Pre-Calculus 12 Learning Targets

Learning Target	Description
$\mathbf{1-1}$	• Explore Arithmetic Sequence and Series and make connections to linear equations • Using sequence and series to solve contextualized problems
$\mathbf{1-2}$	• Explore Geometric Sequence and Series and make connections to non-linear equations • Using sequence and series to solve contextualized problems
$\mathbf{2-1}$	• Understanding the difference between a relation and a function • Communicating domain and range both numerically and graphically
$\mathbf{2-2}$	• Explore and discuss arithmetic combinations of functions • Explore and discuss composite functions
$\mathbf{2-3}$	• Identifying mother graphs of a number of functions • Using transformation to understanding the effect on the original graph • Connecting inverse functions to their originals and discussing domain and range
$\mathbf{3-1}$	• Understanding behaviour of functions based on degree, coefficients, constants and zeros • Graphing polynomials and determining equations of polynomial graphs
$\mathbf{3-2}$	• Understanding division of polynomials using factoring, long division, and synthetic division • Discuss and apply the remainder, rational root, and factor theorems • Interpreting and solving contextualized applications involving polynomials
$\mathbf{4-1}$	• Developing an understanding of radical expressions and their graphs (Domain and Range) • Graphing and solving radical equations • Identifying properties of solution and no solutions scenarios
$\mathbf{4-2}$	• Exploring rational functions, including asymptotes, holes, and intercepts • Understanding how to graph rational functions
$\mathbf{5-1}$	• Discuss and explore basic properties of exponential functions and their graphs • Discuss and explore basic properties of logarithmic functions and their graphs
$\mathbf{5-2}$	• Understanding the properties of logarithms and how they are used to simplify equations • Make connections between exponential and logarithmic functions • Apply the principles of exponential and logarithmic functions to contextualized scenarios
$\mathbf{6-1}$	• Understanding angles (terminal, co-terminal, reference) and their relationship to radians • Solving acute angle functions using trigonometric principles (All trigonometric ratios)
$\mathbf{6-2}$	• Connecting Reference angles with their Special Angles ratios and Quadrant locations • Explore the connection between Special Angles and the Unit circle
$\mathbf{6-3}$	• Graphing basic trigonometric functions (Period, Amplitude, Shifts, Displacements) • Understanding how trigonometric (periodic) functions relate to contextualized scenarios
$\mathbf{7-1}$	• Explore an introduction to basic trigonometric identities and equations • Proving trigonometric identities
$\mathbf{7-2}$	• Solving trigonometric equations and identifying extraneous solutions • Understanding double angle and Sum and Difference Identities