Department of Mathematics, University of Utah

Calculus I

MATH 1210 – Section 023 – Spring 2025

Exam 2

Topics covered

Exam 2 is in-class on Friday, Feb 28, 2025

Exam 2 is 50 minutes, in-class.
All you need to bring is a pen or pencil to write with.
None of the following are allowed for exams: notes, textbook, calculators, reference sheet, laptop, phone.

Exam 2 covers the following sections in the textbook:

- Section 2.3 (mainly the product and differentiation rules)
- Sections 2.4 - 2.9
- Section 3.1 - 3.2

The material on exam 2 will be drawn from the following homework assignments:

- Homework 4
- Homework 5
- Homework 6
- Homework 7

The concepts tested include the following:

- Differentiation and rules
  - The product and quotient rules
  - Derivatives of trigonometric functions
  - The chain rule
  - High-order derivatives (and velocity, acceleration)
  - Implicit differentiation
- Applications of differentiation
  - Related rates problems
  - (Linear) approximations and differentials
  - Extrema, maxima, and minima
  - Computing extrema on closed intervals
  - Stationary, singular, and critical points
  - Monotonicity, concavity, and inflection points
  - Identifying intervals where functions are increasing, decreasing, concave up, and concave down

"Will topic X be covered on the exam?"
A good rule of thumb for answering the above question is to answer the related question,
"Is topic X covered in one of the associated homework assignments?"
The answers to the above two questions are the same.