

## Thinkwell's Homeschool Calculus

### Course Lesson Plan: 38 weeks

Welcome to Thinkwell's Homeschool Calculus! 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 tackle a different topic and all the materials associated with that topic, such as video lectures, exercises, and notes. If you follow our day-by-day schedule, you'll complete the full curriculum for the course in 38 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 you get up and running with Thinkwell's Calculus!

<b>Week 1</b>	
Chapter 1: The Basics	
Assignments	Notes
<b><u>Week 1, Day 1</u></b> 1.1.1 An Introduction to Thinkwell's Calculus 1.1.2 The Two Questions of Calculus	
<b><u>Week 1, Day 2</u></b> 1.1.3 Average Rates of Change 1.1.4 How to Do Math	
<b><u>Week 1, Day 3</u></b> 1.2.1 Functions	
<b><u>Week 1, Day 4</u></b> 1.2.2 Graphing Lines 1.2.3 Parabolas	
<b><u>Week 1, Day 5</u></b> 1.2.4 Some Non-Euclidean Geometry	

<b>Week 2</b>	
Chapter 1 test Chapter 2: Limits	
Assignments	Notes
<b><u>Week 2, Day 1</u></b> Chapter 1 Practice Test	
<b><u>Week 2, Day 2</u></b> Chapter 1 Test	Chapter 1 Test Score: _____
<b><u>Week 2, Day 3</u></b> 2.1.1 Finding Rate of Change over an Interval 2.1.2 Finding Limits Graphically	
<b><u>Week 2, Day 4</u></b> 2.1.3 The Formal Definition of a Limit 2.1.4 The Limit Laws, Part I	
<b><u>Week 2, Day 5</u></b> 2.1.5 The Limit Laws, Part II 2.1.6 One-Sided Limits	

<b>Week 3</b> Chapter 2: Limits Chapter 2 Test	
Assignments	Notes
<b><u>Week 3, Day 1</u></b> 2.1.7 The Squeeze Theorem 2.1.8 Continuity and Discontinuity	
<b><u>Week 3, Day 2</u></b> 2.2.1 Evaluating Limits 2.2.2 Limits and Indeterminate Forms	
<b><u>Week 3, Day 3</u></b> 2.2.3 Two Techniques for Evaluating Limits 2.2.4 An Overview of Limits	
<b><u>Week 3, Day 4</u></b> Chapter 2 Practice Test	
<b><u>Week 3, Day 5</u></b> Chapter 2 Test	Chapter 2 Test Score: _____

<b>Week 4</b> Chapter 3: An Introduction to Derivatives	
Assignments	Notes
<b><u>Week 4, Day 1</u></b> 3.1.1 Rates of Change, Secants, and Tangents 3.1.2 Finding Instantaneous Velocity	
<b><u>Week 4, Day 2</u></b> 3.1.3 The Derivative 3.1.4 Differentiability	
<b><u>Week 4, Day 3</u></b> 3.2.1 The Slope of a Tangent Line 3.2.2 Instantaneous Rate	
<b><u>Week 4, Day 4</u></b> 3.2.3 The Equation of a Tangent Line 3.2.4 More on Instantaneous Rate	
<b><u>Week 4, Day 5</u></b> 3.3.1 The Derivative of the Reciprocal Function 3.3.2 The Derivative of the Square Root Function	

<b>Week 5</b> Chapter 3 Test Chapter 4: Computational Techniques	
Assignments	Notes
<b><u>Week 5, Day 1</u></b> Chapter 3 Practice Test	

<b>Week 5, Day 2</b> Chapter 3 Test	Chapter 3 Test Score: _____
<b>Week 5, Day 3</b> 4.1.1 A Shortcut for Finding Derivatives 4.1.2 A Quick Proof of the Power Rule	
<b>Week 5, Day 4</b> 4.1.3 Uses of the Power Rule 4.2.1 The Product Rule	
<b>Week 5, Day 5</b> 4.2.2 The Quotient Rule 4.3.1 An Introduction to the Chain Rule	

<b>Week 6</b> Chapter 4: Computational Techniques Chapter 4 Test Chapter 5: Special Functions	
Assignments	Notes
<b>Week 6, Day 1</b> 4.3.2 Using the Chain Rule 4.3.3 Combining Computational Techniques	
<b>Week 6, Day 2</b> Chapter 4 Practice Test	
<b>Week 6, Day 3</b> Chapter 4 Test	Chapter 4 Test Score: _____
<b>Week 6, Day 4</b> 5.1.1 A Review of Trigonometry 5.1.2 Graphing Trigonometric Functions	
<b>Week 6, Day 5</b> 5.1.3 The Derivatives of Trigonometric Functions 5.1.4 The Number Pi	

<b>Week 7</b> Chapter 5: Special Functions Chapter 5 Test	
Assignments	Notes
<b>Week 7, Day 1</b> 5.2.1 Graphing Exponential Functions 5.2.2 Derivatives of Exponential Functions	
<b>Week 7, Day 2</b> 5.2.3 The Music of Math 5.3.1 Evaluating Logarithmic Functions	
<b>Week 7, Day 3</b> 5.3.2 The Derivative of the Natural Log Function 5.3.3 Using the Derivative Rules with Transcendental Functions	

<b>Week 7, Day 4</b> Chapter 5 Practice Test	
<b>Week 7, Day 5</b> Chapter 5 Test	Chapter 5 Test Score: _____

<b>Week 8</b> Chapter 6: Implicit Differentiation Chapter 6 Test	
Assignments	Notes
<b>Week 8, Day 1</b> 6.1.1 An Introduction to Implicit Differentiation 6.1.2 Finding the Derivative Implicitly	
<b>Week 8, Day 2</b> 6.2.1 Using Implicit Differentiation	
<b>Week 8, Day 3</b> 6.2.2 Applying Implicit Differentiation	
<b>Week 8, Day 4</b> Chapter 6 Practice Test	
<b>Week 8, Day 5</b> Chapter 6 Test	Chapter 6 Test Score: _____

<b>Week 9</b> Chapter 7: Applications of Differentiation	
Assignments	Notes
<b>Week 9, Day 1</b> 7.1.1 Acceleration and the Derivative 7.1.2 Solving Word Problems Involving Distance and Velocity	
<b>Week 9, Day 2</b> 7.2.1 Higher-Order Derivatives and Linear Approximation 7.2.2 Using the Tangent Line Approximation Formula	
<b>Week 9, Day 3</b> 7.2.3 Newton's Method 7.3.1 The Connection Between Slope and Optimization	
<b>Week 9, Day 4</b> 7.3.2 The Fence Problem 7.3.3 The Box Problem	
<b>Week 9, Day 5</b> 7.3.4 The Can Problem 7.3.5 The Wire-Cutting Problem	

<b>Week 10</b> Chapter 7: Applications of Differentiation Chapter 7 Test	
Assignments	Notes
<b><u>Week 10, Day 1</u></b> 7.4.1 The Pebble Problem 7.4.2 The Ladder Problem	
<b><u>Week 10, Day 2</u></b> 7.4.3 The Baseball Problem	
<b><u>Week 10, Day 3</u></b> 7.4.4 The Blimp Problem 7.4.5 Math Anxiety	
<b><u>Week 10, Day 4</u></b> Chapter 7 Practice Test	
<b><u>Week 10, Day 5</u></b> Chapter 7 Test	Chapter 7 Test Score: _____

<b>Week 11</b> Chapter 8: Curve Sketching	
Assignments	Notes
<b><u>Week 11, Day 1</u></b> 8.1.1 An Introduction to Curve Sketching 8.1.2 Three Big Theorems	
<b><u>Week 11, Day 2</u></b> 8.1.3 Morale Moment 8.2.1 Critical Points	
<b><u>Week 11, Day 3</u></b> 8.2.2 Maximum and Minimum 8.2.3 Regions Where a Function Increases or Decreases	
<b><u>Week 11, Day 4</u></b> 8.2.4 The First Derivative Test 8.2.5 Math Magic	
<b><u>Week 11, Day 5</u></b> 8.3.1 Concavity and Inflection Points 8.3.2 Using the Second Derivative to Examine Concavity	

<b>Week 12</b> Chapter 8: Curve Sketching	
Assignments	Notes
<b><u>Week 12, Day 1</u></b> 8.3.3 The Möbius Band 8.4.1 Graphs of Polynomial Functions	
<b><u>Week 12, Day 2</u></b> 8.4.2 Cusp Points and the Derivative 8.4.3 Domain-Restricted Functions and the Derivative	

<b>Week 12, Day 3</b> 8.4.4 The Second Derivative Test 8.5.1 Vertical Asymptotes	
<b>Week 12, Day 4</b> 8.5.2 Horizontal Asymptotes and Infinite Limits 8.5.3 Graphing Functions with Asymptotes	
<b>Week 12, Day 5</b> 8.5.4 Functions with Asymptotes and Holes 8.5.5 Functions with Asymptotes and Critical Points	

<b>Week 13</b> Chapter 8 Test Chapter 9: The Basics of Integration	
Assignments	Notes
<b>Week 13, Day 1</b> Chapter 8 Practice Test	
<b>Week 13, Day 2</b> Chapter 8 Test	Chapter 8 Test Score: _____
<b>Week 13, Day 3</b> 9.1.1 Antidifferentiation 9.1.2 Antiderivatives of Powers of $x$	
<b>Week 13, Day 4</b> 9.1.3 Antiderivatives of Trigonometric and Exponential Functions 9.2.1 Undoing the Chain Rule	
<b>Week 13, Day 5</b> 9.2.2 Integrating Polynomials by Substitution 9.3.1 Integrating Composite Trigonometric Functions by Substitution	

<b>Week 14</b> Chapter 9: The Basics of Integration	
Assignments	Notes
<b>Week 14, Day 1</b> 9.3.2 Integrating Composite Exponential and Rational Functions by Substitution 9.3.3 More Integrating Trigonometric Functions by Substitution	
<b>Week 14, Day 2</b> 9.3.4 Choosing Effective Function Decompositions 9.4.1 Approximating Areas of Plane Regions	
<b>Week 14, Day 3</b> 9.4.2 Areas, Riemann Sums, and Definite Integrals 9.4.3 The Fundamental Theorem of Calculus, Part I	
<b>Week 14, Day 4</b> 9.4.4 The Fundamental Theorem of Calculus, Part II 9.4.5 Illustrating the Fundamental Theorem of Calculus	

<b>Week 14, Day 5</b> 9.4.6 Evaluating Definite Integrals	
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<b>Week 15</b> Chapter 9 Test Chapter 10: Applications of Integration	
Assignments	Notes
<b>Week 15, Day 1</b> Chapter 9 Practice Test	
<b>Week 15, Day 2</b> Chapter 9 Test	Chapter 9 Test Score: _____
<b>Week 15, Day 3</b> 10.1.1 Antiderivatives and Motion 10.1.2 Gravity and Vertical Motion	
<b>Week 15, Day 4</b> 10.1.3 Solving Vertical Motion Problems 10.2.1 The Area between Two Curves	
<b>Week 15, Day 5</b> 10.2.2 Limits of Integration and Area 10.2.3 Common Mistakes to Avoid When Finding Areas	

<b>Week 16</b> Chapter 10: Applications of Integration Chapter 10 Test Chapter 11: Calculus I Review	
Assignments	Notes
<b>Week 16, Day 1</b> 10.2.4 Regions Bound by Several Curves 10.3.1 Finding Areas by Integrating with Respect to y: Part One	
<b>Week 16, Day 2</b> 10.3.2 Finding Areas by Integrating with Respect to y: Part Two 10.3.3 Area, Integration by Substitution, and Trigonometry	
<b>Week 16, Day 3</b> Chapter 10 Practice Test	
<b>Week 16, Day 4</b> Chapter 10 Test	Chapter 10 Test Score: _____
<b>Week 16, Day 5</b> 11.1.1 A Glimpse Into Calculus II	

<b>Week 17</b> Chapter 12: Math Fun Midterm Exam	
Assignments	Notes
<b><u>Week 17, Day 1</u></b> 12.1.1 An Introduction to Paradoxes 12.1.2 Paradoxes and Air Safety 12.1.3 Newcomb's Paradox	
<b><u>Week 17, Day 2</u></b> 12.1.4 Zeno's Paradox 12.2.1 Fibonacci Numbers 12.2.2 The Golden Ratio	
<b><u>Week 17, Day 3</u></b> Study for Midterm Exam	
<b><u>Week 17, Day 4</u></b> Midterm Practice Test	
<b><u>Week 17, Day 5</u></b> Midterm Exam	Midterm Exam Score: _____

<b>Week 18</b> Chapter 13: An Introduction to Calculus II Chapter 13 Test Chapter 14: L'Hôpital's Rule	
Assignments	Notes
<b><u>Week 18, Day 1</u></b> 13.1.1 Welcome to Calculus II 13.1.2 Review: Calculus I in 20 Minutes	
<b><u>Week 18, Day 2</u></b> Chapter 13 Practice Test	
<b><u>Week 18, Day 3</u></b> Chapter 13 Test	Chapter 13 Test Score: _____
<b><u>Week 18, Day 4</u></b> 14.1.1 Indeterminate Forms 14.1.2 An Introduction to L'Hôpital's Rule	
<b><u>Week 18, Day 5</u></b> 14.1.3 Basic Uses of L'Hôpital's Rule 14.1.4 More Exotic Examples of Indeterminate Forms	

<b>Week 19</b> Chapter 14: L'Hôpital's Rule Chapter 14 Test	
Assignments	Notes
<b><u>Week 19, Day 1</u></b> 14.2.1 L'Hôpital's Rule and Indeterminate Products	



<b>Week 19, Day 2</b> 14.2.2 L'Hôpital's Rule and Indeterminate Differences	
<b>Week 19, Day 3</b> 14.2.3 L'Hôpital's Rule and One to the Infinite Power 14.2.4 Another Example of One to the Infinite Power	
<b>Week 19, Day 4</b> Chapter 14 Practice Test	
<b>Week 19, Day 5</b> Chapter 14 Test	

<b>Week 20</b> Chapter 15: Elementary Functions and Their Inverses	
Assignments	Notes
<b>Week 20, Day 1</b> 15.1.1 The Exponential and Natural Log Functions 15.1.2 Differentiating Logarithmic Functions	
<b>Week 20, Day 2</b> 15.1.3 Logarithmic Differentiation 15.1.4 The Basics of Inverse Functions	
<b>Week 20, Day 3</b> 15.1.5 Finding the Inverse of a Function 15.2.1 Derivatives of Inverse Functions	
<b>Week 20, Day 4</b> 15.3.1 The Inverse Sine, Cosine, and Tangent Functions 15.3.2 The Inverse Secant, Cosecant, and Cotangent Functions	
<b>Week 20, Day 5</b> 15.3.3 Evaluating Inverse Trigonometric Functions	

<b>Week 21</b> Chapter 15: Elementary Functions and Their Inverses Chapter 15 Test	
Assignments	Notes
<b>Week 21, Day 1</b> 15.4.1 Derivatives of Inverse Trigonometric Functions 15.4.2 More Calculus of Inverse Trigonometric Functions	
<b>Week 21, Day 2</b> 15.5.1 Defining the Hyperbolic Functions 15.5.2 Hyperbolic Identities	
<b>Week 21, Day 3</b> 15.5.3 Derivatives of Hyperbolic Functions	
<b>Week 21, Day 4</b> Chapter 15 Practice Test	
<b>Week 21, Day 5</b> Chapter 15 Test	Chapter 15 Test Score: _____

<b>Week 22</b>	
Chapter 16: Techniques of Integration	
Assignments	Notes
<b><u>Week 22, Day 1</u></b>	
16.1.1 An Introduction to the Integral Table	
16.1.2 Making u-Substitutions	
<b><u>Week 22, Day 2</u></b>	
16.2.1 An Introduction to Integrals with Powers of Sine and Cosine	
16.2.2 Integrals with Powers of Sine and Cosine	
<b><u>Week 22, Day 3</u></b>	
16.2.3 Integrals with Even and Odd Powers of Sine and Cosine	
16.3.1 Integrals of Other Trigonometric Functions	
<b><u>Week 22, Day 4</u></b>	
16.3.2 Integrals with Odd Powers of Tangent and Any Power of Secant	
16.3.3 Integrals with Even Powers of Secant and Any Power of Tangent	
<b><u>Week 22, Day 5</u></b>	
16.4.1 Finding Partial Fraction Decompositions	
16.4.2 Partial Fraction	
16.4.3 Long Division	

<b>Week 23</b>	
Chapter 16: Techniques of Integration	
Assignments	Notes
<b><u>Week 23, Day 1</u></b>	
16.5.1 Repeated Linear Factors: Part One	
16.5.2 Repeated Linear Factors: Part Two	
<b><u>Week 23, Day 2</u></b>	
16.5.3 Distinct and Repeated Quadratic Factors	
16.5.4 Partial Fractions of Transcendental Functions	
<b><u>Week 23, Day 3</u></b>	
16.6.1 An Introduction to Integration by Parts	
16.6.2 Applying Integration by Parts to the Natural Log Function	
<b><u>Week 23, Day 4</u></b>	
16.6.3 Inspirational Examples of Integration by Parts	
16.6.4 Repeated Application of Integration by Parts	
<b><u>Week 23, Day 5</u></b>	
16.6.5 Algebraic Manipulation and Integration by Parts	
16.7.1 Converting Radicals into Trigonometric Expressions	

<b>Week 24</b> Chapter 16: Techniques of Integration Chapter 16 Test	
Assignments	Notes
<b><u>Week 24, Day 1</u></b> 16.7.2 Using Trigonometric Substitution to Integrate Radicals 16.7.3 Trigonometric Substitutions on Rational Powers	
<b><u>Week 24, Day 2</u></b> 16.8.1 An Overview of Trigonometric Substitution Strategy 16.8.2 Trigonometric Substitution Involving a Definite Integral: Part One 16.8.3 Trigonometric Substitution Involving a Definite Integral: Part Two	
<b><u>Week 24, Day 3</u></b> 16.9.1 Deriving the Trapezoidal Rule 16.9.2 An Example of the Trapezoidal Rule	
<b><u>Week 24, Day 4</u></b> Chapter 16 Practice Test	
<b><u>Week 24, Day 5</u></b> Chapter 16 Test	Chapter 16 Test Score: _____

<b>Week 25</b> Chapter 17: Improper Integrals Chapter 17 Test	
Assignments	Notes
<b><u>Week 25, Day 1</u></b> 17.1.1 The First Type of Improper Integral	
<b><u>Week 25, Day 2</u></b> 17.1.2 The Second Type of Improper Integral	
<b><u>Week 25, Day 3</u></b> 17.1.3 Infinite Limits of Integration, Convergence, and Divergence	
<b><u>Week 25, Day 4</u></b> Chapter 17 Practice Test	
<b><u>Week 25, Day 5</u></b> Chapter 17 Test	Chapter 17 Test Score: _____

<b>Week 26</b> Chapter 18: Applications of Integral Calculus	
Assignments	Notes
<b><u>Week 26, Day 1</u></b> 18.1.1 Finding the Average Value of a Function 18.2.1 Finding Volumes Using Cross-Sectional Slices	
<b><u>Week 26, Day 2</u></b> 18.2.2 An Example of Finding Cross-Sectional Volumes 18.3.1 Solids of Revolution	

<b>Week 26, Day 3</b> 18.3.2 The Disk Method along the y-Axis 18.3.3 A Transcendental Example of the Disk Method	
<b>Week 26, Day 4</b> 18.3.4 The Washer Method across the x-Axis 18.3.5 The Washer Method across the y-Axis	
<b>Week 26, Day 5</b> 18.4.1 Introducing the Shell Method 18.4.2 Why Shells Can Be Better Than Washers	

<b>Week 27</b> Chapter 18: Applications of Integral Calculus	
Assignments	Notes
<b>Week 27, Day 1</b> 18.4.3 The Shell Method: Integrating with Respect to y 18.5.1 An Introduction to Arc Length	
<b>Week 27, Day 2</b> 18.5.2 Finding Arc Lengths of Curves Given by Functions	
<b>Week 27, Day 3</b> 18.6.1 An Introduction to Work 18.6.2 Calculating Work	
<b>Week 27, Day 4</b> 18.6.3 Hooke's Law	
<b>Week 27, Day 5</b> 18.7.1 Center of Mass 18.7.2 The Center of Mass of a Thin Plate	

<b>Week 28</b> Chapter 18 Test Chapter 19: Sequences and Series	
Assignments	Notes
<b>Week 28, Day 1</b> Chapter 18 Practice Test	
<b>Week 28, Day 2</b> Chapter 18 Test	Chapter 18 Test Score: _____
<b>Week 28, Day 3</b> 19.1.1 The Limit of a Sequence 19.1.2 Determining the Limit of a Sequence	
<b>Week 28, Day 4</b> 19.1.3 The Squeeze and Absolute Value Theorems 19.2.1 Monotonic and Bounded Sequences	
<b>Week 28, Day 5</b> 19.3.1 An Introduction to Infinite Series 19.3.2 The Summation of Infinite Series	

<b>Week 29</b> Chapter 19: Sequences and Series	
Assignments	Notes
<b><u>Week 29, Day 1</u></b> 19.3.3 Geometric Series 19.3.4 Telescoping Series	
<b><u>Week 29, Day 2</u></b> 19.4.1 Properties of Convergent Series 19.4.2 The nth-Term Test for Divergence	
<b><u>Week 29, Day 3</u></b> 19.5.1 An Introduction to the Integral Test 19.5.2 Examples of the Integral Test	
<b><u>Week 29, Day 4</u></b> 19.5.3 Using the Integral Test 19.5.4 Defining p-Series	
<b><u>Week 29, Day 5</u></b> 19.6.1 An Introduction to the Direct Comparison Test 19.6.2 Using the Direct Comparison Test	

<b>Week 30</b> Chapter 19: Sequences and Series	
Assignments	Notes
<b><u>Week 30, Day 1</u></b> 19.7.1 An Introduction to the Limit Comparison Test 19.7.2 Using the Limit Comparison Test	
<b><u>Week 30, Day 2</u></b> 19.7.3 Inverting the Series in the Limit Comparison Test 19.8.1 Alternating Series	
<b><u>Week 30, Day 3</u></b> 19.8.2 The Alternating Series Test 19.8.3 Estimating the Sum of an Alternating Series	
<b><u>Week 30, Day 4</u></b> 19.9.1 Absolute and Conditional Convergence 19.10.1 The Ratio Test	
<b><u>Week 30, Day 5</u></b> 19.10.2 Examples of the Ratio Test 19.10.3 The Root Test	

<b>Week 31</b> Chapter 19: Sequences and Series	
Assignments	Notes
<b><u>Week 31, Day 1</u></b> 19.11.1 Polynomial Approximation of Elementary Functions 19.11.2 Higher-Degree Approximations	

<b>Week 31, Day 2</b> 19.12.1 Taylor Polynomials 19.12.2 Maclaurin Polynomials	
<b>Week 31, Day 3</b> 19.12.3 The Remainder of a Taylor Polynomial 19.12.4 Approximating the Value of a Function	
<b>Week 31, Day 4</b> 19.13.1 Taylor Series 19.13.2 Examples of the Taylor and Maclaurin Series	
<b>Week 31, Day 5</b> 19.13.3 New Taylor Series 19.13.4 The Convergence of Taylor Series	

<b>Week 32</b> Chapter 19: Sequences and Series	
Assignments	Notes
<b>Week 32, Day 1</b> 19.14.1 The Definition of Power Series 19.14.2 The Interval and Radius of Convergence	
<b>Week 32, Day 2</b> 19.14.3 Finding the Interval and Radius of Convergence: Part One 19.14.4 Finding the Interval and Radius of Convergence: Part Two	
<b>Week 32, Day 3</b> 19.14.5 Finding the Interval and Radius of Convergence: Part Three 19.15.1 Differentiation and Integration of Power Series	
<b>Week 32, Day 4</b> 19.15.2 Finding Power Series Representations by Differentiation 19.15.3 Finding Power Series Representations by Integration	
<b>Week 32, Day 5</b> 19.15.4 Integrating Functions Using Power Series	

<b>Week 33</b> Chapter 19 Test Chapter 20: Differential Equations	
Assignments	Notes
<b>Week 33, Day 1</b> Chapter 19 Practice Test	
<b>Week 33, Day 2</b> Chapter 19 Test	Chapter 19 Test Score: _____
<b>Week 33, Day 3</b> 20.1.1 An Introduction to Differential Equations 20.1.2 Solving Separable Differential Equations	

<b><u>Week 33, Day 4</u></b> 20.1.3 Finding a Particular Solution 20.1.4 Direction Fields	
<b><u>Week 33, Day 5</u></b> 20.1.5 Euler's Method for Solving Differential Equations Numerically 20.2.1 Separating Homogeneous Differential Equations	

<b>Week 34</b> Chapter 20: Differential Equations Chapter 20 Test	
Assignments	Notes
<b><u>Week 34, Day 1</u></b> 20.2.2 Change of Variables 20.3.1 Exponential Growth	
<b><u>Week 34, Day 2</u></b> 20.3.2 Logistic Growth 20.3.3 Radioactive Decay	
<b><u>Week 34, Day 3</u></b> 20.4.1 First-Order Linear Differential Equations 20.4.2 Using Integrating Factors	
<b><u>Week 34, Day 4</u></b> Chapter 20 Practice Test	
<b><u>Week 34, Day 5</u></b> Chapter 20 Test	Chapter 20 Test Score: _____

<b>Week 35</b> Chapter 21: Parametric Equations and Polar Coordinates	
Assignments	Notes
<b><u>Week 35, Day 1</u></b> 21.1.1 An Introduction to Parametric Equations 21.1.2 The Cycloid 21.1.3 Eliminating Parameters	
<b><u>Week 35, Day 2</u></b> 21.2.1 Derivatives of Parametric Equations 21.2.2 Graphing the Elliptic Curve	
<b><u>Week 35, Day 3</u></b> 21.2.3 The Arc Length of a Parameterized Curve 21.2.4 Finding Arc Lengths of Curves Given by Parametric Equations	
<b><u>Week 35, Day 4</u></b> 21.3.1 The Polar Coordinate System 21.3.2 Converting between Polar and Cartesian Forms	
<b><u>Week 35, Day 5</u></b> 21.3.3 Spirals and Circles 21.3.4 Graphing Some Special Polar Functions	

<b>Week 36</b> Chapter 21: Parametric Equations and Polar Coordinates Chapter 21 Test	
Assignments	Notes
<b><u>Week 36, Day 1</u></b> 21.4.1 Calculus and the Rose Curve 21.4.2 Finding the Slopes of Tangent Lines in Polar Form	
<b><u>Week 36, Day 2</u></b> 21.5.1 Heading toward the Area of a Polar Region 21.5.2 Finding the Area of a Polar Region: Part One 21.5.3 Finding the Area of a Polar Region: Part Two	
<b><u>Week 36, Day 3</u></b> 21.5.4 The Area of a Region Bounded by Two Polar Curves: Part One 21.5.5 The Area of a Region Bounded by Two Polar Curves: Part Two	
<b><u>Week 36, Day 4</u></b> Chapter 21 Practice Test	
<b><u>Week 36, Day 5</u></b> Chapter 21 Test	Chapter 21 Test Score: _____

<b>Week 37</b> Chapter 22: Vector Calculus and the Geometry of $\mathbf{R}^2$ and $\mathbf{R}^3$	
Assignments	Notes
<b><u>Week 37, Day 1</u></b> 22.1.1 Coordinate Geometry in Three Dimensional Space 22.1.2 Introduction to Vectors	
<b><u>Week 37, Day 2</u></b> 22.1.3 Vectors in $\mathbf{R}^2$ and $\mathbf{R}^3$ 22.1.4 An Introduction to the Dot Product 22.1.5 Orthogonal Projections	
<b><u>Week 37, Day 3</u></b> 22.1.6 An Introduction to the Cross Product 22.1.7 Geometry of the Cross Product	
<b><u>Week 37, Day 4</u></b> 22.1.8 Equations of Lines and Planes in $\mathbf{R}^3$ 22.2.1 Introduction to Vector Functions	
<b><u>Week 37, Day 5</u></b> 22.2.2 Derivatives of Vector Functions 22.2.3 Vector Functions: Smooth Curves 22.2.4 Vector Functions: Velocity and Acceleration	



<b>Week 38</b> Final Exam	
Assignments	Notes
<b><u>Week 38, Day 1</u></b> Study for Final Exam	
<b><u>Week 38, Day 2</u></b> Study for Final Exam	
<b><u>Week 38, Day 3</u></b> Study for Final Exam	
<b><u>Week 38, Day 4</u></b> Practice Final Exam	
<b><u>Week 38, Day 5</u></b> Final Exam	Final Exam Score: _____