

Pre-Calculus

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Students who are ready for *PreCalculus* have successfully completed *Algebra I*, *Geometry*, and *Algebra II*.

Concepts and skills learned in the Pre-Calculus curriculum:

- Pythagorean Theorem
- Special Right Triangles (30° - 60° - 90° and 45° - 45° - 90°)
- Trigonometric Ratios
- Inverse Trigonometric Ratios
- Interpreting the Trigonometry Tables
- Using the Trig. Table to Solve for the Unknown
- Using a Calculator and Arc Functions
- Angles of Elevation and Depression
- Angles less than 0°
- Angles greater than 360°
- Reference Angles
- Cofunctions
- Negative Angle Relationships
- Proving Trigonometric Identities
- Sum and Difference Identities
- Double-Angle and Half-Angle Identities
- Law of Sines
- Law of Cosines
- Ambiguity in the Law of Sines
- Radian Measure
- Polar Coordinates and Rectangular Coordinates
- Polar Equations and Polar Graphs
- Vectors
- Functions: Relation, Domain, and Range
- Graphing the Sine and Cosine Functions
- Graphing the Secant and Cosecant Functions
- Graphing the Tangent and Cotangent Functions
- Logarithms
- Arithmetic Sequences and Series
- Geometric Sequences and Series
- Proof of $\cos(A - B) = \cos A \cos B + \sin A \sin B$
- Finding the Area of a Triangle Trigonometrically
- Interpolation
- Navigation
- Natural Logarithms
- Equations with Absolute Value
- Equations with Radicals
- Inequalities with Absolute Value
- Inequalities with Radicals
- Limits