

Exam 4 Information

Math 207 GH - Fall 2016

Exam 4 (same as the final exam) will cover topics from all handouts posted on the class's web site. These include lecture notes and previous exam reviews.

Students must be able to **state and prove**:

Trigonometric limits such as $\sin x/x$ (as x approaches zero) and those related to e . Intermediate Value Theorem (both versions), Mean Value Theorem, differentiating functions using the definition (limit of the differential quotient). Differentiating $\sin x$, $\cos x$, $\log_a x$, a^x , $\sin^{-1}x$, $\cos^{-1}x$, $\tan^{-1}x$. If a function is differentiable at a number x , then it is continuous there. The product and quotient rule for derivatives.

Students must be able to correctly **state** the following:

Least Upper Bound Property of real Numbers, Intermediate Value Theorem (both versions), Rolle's Theorem, Mean Value Theorem, Second Derivative Test. The Fundamental Theorem of Calculus (Parts 1 and 2).

Exam 4 will cover the following topics from the textbook

Chapter 1: all except 1.4
Chapter 2: all
Chapter 3: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.9
Chapter 4: all except 4.8
Chapter 5: all
Chapter 7: 7.8