Transitioning to Math 152

Fall 2017

Math 152 is the second Calculus course for students who have completed Math 151. If you have not taken Math 151 at Rutgers, this course will almost certainly be more rigorous than what you have been exposed to. Students who took Math 135 or who took Calculus I in high school should make note of the following significant differences between those courses and Math 152.

A. Workshops: The bulk of the time in recitation is spent on workshops. These are collections of about four problems that are a bit more challenging than what we have time for in lecture and what is assigned for homework. Each week students will write up one of these problems, which will be collected at the following recitation. While students will be working on the workshop problems together in small groups, it is very important that the writing students submit be their own.

The following link provides some useful information on good workshop writing.

https://sites.google.com/a/scarletmail.rutgers.edu/math-151-spring-2015/workshops

B. Topics Students Entering Math 152 Need To Know: These topics may not have been covered in depth in Math 135 or Calculus I courses offered elsewhere but Math 152 students are expected to know them. The following sections are from the Math 152 textbook: Calculus - Early Transcendentals, 3rd edition, by Jon Rogawski and Colin Adams.

Inverse Functions, Inverse Trigonometric Functions and Their Derivatives.

- Read §1.5 on Inverse Functions. Work out problems 4, 12, 16, 20, 22, 28, 34, 38, 40.
- Read §3.8 on Implicit Differentiation. Work out problems 10, 14, 20, 26, 28, 30, 36, 40, 48, 52, and 60.

Indeterminate Forms $0^0$, $1^\infty$, and $\infty^0$.

- Read §4.5 on L’Hôpital’s Rule and work out problems 46-50.

Summation Notation.

- Read §5.1, pages 261-268. Work out problems 24, 32, 40, 46, and 54.

Hyperbolic Functions and Their Derivatives.

- Read §1.6 (pages 44-46) and work out problems 38, 40, and 41.
- Read §3.9 (pages 178-180) and work out problems 54, 58, 66, 68, and 72.

C. Formula Sheets: There are no formula sheets in quizzes or exams in Math 152. Students will be expected to memorize the derivatives and antiderivatives of logarithmic, exponential, trigonometric, hyperbolic, inverse trigonometric, and inverse hyperbolic functions. Students should also know the values of trigonometric functions.