

**Math 0120**  
**Exam #2 Review**  
**Chapters 3 and 4**

Critical numbers of a function

Extreme points and inflection points of a function

Graphing a function using the first and second derivatives, including sign charts

7 points for curve sketching

Optimization

Continuous function on a closed interval

Enclosures

Profit

Rectangular box

Poster

Harvest size

Materials to construct a box, poster, or cylindrical container

Inventory costs

Pythagorean Theorem

Optimization Problems

Implicit differentiation and related rates

Exponential functions

Properties of exponents

Domain and range

Present and future value

Logarithmic functions

Properties of logarithms

Domain and range

Solving exponential growth and decay problems

Derivatives of exponential and logarithmic functions

Tangent lines, implicit differentiation

Relative rate of growth

Elasticity of demand