

Spring 2011  
MA 22300 – Topics List

I. Finding derivatives

- Using the constant, power, constant multiple and sum rules
- Using the product rule
- Using the quotient rule
- Using the chain rule – both directly and using related functions
- Using implicit differentiation
- Higher order derivatives

II. Applications of the derivative

- Finding the slope/equation of a tangent line; finding point(s) on a graph where the tangent line is horizontal
- Finding the rate of change of a function
- Finding a marginal function; its use in estimating actual change
- Using increments to approximate the change in a function

III. Applications not using the derivative

- Finding the  $y$ -value of a point
- Finding the actual change in a function