Lecture 5: Vector caclulus

Math 195 Section 91

Wednesday July 1, 2009

More on 14.2, 15.1

0.1 Functions of one variables

definition of derivative
   why is this the definition?
   derivative of vector-valued functions
   derivative of dot product, cross product

0.2 Functions of many variables

examples of functions of many variables
   what is the domain? what is the range? the book thinks of domain as "biggest domain possible for the given rule." This is perhaps not the best way to define the domain.
   linear functions; quadratic functions, etc.
   level curves
   level surfaces
   Introduction to limits