unit circle and the definition of a periodic function to evaluate trigonometric functions in mathematical and real-world problems.	Evaluating the Six Trigonometric Functions
P.4 (B)	Describe the relationship between degree and radian measure on the unit circle.	Radian Measure The Unit Circle
P.4 (C)	Represent angles in radians or degrees based on the concept of rotation and find the measure of reference angles and angles in standard position.	Angles in Standard Position Graphs of Polar Equations Polar Coordinates Radian Measure The Unit Circle
P.4 (D)	Represent angles in radians or degrees based on the concept of rotation in mathematical and real-world problems, including linear and angular velocity.	Angles in Standard Position Linear and Angular Velocity
P.4 (E)	Determine the value of trigonometric ratios of angles and solve problems involving trigonometric ratios in mathematical and real-world problems.	Evaluating the Six Trigonometric Functions Reciprocal Trigonometric Functions Right Triangle Trigonometry The Unit Circle
P.4 (F)	Use trigonometry in mathematical and real-world problems, including directional bearing.	Evaluating the Six Trigonometric Functions Graphs of Polar Equations Law of Cosines

Standard ID	Standard Text	Edgenuity Lesson Name
P.4 (F)	Use trigonometry in mathematical and real-world problems, including directional bearing. <i>(cont'd)</i>	Law of Sines Linear and Angular Velocity Modeling with Periodic Functions Polar Coordinates Reciprocal Trigonometric Functions Right Triangle Trigonometry The Unit Circle
P.4 (G)	Use the Law of Sines in mathematical and real-world problems.	Law of Sines
P.4 (H)	Use the Law of Cosines in mathematical and real-world problems.	Law of Cosines
P.4 (I)	Use vectors to model situations involving magnitude and direction.	Algebraic Vectors Dot Products of Vectors Geometric Vectors Vectors in Three-Dimensional Space
P.4 (J)	Represent the addition of vectors and the multiplication of a vector by a scalar geometrically and symbolically.	Algebraic Vectors Geometric Vectors
P.4 (K)	Apply vector addition and multiplication of a vector by a scalar in mathematical and real-world problems.	Algebraic Vectors Geometric Vectors
P.5.	Algebraic reasoning. The student uses process standards in mathematics to evaluate expressions, describe patterns, formulate models, and solve equations and inequalities using properties, procedures, or algorithms. The student is expected to:	
P.5 (A)	Evaluate finite sums and geometric series, when possible, written in sigma notation.	Arithmetic Sequences and Series Convergent and Divergent Series Geometric Sequences and Series
P.5 (B)	Represent arithmetic sequences and geometric sequences using recursive formulas.	Arithmetic Sequences and Series Geometric Sequences and Series
P.5 (C)	Calculate the n th term and the n th partial sum of an arithmetic series in mathematical and real-world problems.	Arithmetic Sequences and Series Convergent and Divergent Series Sigma Notation and the n th Term Page 7 of 9

Standard ID	Standard Text	Edgenuity Lesson Name
P.5 (D)	Represent arithmetic series and geometric series using sigma notation.	Sigma Notation and the nth Term
P.5 (E)	Calculate the nth term of a geometric series, the nth partial sum of a geometric series, and sum of an infinite geometric series when it exists.	Convergent and Divergent Series Geometric Sequences and Series Infinite Sequences and Series
P.5 (F)	Apply the Binomial Theorem for the expansion of $(a + b)^n$ in powers of a and b for a positive integer n, where a and b are any numbers.	The Binomial Theorem
P.5 (G)	Use the properties of logarithms to evaluate or transform logarithmic expressions.	Properties and Laws of Logarithms
P.5 (H)	Generate and solve logarithmic equations in mathematical and real-world problems.	Solving Exponential and Logarithmic Equations
P.5 (I)	Generate and solve exponential equations in mathematical and real-world problems.	Solving Exponential and Logarithmic Equations
P.5 (J)	Solve polynomial equations with real coefficients by applying a variety of techniques in mathematical and real-world problems.	Applications of Equations Solving Equations Graphically Solving Polynomial Equations using Technology Solving Quadratic Equations Algebraically
P.5 (K)	Solve polynomial inequalities with real coefficients by applying a variety of techniques and write the solution set of the polynomial inequality in interval notation in mathematical and real-world problems.	Solving Polynomial Equations using Technology
P.5 (L)	Solve rational inequalities with real coefficients by applying a variety of techniques and write the solution set of the rational inequality in interval notation in mathematical and real-world problems.	Rational Inequalities

Standard ID	Standard Text	Edgenuity Lesson Name
P.5 (M)	Use trigonometric identities such as reciprocal, quotient, Pythagorean, co-functions, even/odd, and sum and difference identities for cosine and sine to simplify trigonometric expressions.	Basic Trigonometric Identities Double-Angle and Half-Angle Identities Sum and Difference Identities Verifying Trigonometric Identities
P.5 (N)	generate and solve trigonometric equations in mathematical and real-world problems.	Modeling with Periodic Functions Solving Trigonometric Equations