

## Calc 1B Schoenbrun - What the Final Will Cover

Chapters 5.1, 5.2, 5.3, 5.4, 5.5, 6.2, 6.3, 6.5, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.8, 7.9, 10.3

You should know:

What a Riemann sum is and what it is used for.

An indefinite and a definite integral is.

How to evaluate a definite integral by finding an anti-derivative.

How to evaluate a definite integral using a Ti-83 or Ti-84 calculator.

The difference between an approximate solution and an exact solution.

What the fundamental theorem of calculus tells us.

What the average value of a function is.

The mean value theorem for Integrals.

How to evaluate definite and indefinite integrals using the following techniques:

Inspection

Simple anti-derivatives

Substitution

The basic approaches described in chapter 7.1 Integration by parts

Trigonometric Integrals and trigonometric substitution Partial Fractions

How to find the area of regions between curves.

How to find a volume using slicing including the disk and washer methods. How to find the length of a curve.

How to evaluate an improper integral.

How to solve a linear differential equation with initial conditions.

How to solve a differential equation by the separation of variables.

How to integrate using polar coordinates.