

Exam 2 Information

Math 208 GH - Spring 2017

Exam 2 will cover the following

All handouts posted on the class's web site for Classes 1-20

Are you ready for calculus 2?	Numerical Integration
Overview of Conic Sections	Applications of the Definite Integral
Review of Trigonometric Functions	Volumes 1 (cross sections)
Differentiating Trig Functions	Volumes 2 (disk method)
Inverse Trig Expressions	Hyperbolic Functions
The Fundamental Theorem	Volumes 3 (washer method)
Exponents and Logarithms	Graphing the Reciprocal
Integrating by Substitution	Integrating Hyperbolic Functions
Trigonometric Integrals 1	Volumes 4 (cylindrical shell method)
Sum-Product Identities	Work
Integrating by Parts	Arc Length
Trigonometric Formulas	Center of Mass
Trigonometric Substitutions	The Real Number System
Partial Fractions	The Least Upper Bound Property
L'Hôpital's Rule	Proving the Intermediate Value Theorem
Improper Integrals	Sequences - Part 1
Riemann Sums	

Students are expected to **correctly state**: The Intermediate Value Theorem, The Fundamental Theorem of Calculus, The definition of $f(x)=\ln x$ as a function defined in terms of definite integrals. The Least Upper Bound Property, The definition of a convergent sequence

Students are expected to **prove**: formulas for derivatives and integrals of logarithmic, exponential, trigonometric, inverse trigonometric, hyperbolic, and inverse hyperbolic functions. Properties of logarithms defined in terms of integrals. Proving the Intermediate Theorem.

Topics from the textbook:

Techniques of Integration:	Chapter 5 - all Chapter 7 - 7.1, 7.2, 7.3, 7.4, 7.5, 7.7, 7.8
Applications of Definite Integrals:	Chapter 6 – all Chapter 8 – 8.1, 8.3
Infinite Sequences:	Chapter 11– 11.1

Last revised: March 23, 2017