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
- Definition of Definite Integral

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

Integration:
- Indefinite Integrals
- Power Rule
- U-substitution
- Definite Integrals
- Solve Differential Equations
- MVT for Integrals
- Average Value
- First Fundamental Theorem of Calculus
- Second 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
- Centroid of a 2d closed, bounded region