Pacing Guide

Unit 1: Review of Functions and Quadratics

1.1 Introduction to Functions
1.2 Domain of a Function and Interval Notation
1.3 Range of a Function and Interval Notation
1.4 Composition of Functions
1.5 Inverse Functions
1.6 Introduction to Quadratic Functions
1.7 Graphing Quadratic Functions – Vertex Form
1.8 Solving Quadratic Equations with Square Roots
1.9 Solving Quadratics by Completing the Square
1.10 Converting to Vertex Form by Completing the Square
1.11 Graphing Quadratic Inequalities
Unit 1 Review
Unit 1 Test

Unit 1 Completion – 13 Days

Unit 2: Polynomials

2.1 Introduction to Polynomials
2.2 Finding a Polynomial Given the Roots
2.3 Dividing Polynomials Using Long Division
2.4 Dividing Polynomials Using Synthetic Division
2.5 Factor and Remainder Theorem
2.6 Location Principle and Multiplicity of Zeros

2.7 Rational Root Theorem

2.8 Complex Conjugate Root Theorem

2.9 Fundamental Theorem of Algebra

2.10 Graphing Polynomials

Unit 2 Review

Unit 2 Test

Unit 2 Completion – 12 Days

Unit 3: Rational Functions

3.1 Introduction to Rational Functions

3.2 Graphing Rational Functions

3.3 Graphing Rational Functions Part II

3.4 Slant Asymptotes

3.5 Parabolic Asymptotes

3.6 Multiplying and Dividing Rational Expressions

3.7 Solving Rational Equations

Unit 3 Review

Unit 3 Test

Unit 3 Completion – 9 Days

Unit 4: Exponential and Logarithmic Functions

4.1 Introduction to Exponential and Logarithmic Properties

4.2 Graphing Exponential Functions

4.3 Logarithmic Functions

4.4 Properties of Logarithms

4.5 The Exponential-Logarithmic Inverse Property

Unit 4 Completion – 11 Days

Unit 5: Vectors

Unit 5 Completion – 10 Days

Unit 6: Matrices

Unit 6 Completion – 11 Days

Unit 7: Complex Numbers

Unit 7 Completion – 10 Days

Unit 8: Trigonometric Functions

8.4 Special Triangles and Exact Ratios
8.5 Graphing the Sine and Cosine Functions
8.6 Graphing the Tangent and Cotangent Functions
8.7 Graphing the Secant and Cosecant Functions
8.8 Applications of Trigonometric Functions
8.9 Modelling Trigonometric Functions
8.10 Inverse Trigonometric Functions
Unit 8 Review
Unit 8 Test

Unit 8 Completion – 12 Days

Pre-Calculus Midterm

Midterm Exam Review – 3 Days
Midterm Exam – 1 Day

Midterm Completion – 4 Days

Unit 9: Analytic Trigonometry

9.1 Introduction to Analytic Trigonometry
9.2 Cofunction, Periodicity and Negative Angle Identities
9.3 Addition and Subtraction Identities
9.4 Double and Half-Angle Identities
9.5 Product to Sum Identities
9.6 Solving Trigonometric Equations Algebraically
9.7 Solving Trigonometric Equations with Identities
Unit 9 Review

Unit 9 Test

Unit 9 Completion – 9 Days

Unit 10: Conic Sections

10.1 Introduction to Conic Sections
10.2 Parabolas
10.3 Parabolas Part II
10.4 Circles
10.5 Circles Part II
10.6 Ellipses
10.7 Ellipses Part II
10.8 Hyperbolas
10.9 Hyperbolas Part II
10.10 Solving Non-Linear Systems
10.11 Parametric Equations
10.12 Parametric Equations of Conic Sections
Unit 10 Review
Unit 10 Test

Unit 10 Completion – 14 Days

Unit 11: Polar Coordinates

11.1 Introduction to Polar Coordinates
11.2 Converting Rectangular to Polar Coordinates
11.3 Converting Polar to Rectangular Coordinates
11.4 Polar Equations and Graphs
11.5 Eccentricity of Conic Sections

Unit 11 Completion – 11 Days

Unit 12: Sequences and Series

Unit 12 Completion – 12 Days

Unit 13: Introduction to Calculus

13.3 Limits Involving Infinity

13.4 Slope of a Tangent Line

13.5 The Power Rule

13.6 The Product and Quotient Rules

13.7 The Chain Rule

13.8 Applications of Derivatives

13.9 Antiderivatives

13.10 Integrals and the Area Under a Curve

Unit 13 Review

Unit 13 Test

Unit 13 Completion – 12 Days

Pre-Calculus Final Exam

Final Exam Review – 5 Days

Final Exam – 1 Day

Final Exam Completion – 6 Days

Note: One day is allotted for each lesson, unit test and unit review.

Total: 156 Days

31.2 five-day weeks or 39 four-day weeks