

Math1210 Final Exam Topics

Limits:

- As x goes to a finite number (0/0 case)
- As x goes to a finite number ($A/0$ case, where A is not zero)
- As x goes to infinity
- Continuity
- Definition of Derivative
- Trig Functions

Derivatives:

- Power Rule
- Product Rule
- Quotient Rule
- Chain Rule
- Trig Derivatives
- Higher Order Derivatives
- Implicit Differentiation
- Related Rates
- Analyze Graph
- Optimization Problems
- MVT for Derivatives
- Differentials (approximations)
- Newton's method

Integration:

- Indefinite Integrals
- Power Rule
- U-substitution
- Definite Integrals
- Solve Differential Equations
- Definition of Definite Integral
- MVT for Integrals
- Average Value
- First Fundamental Theorem of Calculus
- Area of bounded 2d region
- Volume of 3d solid of revolution
 - Washer/Disk method
 - Shell method
- Arc length of a smooth curve
- Surface Area of a solid
- Work