Spring 2012

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
   • Using implicit differentiation
   • Higher order derivatives, using all rules

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 or vertical
   • Finding the rate of change of a function in general and for a specific value
   • Finding a marginal function; its use in estimating actual change
   • Using increments to approximate the change in a function
   • Finding a velocity function, given a distance function
   • Basic related rates

III. Applications not using the derivative
   • Finding the *y*-value of a point
   • Finding the actual change in a function