Contents

- Chapter 1: Functions (函数)
 - o Exponential Functions (指数函数)
 - o Inverse Functions and Logarithm(反函数和对数)
- Chapter 2: Limits and Derivatives (极限和导数)
 - o The Limit of a Function (函数的极限)
 - o The Precise Definition of a Limit(极限的精确定义)
 - o Continuity (连续性)
 - o Limits at Infinity: Horizontal Asymptotes(无穷远处极限:水平渐近线)
 - o Derivatives and Rates of Change (导数和变化率)
 - o The Derivative as a Function (作为函数的导数)
- Chapter 3: Differentiation Rules (微分法则)
 - o Derivatives of Polynomials and Exponential Functions (多项式和指数函数的导数)
 - o The Product and Quotient Rules (乘法和除法法则)
 - o Derivatives of Trigonometric Functions (三角函数的导数)
 - o The Chain Rule (链式法则)
 - o Implicit Differentiation (隐微分)
 - o Derivatives of Logarithmic Functions (对数函数的导数)
 - o Exponential Growth and Decay (指数增长和衰减)
 - o Linear Approximations and Differentials (线性近似和微分)
 - o Hyperbolic Functions (双曲函数)
- Chapter 4 : Applications of Differentiation (微分的应用)
 - o Maximum and Minimum Values (最大值和最小值)
 - o Mean Value Theorem (中值定理)
 - o How Derivatives Affect the Shape of a Graph (导数如何影响图象的形状)
 - o Indeterminate Forms and l'Hospital Rule(不定形式和洛必达法则)
 - o Optimization Problems (优化问题)
 - o Newton's Method (牛顿法)
 - o Antiderivatives (反导数)

- Chapter 5: Integrals (积分)
 - o Areas and Distances (面积和距离)
 - o Definite Integral (定积分)
 - o The Fundamental Theorem of Calculus (微积分基本定理)
 - o Indefinite Integrals and the Net Change Problem(不定积分和合变化定理)
 - o The Substitution Rule (代换法则)
- Chapter 6: Applications of Integration (积分运算的应用)
 - o Areas between Curves (曲线间的面积)
 - o Volumes (体积)
 - o Volumes by Cylindrical Shells(柱形壳法求体积)
 - o Work (功)
 - o Average Value of a Function(函数的平均值)
- Chapter 7: Techniques of Integration (积分运算的技巧)
 - o Integration by Parts (分部积分)
 - o Trigonometric Integrals (三角积分)
 - o Trigonometric Substitution(三角代换)
 - o Integration of Rational Functions by Partial Fractions(用分项分式对有理函数的积分运算)
 - o Strategy of Integration (积分运算的策略)
 - o Approximate Integration(近似积分运算)
 - o Improper Integrals (反常积分)