MATH 361 — HOMEWORK 10.

due on Friday, November 20.

Textbook: *"Elementary Classical Analysis"* , second edition
by J. E. Marsden and M. J. Hoffman

Topics:

- **Chapter 6:** Differentiable Mappings
  - 6.1 Definition of the Derivative
  - 6.2 Matrix Representation
  - 6.3 Continuity of Differentiable Mappings; Differentiable Paths
  - 6.4 Conditions for Differentiability
  - 6.5 The Chain Rule
  - 6.6 Product Rules and Gradients
  - 6.7 The Mean Value Theorem
- **Differentiability of Multilinear Maps and Inverses. Operations on Functions (The Lectures)**

Tenth Homework Assignment.

Reading:

- Read Sections 6.5 to 6.7. (We are going to discuss partial derivatives in greater detail next week.) Read the slides (or/and watch the videos).

***Exercises: Problems*:**

- Page 348: problems $3, 4, 5$
- Page 352: problems: $1, 2$
- Page 355: problems:$1, 2, 4, 6$
- Page 383: problems:12