**Precalculus Curriculum Overview 2018 - 2019**

**Ms. Gladstone**

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A Period

**Course Website:** [www.ms-gladstone-math.weebly.com](file:///C:\Users\Miriam\ALL\Hopkins%20Academy\www.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.