AP Calculus AB Notes

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Advanced Placement Calculus AB is designed for students who have a thorough knowledge of college preparatory mathematics, including Algebra, Geometry, Trigonometry, and Elementary Analysis. The course includes a study of elementary functions, properties of limits, the derivative and applications, techniques of integration, and applications of the definite integral.

Contents

1 Limits and Continuity

2 Differentiation: Definition and Fundamental Properties

3 Differentiation: Composite, Implicit, and Inverse Functions

3.1 Chain Rule

3.2 L'Hopital's Rule

3.3 Implicit Differentiation

3.4 Inverse Functions & Derivatives

4 Contextual Applications of Differentiation

5 Analytical Applications of Differentiation

6 Integration and Accumulation of Change

7 Differential Equations

7.1 Slope Fields

7.2 Separation of Variables

8 Applications of Integration

8.1 Average Value

8.2 Net Change

8.3 Area between Two Curves

8.4 Volume - Disk & Washer

8.5 Volume - Cross Sections