Thinkwell's Homeschool Precalculus
Course Lesson Plan: 36 weeks

Welcome to Thinkwell's Homeschool Precalculus! We're thrilled that you've decided to make us part of your homeschool curriculum. This lesson plan is meant to be a guide for you and your homeschool student. Each day, you'll either

- Complete the core materials for between 1 and 4 topics (the core materials for each topic include 1 video lecture with notes and a 12-question Thinkwell Exercise, as well as Exercise Examples and Sample Problems with Solutions),
- prepare for an assessment (take a practice quiz, practice test, or practice exam), or
- take an assessment (quiz, test, or exam).

If you follow our day-by-day schedule, you'll complete the full curriculum for the course in 36 weeks. Feel free to modify and amend the plan as it best works for you. And, as always, please let us know what we can do to help get you up and running with Thinkwell's Homeschool Precalculus!

Week 1 Chapter 1: Basic Algebra Review	
Assignments	Notes
Week 1, Day 1 ☐ 1.1.1 The Top Ten List of Mistakes (5:01) ☐ 1.2.1 Concepts of Inequality (8:26) ☐ 1.2.2 Inequalities and Interval Notation (10:39)	
Week 1, Day 2 ☐ 1.3.1 Properties of Absolute Value (6:41) ☐ 1.3.2 Evaluating Absolute Value Expressions (12:10) ☐ 1.4.1 An Introduction to Exponents (1:36)	
Week 1, Day 3 ☐ 1.4.2 Evaluating Exponential Expressions (4:19) ☐ 1.4.3 Applying the Rules of Exponents (10:11) ☐ 1.4.4 Evaluating Expressions with Negative Exponents (9:32)	
Week 1, Day 4 ☐ 1.5.1 Converting between Decimal and Scientific Notation (6:54) ☐ 1.5.2 Converting Rational Exponents and Radicals (14:01) ☐ Practice Quiz 1.1-1.5	
Week 1, Day 5 ☐ Quiz 1.1-1.5	

Week 2	
Chapter 1: Basic Algebra Review	
Assignments	Notes
Week 2, Day 1 ☐ 1.6.1 Simplifying Radical Expressions (3:21) ☐ 1.6.2 Simplifying Radical Expressions with Variables (8:45) ☐ 1.6.3 Rationalizing Denominators (12:22)	
Week 2, Day 2 ☐ 1.7.1 Determining Components and Degree (9:31) ☐ 1.7.2 Adding, Subtracting, and Multiplying Polynomials (7:25) ☐ 1.7.3 Multiplying Big Products (8:31)	
Week 2, Day 3 ☐ 1.7.4 Using Special Products (11:28) ☐ 1.8.1 Factoring Using the Greatest Common Factor (5:45) ☐ 1.8.2 Factoring by Grouping (7:21)	
Week 2, Day 4 ☐ 1.8.3 Factoring Trinomials Completely (15:22) ☐ 1.8.4 Factoring Trinomials: The Grouping Method (14:16)	
Week 2, Day 5 ☐ 1.9.1 Factoring Perfect Square Trinomials (5:12) ☐ 1.9.2 Factoring the Difference of Two Squares (4:09) ☐ 1.9.3 Factoring the Sums and Differences of Cubes (8:53)	

Week 3	
Chapter 1: Basic Algebra Review	
Assignments	Notes
Week 3, Day 1 ☐ 1.9.4 Factoring by Any Method (13:12) ☐ Practice Quiz 1.6-1.9	
Week 3, Day 2 ☐ Quiz 1.6-1.9	
Week 3, Day 3 ☐ 1.10.1 Rational Expressions and Domain (5:07) ☐ 1.10.2 Working with Fractions (6:06) ☐ 1.10.3 Writing Rational Expressions in Lowest Terms (9:07)	
Week 3, Day 4 ☐ 1.11.1 Multiplying and Dividing Rational Expressions (9:37) ☐ 1.11.2 Adding and Subtracting Rational Expressions (11:28) ☐ 1.11.3 Rewriting Complex Fractions (8:56)	
Week 3, Day 5 ☐ 1.12.1 Introducing and Writing Complex Numbers (4:42) ☐ 1.12.2 Rewriting Powers of I (5:59) ☐ 1.12.3 Adding and Subtracting Complex Numbers (2:10)	

Week 4 Chapter 1: Basic Algebra Review Chapter 1 Test Chapter 2: Equations and Inequalities	
Assignments	Notes
Week 4, Day 1 ☐ 1.12.4 Multiplying Complex Numbers (4:43) ☐ 1.12.5 Dividing Complex Numbers (8:57) ☐ Practice Quiz 1.10-1.12	
Week 4, Day 2 ☐ Quiz 1.10-1.12	
Week 4, Day 3 ☐ Chapter 1 Practice Test	
Week 4, Day 4 ☐ Chapter 1 Test	Chapter 1 Test Score: _____
Week 4, Day 5 ☐ 2.1.1 An Introduction to Solving Equations (9:28) ☐ 2.1.2 Solving a Linear Equation (7:56) ☐ 2.1.3 Solving a Linear Equation with Rationals (14:38)	

Week 5 Chapter 2: Equations and Inequalities	
Assignments	Notes
Week 5, Day 1 ☐ 2.1.4 Solving a Linear Equation That Has Restrictions (5:44) ☐ 2.2.1 An Introduction to Solving Word Problems (1:56) ☐ 2.2.2 Solving for Perimeter (5:19) ☐ 2.2.3 Solving a Linear Geometry Problem (6:06)	
Week 5, Day 2 ☐ 2.2.4 Solving for Consecutive Numbers (6:18) ☐ 2.2.5 Solving to Find the Average (4:13) ☐ 2.3.1 Solving for Constant Velocity (7:58)	
Week 5, Day 3 ☐ 2.3.2 Solving a Problem about Work (7:08) ☐ 2.3.3 Solving a Mixture Problem (10:05) ☐ 2.3.4 Solving an Investment Problem (9:10)	
Week 5, Day 4 ☐ 2.3.5 Solving Business Problems (4:19) ☐ Practice Quiz 2.1-2.3	
Week 5, Day 5 ☐ Quiz 2.1-2.3	

Week 6 Chapter 2: Equations and Inequalities	
Assignments	Notes
Week 6, Day 1 ☐ 2.4.1 Solving Quadratics by Factoring (11:49) ☐ 2.4.2 Solving Quadratics by Completing the Square (8:47) ☐ 2.4.3 Completing the Square: Another Example (4:39)	
Week 6, Day 2 ☐ 2.5.1 Proving the Quadratic Formula (7:14) ☐ 2.5.2 Using the Quadratic Formula (9:23) ☐ 2.5.3 Predicting the Type of Solutions Using the Discriminant (8:41)	
Week 6, Day 3 ☐ 2.6.1 Solving for a Squared Variable (5:58) ☐ 2.6.2 Finding Real Number Restrictions (6:24) ☐ 2.6.3 Solving Fancy Quadratics (7:00)	
Week 6, Day 4 ☐ 2.7.1 An Introduction to Word Problems with Quadratics (0:42) ☐ 2.7.2 Solving a Quadratic Geometry Problem (8:55) ☐ 2.7.3 Solving with the Pythagorean Theorem (8:16)	
Week 6, Day 5 ☐ 2.7.4 The Pythagorean Theorem: Another Example (5:54) ☐ 2.8.1 Solving a Motion Problem (19:13) ☐ 2.8.2 Solving a Projectile Problem (9:07)	

Week 7 Chapter 2: Equations and Inequalities	
Assignments	Notes
Week 7, Day 1 ☐ 2.8.3 Solving Other Problems (9:04) ☐ Practice Quiz 2.4-2.8	
Week 7, Day 2 ☐ Quiz 2.4-2.8	
Week 7, Day 3 ☐ 2.9.1 Determining Extraneous Roots (3:53) ☐ 2.9.2 Solving an Equation Containing a Radical (12:18) ☐ 2.9.3 Solving an Equation with Two Radicals (11:21) ☐ 2.9.4 Solving an Equation with Rational Exponents (13:30)	
Week 7, Day 4 ☐ 2.10.1 An Introduction to Variation (5:56) ☐ 2.10.2 Direct Proportion (5:02) ☐ 2.10.3 Inverse Proportion (4:57)	
Week 7, Day 5 ☐ 2.11.1 An Introduction to Solving Inequalities (8:29) ☐ 2.11.2 Solving Compound Inequalities (8:44) ☐ 2.11.3 More on Compound Inequalities (9:15)	

Week 8	
Chapter 2: Equations and Inequalities	
Assignments	Notes
Week 8, Day 1 ☐ 2.11.4 Solving Word Problems Involving Inequalities (6:19) ☐ Practice Quiz 2.9-2.11	
Week 8, Day 2 ☐ Quiz 2.9-2.11	
Week 8, Day 3 ☐ 2.12.1 Solving Quadratic Inequalities (9:54) ☐ 2.12.2 Solving Quadratic Inequalities: Another Example (8:31)	
Week 8, Day 4 ☐ 2.13.1 Solving Rational Inequalities (17:55) ☐ 2.13.2 Solving Rational Inequalities: Another Example (8:49) ☐ 2.13.3 Determining the Domains of Expressions with Radicals (6:46)	
Week 8, Day 5 ☐ 2.14.1 Matching Number Lines with Absolute Values (10:49) ☐ 2.14.2 Solving Absolute Value Equations (7:21) ☐ 2.14.3 Solving Equations with Two Absolute Value Expressions (10:15)	

Week 9	
Chapter 2: Equations and Inequalities Chapter 2 Test Chapter 3: Relations and Functions	
Assignments	Notes
Week 9, Day 1 ☐ 2.14.4 Solving Absolute Value Inequalities (9:12) ☐ 2.14.5 Solving Absolute Value Inequalities: More Examples (6:11) ☐ Practice Quiz 2.12-2.14	
Week 9, Day 2 ☐ Quiz 2.12-2.14	
Week 9, Day 3 ☐ Chapter 2 Practice Test	
Week 9, Day 4 ☐ Chapter 2 Test	Chapter 2 Test Score: _____
Week 9, Day 5 ☐ 3.1.1 Using the Cartesian System (7:31) ☐ 3.1.2 Thinking Visually (2:55) ☐ 3.2.1 Finding the Distance between Two Points (10:57) ☐ 3.2.2 Finding the Second Endpoint of a Segment (5:40)	

Week 10	
Chapter 3: Relations and Functions	
Assignments	Notes
Week 10, Day 1 ☐ 3.3.1 Collinearity and Distance (8:33) ☐ 3.3.2 Triangles (5:26) ☐ 3.4.1 Finding the Center-Radius Form of the Equation of a Circle (8:49)	
Week 10, Day 2 ☐ 3.4.2 Decoding the Circle Formula (4:31) ☐ 3.4.3 Finding the Center and Radius of a Circle (9:37) ☐ 3.4.4 Solving Word Problems Involving Circles (11:00)	
Week 10, Day 3 ☐ 3.5.1 Graphing Equations by Locating Points (13:38) ☐ 3.5.2 Finding the x- and y-Intercepts of an Equation (13:13) ☐ Practice Quiz 3.1-3.5	
Week 10, Day 4 ☐ Quiz 3.1-3.5	
Week 10, Day 5 ☐ 3.6.1 Functions and the Vertical Line Test (7:07) ☐ 3.6.2 Identifying Functions (9:24) ☐ 3.6.3 Function Notation and Finding Function Values (8:53)	

Week 11	
Chapter 3: Relations and Functions	
Assignments	Notes
Week 11, Day 1 ☐ 3.7.1 Determining Intervals Over Which a Function Is Increasing (8:03) ☐ 3.7.2 Evaluating Piecewise-Defined Functions for Given Values (9:45) ☐ 3.7.3 Solving Word Problems Involving Functions (5:43)	
Week 11, Day 2 ☐ 3.8.1 Finding the Domain and Range of a Function (11:01) ☐ 3.8.2 Domain and Range: One Explicit Example (5:16) ☐ 3.8.3 Satisfying the Domain of a Function (12:13) ☐ Practice Quiz 3.6-3.8	
Week 11, Day 3 ☐ Quiz 3.6-3.8	
Week 11, Day 4 ☐ 3.9.1 An Introduction to Slope (3:16) ☐ 3.9.2 Finding the Slope of a Line Given Two Points (12:35) ☐ 3.9.3 Interpreting Slope from a Graph (3:56) ☐ 3.9.4 Graphing a Line Using Point and Slope (7:11)	
Week 11, Day 5 ☐ 3.10.1 Writing an Equation in Slope-Intercept Form (8:52) ☐ 3.10.2 Writing an Equation Given Two Points (6:31) ☐ 3.10.3 Writing an Equation in Point-Slope Form (5:43)	

Week 12	
Chapter 3: Relations and Functions	
Assignments	Notes
Week 12, Day 1 ☐ 3.10.4 Matching a Slope-Intercept Equation with Its Graph (8:57) ☐ 3.10.5 Slope for Parallel and Perpendicular Lines (9:52)	
Week 12, Day 2 ☐ 3.11.1 Constructing Linear Function Models of Data (6:17) ☐ 3.11.2 Linear Cost and Revenue Functions (9:18)	
Week 12, Day 3 ☐ 3.12.1 Graphing Some Important Functions (10:25) ☐ 3.12.2 Graphing Piecewise-Defined Functions (10:36) ☐ 3.12.3 Matching Equations with Their Graphs (11:11)	
Week 12, Day 4 ☐ 3.13.1 The Greatest Integer Function (8:58) ☐ 3.13.2 Graphing the Greatest Integer Function (6:59) ☐ Practice Quiz 3.9-3.13	
Week 12, Day 5 ☐ Quiz 3.9-3.13	

Week 13	
Chapter 3: Relations and Functions	
Assignments	Notes
Week 13, Day 1 ☐ 3.14.1 Deconstructing the Graph of a Quadratic Function (5:29) ☐ 3.14.2 Nice-Looking Parabolas (6:47) ☐ 3.14.3 Using Discriminants to Graph Parabolas (8:02) ☐ 3.14.4 Maximum Height in the Real World (8:15)	
Week 13, Day 2 ☐ 3.15.1 Finding the Vertex by Completing the Square (6:06) ☐ 3.15.2 Using the Vertex to Write the Quadratic Equation (9:09) ☐ 3.15.3 Finding the Maximum or Minimum of a Quadratic (6:58)	
Week 13, Day 3 ☐ 3.15.4 Graphing Parabolas (14:35) ☐ 3.16.1 Shifting Curves along Axes (4:17) ☐ 3.16.2 Shifting or Translating Curves along Axes (5:51)	
Week 13, Day 4 ☐ 3.16.3 Stretching a Graph (10:18) ☐ 3.16.4 Graphing Quadratics Using Patterns (3:18)	
Week 13, Day 5 ☐ 3.17.1 Determining Symmetry (11:15) ☐ 3.17.2 Reflections (6:27) ☐ 3.17.3 Reflecting Specific Functions (4:32)	

Week 14	
Chapter 3: Relations and Functions	
Chapter 3 Test	
Assignments	Notes
Week 14, Day 1	
☐ 3.18.1 Using Operations on Functions (5:43)	
☐ 3.18.2 Composite Functions (9:37)	
☐ 3.18.3 Components of Composite Functions (8:11)	
☐ 3.18.4 Finding Functions That Form a Given Composite (6:24)	
Week 14, Day 2	
☐ 3.18.5 Finding the Difference Quotient of a Function (4:21)	
☐ 3.18.6 Calculating the Average Rate of Change (6:48)	
☐ Practice Quiz 3.14-3.18	
Week 14, Day 3	
☐ Quiz 3.14-3.18	
Week 14, Day 4	
☐ Chapter 3 Practice Test	
Week 14, Day 5	Chapter 3 Test Score:
☐ Chapter 3 Test	_____

Week 15	
Chapter 4: Polynomial and Rational Functions	
Assignments	Notes
Week 15, Day 1	
☐ 4.1.1 Using Long Division with Polynomials (9:33)	
☐ 4.1.2 Long Division: Another Example (6:38)	
Week 15, Day 2	
☐ 4.2.1 Using Synthetic Division with Polynomials (7:59)	
☐ 4.2.2 More Synthetic Division (7:42)	
Week 15, Day 3	
☐ 4.3.1 The Remainder Theorem (8:52)	
☐ 4.3.2 More on the Remainder Theorem (6:08)	
☐ 4.4.1 The Factor Theorem and Its Uses (8:07)	
Week 15, Day 4	
☐ 4.4.2 Factoring a Polynomial Given a Zero (11:08)	
☐ 4.5.1 Presenting the Rational Zero Theorem (7:14)	
☐ 4.5.2 Considering Possible Solutions (7:44)	
Week 15, Day 5	
☐ 4.6.1 Finding Polynomials Given Zeros, Degree, and One Point (11:19)	
☐ 4.6.2 Finding all Zeros and Multiplicities of a Polynomial (8:09)	
☐ 4.6.3 Finding the Real Zeros for a Polynomial (8:16)	
☐ 4.6.4 Using Descartes' Rule of Signs (6:50)	

Week 16 Chapter 4: Polynomial and Rational Functions	
Assignments	Notes
Week 16, Day 1 ☐ 4.6.5 Finding the Zeros of a Polynomial from Start to Finish (6:05) ☐ 4.6.6 The Fundamental Theorem of Algebra (10:32) ☐ 4.6.7 The Conjugate Pair Theorem (7:14) ☐ Practice Quiz 4.1-4.6	
Week 16, Day 2 ☐ Quiz 4.1-4.6	
Week 16, Day 3 ☐ 4.7.1 Matching Graphs to Polynomial Functions (9:17) ☐ 4.7.2 Sketching the Graphs of Basic Polynomial Functions (11:15) ☐ 4.7.3 Graphing Polynomial Functions: Another Example (17:06)	
Week 16, Day 4 ☐ 4.8.1 Understanding Rational Functions (4:13) ☐ 4.8.2 Basic Rational Functions (9:21) ☐ 4.9.1 Vertical Asymptotes (7:51)	
Week 16, Day 5 ☐ 4.9.2 Horizontal Asymptotes (9:12) ☐ 4.9.3 Graphing Rational Functions (13:34) ☐ 4.9.4 Graphing Rational Functions: More Examples (8:25)	

Week 17 Chapter 4: Polynomial and Rational Functions Chapter 4 Test Chapter 5: Exponential and Logarithmic Functions	
Assignments	Notes
Week 17, Day 1 ☐ 4.9.5 Oblique Asymptotes (17:13) ☐ 4.9.6 Oblique Asymptotes: Another Example (12:33) ☐ Practice Quiz 4.7-4.9	
Week 17, Day 2 ☐ Quiz 4.7-4.9	
Week 17, Day 3 ☐ Chapter 4 Practice Test	
Week 17, Day 4 ☐ Chapter 4 Test	Chapter 4 Test Score: _____
Week 17, Day 5 ☐ 5.1.1 Understanding Inverse Functions (8:42) ☐ 5.1.2 The Horizontal Line Test (3:58) ☐ 5.1.3 Are Two Functions Inverses of Each Other? (12:26) ☐ 5.1.4 Graphing the Inverse (6:11)	

Week 18	
Chapter 5: Exponential and Logarithmic Functions	
Assignments	Notes
Week 18, Day 1 ☐ 5.2.1 Finding the Inverse of a Function (3:39) ☐ 5.2.2 Finding the Inverse of a Function with Higher Powers (3:08) ☐ 5.3.1 An Introduction to Exponential Functions (14:06)	
Week 18, Day 2 ☐ 5.3.2 Graphing Exponential Functions: Useful Patterns (8:55) ☐ 5.3.3 Graphing Exponential Functions: More Examples (7:12) ☐ 5.4.1 Using Properties of Exponents to Solve Exponential Equations (6:55)	
Week 18, Day 3 ☐ 5.4.2 Finding Present Value and Future Value (8:39) ☐ 5.4.3 Finding an Interest Rate to Match Given Goals (4:11) ☐ Practice Quiz 5.1-5.4	
Week 18, Day 4 ☐ Quiz 5.1-5.4	
Week 18, Day 5 ☐ 5.5.1 e (6:46) ☐ 5.5.2 Applying Exponential Functions (4:30) ☐ 5.6.1 An Introduction to Logarithmic Functions (7:19) ☐ 5.6.2 Converting between Exponential and Logarithmic Functions (5:44)	

Week 19	
Chapter 5: Exponential and Logarithmic Functions	
Assignments	Notes
Week 19, Day 1 ☐ 5.7.1 Finding the Value of a Logarithmic Function (6:43) ☐ 5.7.2 Solving for x in Logarithmic Equations (6:53) ☐ 5.7.3 Graphing Logarithmic Functions (10:05) ☐ 5.7.4 Matching Logarithmic Functions with Their Graphs (8:48)	
Week 19, Day 2 ☐ 5.8.1 Properties of Logarithms (8:51) ☐ 5.8.2 Expanding a Logarithmic Expression Using Properties (10:40) ☐ 5.8.3 Combining Logarithmic Expressions (9:16)	
Week 19, Day 3 ☐ 5.9.1 Evaluating Logarithmic Functions Using a Calculator (5:13) ☐ 5.9.2 Using the Change of Base Formula (9:27) ☐ Practice Quiz 5.5-5.9	
Week 19, Day 4 ☐ Quiz 5.5-5.9	
Week 19, Day 5 ☐ 5.10.1 The Richter Scale (3:21) ☐ 5.10.2 The Distance Modulus Formula (5:05) ☐ 5.11.1 Solving Exponential Equations (12:00)	

Week 20	
Chapter 5: Exponential and Logarithmic Functions	
Assignments	Notes
Week 20, Day 1 ☐ 5.11.2 Solving Logarithmic Equations (12:49) ☐ 5.11.3 Solving Equations with Logarithmic Exponents (7:04) ☐ 5.12.1 Compound Interest (4:39)	
Week 20, Day 2 ☐ 5.12.2 Predicting Change (4:36) ☐ 5.13.1 An Introduction to Exponential Growth and Decay (5:34) ☐ 5.13.2 Half-Life (11:07)	
Week 20, Day 3 ☐ 5.13.3 Newton's Law of Cooling (10:03) ☐ 5.13.4 Continuously Compounded Interest (5:05) ☐ Practice Quiz 5.10-5.13	
Week 20, Day 4 ☐ Quiz 5.10-5.13	
Week 20, Day 5 ☐ Chapter 5 Practice Test	

Week 21	
Chapter 5 Test	
Midterm Exam	
Chapter 6: The Trigonometric Functions	
Assignments	Notes
Week 21, Day 1 ☐ Chapter 5 Test	Chapter 5 Test Score: _____
Week 21, Day 2 ☐ Practice Midterm Exam	
Week 21, Day 3 ☐ Practice Midterm Exam	
Week 21, Day 4 ☐ Midterm Exam	Midterm Exam Score: _____
Week 21, Day 5 ☐ 6.1.1 Finding the Quadrant in Which an Angle Lies (5:42) ☐ 6.1.2 Finding Coterminal Angles (3:39) ☐ 6.1.3 Finding the Complement and Supplement of an Angle (2:12)	

Week 22	
Chapter 6: The Trigonometric Functions	
Assignments	Notes
Week 22, Day 1 ☐ 6.1.4 Converting between Degrees and Radians (10:04) ☐ 6.1.5 Using the Arc Length Formula (7:23) ☐ 6.2.1 An Introduction to the Trigonometric Functions (12:43)	
Week 22, Day 2 ☐ 6.2.2 Evaluating Trigonometric Functions for an Angle in a Right Triangle (6:58) ☐ 6.2.3 Finding an Angle Given the Value of a Trigonometric Function (5:20) ☐ 6.2.4 Using Trigonometric Functions to Find Unknown Sides of Right Triangles (5:17)	
Week 22, Day 3 ☐ 6.2.5 Finding the Height of a Building (4:20) ☐ 6.3.1 Evaluating Trigonometric Functions for an Angle in the Coordinate Plane (15:01) ☐ 6.3.2 Evaluating Trigonometric Functions Using the Reference Angle (11:19)	
Week 22, Day 4 ☐ 6.3.3 Finding the Value of Trigonometric Functions Given Information about the Values of Other Trigonometric Functions (8:58) ☐ 6.3.4 Trigonometric Functions of Important Angles (9:37) ☐ Practice Quiz 6.1-6.3	
Week 22, Day 5 ☐ Quiz 6.1-6.3	

Week 23	
Chapter 6: The Trigonometric Functions	
Assignments	Notes
Week 23, Day 1 ☐ 6.4.1 An Introduction to the Graphs of Sine and Cosine Functions (10:13) ☐ 6.4.2 Graphing Sine or Cosine Functions with Different Coefficients (12:20) ☐ 6.4.3 Finding Maximum and Minimum Values and Zeros of Sine and Cosine (6:49)	
Week 23, Day 2 ☐ 6.4.4 Solving Word Problems Involving Sine or Cosine Functions (4:24) ☐ 6.5.1 Graphing Sine and Cosine Functions with Phase Shifts (7:20) ☐ 6.5.2 Fancy Graphing: Changes in Period, Amplitude, Vertical Shift, and Phase Shift (8:29)	
Week 23, Day 3 ☐ 6.6.1 Graphing the Tangent, Secant, Cosecant, and Cotangent Functions (13:19)	

Assignments	Notes
☐ 6.6.2 Fancy Graphing: Tangent, Secant, Cosecant, and Cotangent (11:22) ☐ 6.6.3 Identifying a Trigonometric Function from its Graph (4:57)	
Week 23, Day 4 ☐ 6.7.1 An Introduction to Inverse Trigonometric Functions (9:30) ☐ 6.7.2 Evaluating Inverse Trigonometric Functions (8:24) ☐ 6.7.3 Solving an Equation Involving an Inverse Trigonometric Function (4:49)	
Week 23, Day 5 ☐ 6.7.4 Evaluating the Composition of a Trigonometric Function and Its Inverse (9:09) ☐ 6.7.5 Applying Trigonometric Functions: Is He Speeding? (10:56) ☐ Practice Quiz 6.4-6.7	

Week 24 Chapter 6: The Trigonometric Functions Chapter 6 Test Chapter 7: Trigonometric Identities	
Assignments	Notes
Week 24, Day 1 ☐ Quiz 6.4-6.7	
Week 24, Day 2 ☐ Chapter 6 Practice Test	
Week 24, Day 3 ☐ Chapter 6 Test	Chapter 6 Test Score: _____
Week 24, Day 4 ☐ 7.1.1 Fundamental Trigonometric Identities (7:24) ☐ 7.1.2 Finding All Function Values (4:52) ☐ 7.2.1 Simplifying a Trigonometric Expression Using Trigonometric Identities (5:28)	
Week 24, Day 5 ☐ 7.2.2 Simplifying Trigonometric Expressions Involving Fractions (8:26) ☐ 7.2.3 Simplifying Products of Binomials Involving Trigonometric Functions (11:11) ☐ 7.2.4 Factoring Trigonometric Expressions (7:24)	

Week 25 Chapter 7: Trigonometric Identities	
Assignments	Notes
Week 25, Day 1 ☐ 7.2.5 Determining Whether a Trigonometric Function Is Odd, Even, or Neither (10:26) ☐ 7.3.1 Proving an Identity (10:08) ☐ 7.3.2 Proving an Identity: Other Examples (6:15)	

<u>Week 25, Day 2</u> ☐ 7.4.1 Solving Trigonometric Equations (9:08) ☐ 7.4.2 Solving Trigonometric Equations by Factoring (10:37) ☐ 7.4.3 Solving Trigonometric Equations with Coefficients in the Argument (21:20)	
<u>Week 25, Day 3</u> ☐ 7.4.4 Solving Trigonometric Equations Using the Quadratic Formula (14:55) ☐ 7.4.5 Solving Word Problems Involving Trigonometric Equations (8:33) ☐ Practice Quiz 7.1-7.4	
<u>Week 25, Day 4</u> ☐ Quiz 7.1-7.4	
<u>Week 25, Day 5</u> ☐ 7.5.1 Identities for Sums and Differences of Angles (9:00) ☐ 7.5.2 Using Sum and Difference Identities (3:12) ☐ 7.5.3 Using Sum and Difference Identities to Simplify an Expression (4:40)	

Week 26 Chapter 7: Trigonometric Identities Chapter 7 Test	
Assignments	Notes
<u>Week 26, Day 1</u> ☐ 7.6.1 Confirming a Double-Angle Identity (6:19) ☐ 7.6.2 Using Double-Angle Identities (6:46) ☐ 7.6.3 Solving Word Problems Involving Multiple-Angle Identities (8:42)	
<u>Week 26, Day 2</u> ☐ 7.7.1 Using a Cofunction Identity (9:26) ☐ 7.7.2 Using a Power-Reducing Identity (8:49) ☐ 7.7.3 Using Half-Angle Identities to Solve a Trigonometric Equation (7:13) ☐ Practice Quiz 7.5-7.7	
<u>Week 26, Day 3</u> ☐ Quiz 7.5-7.7	
<u>Week 26, Day 4</u> ☐ Chapter 7 Practice Test	
<u>Week 26, Day 5</u> ☐ Chapter 7 Test	Chapter 7 Test Score: _____

Week 27 Chapter 8: Applications of Trigonometry	
Assignments	Notes
<u>Week 27, Day 1</u> ☐ 8.1.1 The Law of Sines (9:04)	

☐ 8.1.2 Solving a Triangle Given Two Sides and One Angle (6:37)	
☐ 8.1.3 Solving a Triangle (SAS): Another Example (12:18)	
Week 27, Day 2	
☐ 8.1.4 The Law of Sines: An Application (6:12)	
☐ 8.2.1 The Law of Cosines (5:38)	
☐ 8.2.2 The Law of Cosines (SSS) (7:05)	
Week 27, Day 3	
☐ 8.2.3 The Law of Cosines (SAS): An Application (5:44)	
☐ 8.2.4 Heron's Formula (7:23)	
☐ 8.3.1 An Introduction to Vectors (7:55)	
Week 27, Day 4	
☐ 8.3.2 Finding the Magnitude and Direction of a Vector (6:43)	
☐ 8.3.3 Vector Addition and Scalar Multiplication (9:26)	
☐ 8.4.1 Finding the Components of a Vector (7:32)	
Week 27, Day 5	
☐ 8.4.2 Finding a Unit Vector (5:25)	
☐ 8.4.3 Solving Word Problems Involving Velocity or Forces (5:52)	
☐ Practice Quiz 8.1-8.4	

Week 28	
Chapter 8: Applications of Trigonometry	
Assignments	Notes
Week 28, Day 1	
☐ Quiz 8.1-8.4	
Week 28, Day 2	
☐ 8.5.1 Graphing a Complex Number and Finding Its Absolute Value (6:04)	
☐ 8.5.2 Expressing a Complex Number in Trigonometric or Polar Form (6:54)	
☐ 8.5.3 Multiplying and Dividing Complex Numbers in Trigonometric or Polar Form (11:08)	
Week 28, Day 3	
☐ 8.6.1 Using DeMoivre's Theorem to Raise a Complex Number to a Power (8:17)	
☐ 8.6.2 Roots of Complex Numbers (10:42)	
☐ 8.6.3 More Roots of Complex Numbers (8:32)	
☐ 8.6.4 Roots of Unity (11:46)	
Week 28, Day 4	
☐ 8.7.1 An Introduction to Polar Coordinates (5:32)	
☐ 8.7.2 Converting between Polar and Rectangular Coordinates (8:38)	
☐ 8.7.3 Converting between Polar and Rectangular Equations (13:20)	
Week 28, Day 5	
☐ 8.7.4 Graphing Simple Polar Equations (10:07)	
☐ 8.7.5 Graphing Special Polar Equations (12:17)	
☐ Practice Quiz 8.5-8.7	

Week 29 Chapter 8: Applications of Trigonometry Chapter 8 Test Chapter 9: Systems of Equations and Matrices	
Assignments	Notes
Week 29, Day 1 ☐ Quiz 8.5-8.7	
Week 29, Day 2 ☐ Chapter 8 Practice Test	
Week 29, Day 3 ☐ Chapter 8 Test	Chapter 8 Test Score: _____
Week 29, Day 4 ☐ 9.1.1 An Introduction to Linear Systems (4:36) ☐ 9.1.2 Solving a System by Substitution (7:46) ☐ 9.1.3 Solving a System by Elimination (7:08)	
Week 29, Day 5 ☐ 9.2.1 An Introduction to Linear Systems in Three Variables (4:12) ☐ 9.2.2 Solving Linear Systems in Three Variables (6:58) ☐ 9.2.3 Solving Inconsistent Systems (7:24)	

Week 30 Chapter 9: Systems of Equations and Matrices	
Assignments	Notes
Week 30, Day 1 ☐ 9.2.4 Solving Dependent Systems (8:31) ☐ 9.2.5 Solving Systems with Two Equations (8:22)	
Week 30, Day 2 ☐ 9.3.1 Investments (5:16) ☐ 9.3.2 Solving with Partial Fractions (6:36) ☐ 9.3.3 Partial Fractions: Another Example (12:23)	
Week 30, Day 3 ☐ 9.4.1 Solving Nonlinear Systems Using Elimination (3:32) ☐ 9.4.2 Solving Nonlinear Systems by Substitution (3:35) ☐ Practice Quiz 9.1-9.4	
Week 30, Day 4 ☐ Quiz 9.1-9.4	
Week 30, Day 5 ☐ 9.5.1 An Introduction to Matrices (4:47) ☐ 9.5.2 The Arithmetic of Matrices (3:16) ☐ 9.5.3 Multiplying Matrices by a Scalar (3:11) ☐ 9.5.4 Multiplying Matrices (14:45)	

Week 31	
Chapter 9: Systems of Equations and Matrices	
Assignments	Notes
Week 31, Day 1 ☐ 9.6.1 Using the Gauss-Jordan Method (7:54) ☐ 9.6.2 Using Gauss-Jordan: Another Example (6:20) ☐ 9.6.3 Using the Gauss-Jordan Method with Three Equations (13:26)	
Week 31, Day 2 ☐ 9.6.4 Gaussian Elimination with Three Equations (5:59) ☐ 9.7.1 Evaluating 2 x 2 Determinants (6:49) ☐ 9.7.2 Evaluating n x n Determinants (8:59)	
Week 31, Day 3 ☐ 9.7.3 Evaluating a Determinant Using Elementary Row Operations (11:23) ☐ 9.7.4 Finding a Determinant using Expanding by Cofactors (9:23) ☐ 9.7.5 Applying Determinants (13:32)	
Week 31, Day 4 ☐ 9.8.1 Using Cramer's Rule (7:29) ☐ 9.8.2 Using Cramer's Rule in a 3x3 Matrix (8:54) ☐ Practice Quiz 9.5-9.8	
Week 31, Day 5 ☐ Quiz 9.5-9.8	

Week 32	
Chapter 9: Systems of Equations and Matrices	
Assignments	Notes
Week 32, Day 1 ☐ 9.9.1 An Introduction to Inverses (6:39) ☐ 9.9.2 Inverses: 2 x 2 Matrices (4:52) ☐ 9.9.3 Another Look at 2 x 2 Inverses (5:47)	
Week 32, Day 2 ☐ 9.9.4 Inverses: 3 x 3 Matrices (8:40) ☐ 9.9.5 Solving a System of Equations with Inverses (7:16)	
Week 32, Day 3 ☐ 9.10.1 An Introduction to Graphing Linear Inequalities (7:02) ☐ 9.10.2 Graphing Linear and Nonlinear Inequalities (9:04) ☐ 9.10.3 Graphing the Solution Set of a System of Inequalities (11:05)	
Week 32, Day 4 ☐ 9.11.1 Solving for Maxima-Minima (11:06) ☐ 9.11.2 Applying Linear Programming (12:17) ☐ Practice Quiz 9.9-9.11	
Week 32, Day 5 ☐ Quiz 9.9-9.11	

Week 33 Chapter 9 Test Chapter 10: Special Topics	
Assignments	Notes
Week 33, Day 1 ☐ Chapter 9 Practice Test	
Week 33, Day 2 ☐ Chapter 9 Test	Chapter 9 Test Score: _____
Week 33, Day 3 ☐ 10.1.1 An Introduction to Conic Sections (4:31) ☐ 10.1.2 An Introduction to Parabolas (4:59) ☐ 10.1.3 Determining Information about a Parabola from Its Equation (4:57) ☐ 10.1.4 Writing an Equation for a Parabola (5:08)	
Week 33, Day 4 ☐ 10.2.1 An Introduction to Ellipses (9:10) ☐ 10.2.2 Finding the Equation for an Ellipse (4:40) ☐ 10.2.3 Applying Ellipses: Satellites (8:08)	
Week 33, Day 5 ☐ 10.2.4 The Eccentricity of an Ellipse (10:15) ☐ 10.3.1 An Introduction to Hyperbolas (5:56) ☐ 10.3.2 Finding the Equation for a Hyperbola (5:07)	

Week 34 Chapter 10: Special Topics	
Assignments	Notes
Week 34, Day 1 ☐ 10.3.3 Applying Hyperbolas: Navigation (10:52) ☐ 10.4.1 Identifying a Conic (6:44) ☐ 10.4.2 Name That Conic (7:11)	
Week 34, Day 2 ☐ 10.4.3 Rotation of Axes (16:33) ☐ 10.4.4 Rotating Conics (16:15) ☐ Practice Quiz 10.1-10.4	
Week 34, Day 3 ☐ Quiz 10.1-10.4	
Week 34, Day 4 ☐ 10.5.1 Using the Binomial Theorem (6:08) ☐ 10.5.2 Binomial Coefficients (17:43) ☐ 10.5.3 Finding a Term of a Binomial Expansion (12:47)	
Week 34, Day 5 ☐ 10.6.1 General and Specific Terms (10:00) ☐ 10.6.2 Understanding Sequence Problems (8:22) ☐ 10.6.3 Series Notation, Definitions and Evaluating (7:55)	

Week 35	
Chapter 10: Special Topics	
Assignments	Notes
Week 35, Day 1 ☐ 10.6.4 Solving Problems Involving Arithmetic Sequences (7:12) ☐ 10.6.5 Finding the Sum of an Arithmetic Sequence (9:42) ☐ 10.6.6 Solving Problems Involving Geometric Sequences (10:51)	
Week 35, Day 2 ☐ 10.6.7 Finding the Sum of a Geometric Sequence (13:17) ☐ 10.7.1 Proving Formulas Using Mathematical Induction (4:40) ☐ 10.7.2 Examples of Induction (13:23)	
Week 35, Day 3 ☐ 10.8.1 Solving Problems Involving Permutations (8:35) ☐ 10.8.2 Solving Problems Involving Combinations (8:06) ☐ 10.8.3 Independent Events (9:34)	
Week 35, Day 4 ☐ 10.8.4 Inclusive and Exclusive Events (3:25) ☐ Practice Quiz 10.5-10.8	
Week 35, Day 5 ☐ Quiz 10.5-10.8	

Week 36	
Chapter 10 Test	
Final Exam	
Assignments	Notes
Week 36, Day 1 ☐ Chapter 10 Practice Test	
Week 36, Day 2 ☐ Chapter 10 Test	Chapter 10 Test Score: _____
Week 36, Day 3 ☐ Practice Final Exam	
Week 36, Day 4 ☐ Practice Final Exam	
Week 36, Day 5 ☐ Final Exam	Final Exam Score: _____