**Precalculus Curriculum Overview 2018 - 2019**

**Ms. Gladstone**

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A Period

**Course Website:** [www.ms-gladstone-math.weebly.com](file:///C%3A%5CUsers%5CMiriam%5CALL%5CHopkins%20Academy%5Cwww.ms-gladstone-math.weebly.com)

**Course Overview:** Welcome to Precalculus. This year we will investigate graphing functions and relations, polynomial equations, exponential and logarithmic functions, and conics. We will also introduce trigonometry.

**Required Text:** Larson, R., et al. *Algebra 2*. McDougal Littell, 2004.

**Curriculum Overview:**

First Quarter

Unit I: Functions

 What is a Function?

 Graphing Functions

 Linear Functions

 Linear Equations and Inequalities

 Linear Systems

Unit II: Quadratic Functions

 Forms of Quadratic Functions

 Graphing Quadratic Functions

 Transformations

 Solving Quadratic Functions

 Applications of Quadratic Functions

Unit III: Polynomial and Rational Functions

 Polynomial Expressions

Dividing Polynomials

 Solving Polynomial Equations

 Graphing Polynomial Functions

 Rational Functions

Arithmetic of Complex Numbers

 Powers and Roots of Complex Numbers

Second Quarter

Unit IV: Exponential and Logarithmic Functions

 Exponents and Radicals

 Exponential Functions

 Geometric Sequences

 Introductions to Logarithms

 Applications of Logarithms

Unit V: Conic Sections

 Introduction to Conic Sections

 Ellipses

 Hyperbolas

 Parabolas

Third Quarter

Unit VI: Right Triangles

 Right Triangles

 Angles and Radians

 Trigonometric Ratios and the Unit Circle

Unit VII: Trigonometric Functions

 Graphs of Sine and Cosine

 Graphs of Other Functions

 Simple Transformations of Sinusoids

Unit VIII: Working with Trigonometric Functions

 Inverse Trigonometric Functions

 Solving Trigonometric Equations

Fourth Quarter

Unit IX: Trigonometric Identities

 Trigonometric Identities

 Applications of Identities

Unit X: Applications of Trigonometry

 Law of Cosines

 Law of Sines

Unit XI: Sequences and Series

 Arithmetic Sequences

 Geometric Sequences and Series

Note: This curriculum is our goal, but the order of units, speed at which we progress, and ultimately the content that we get through this year is subject to change.