

Exam 4 Information

Math 207 GH - Fall 2017

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 (all lecture notes posted on the class's web site)

Chapter 1.– all

Chapter 2 – all

Chapter 3.– 3.1-3.7, 3.10

Chapter 4 – 4.1 – 4.4., 4.6, 4.7