

Lesson 33 - General Regions I**Objectives**

- For any region in the xy plane:
 - Sketch the region.
 - Label the boundaries.
 - Label the intersections.
- Find the volume of any solid whose *base* is a specified region in the xy plane and whose *top* is a given function $f(x, y)$.
- Use an iterated integral to compute volume, population, center of mass, and other values that can be accumulated in more than one dimension.

READ

- Stewart, Chapter 15.3, page 965-972.

THINK ABOUT

- Explain in terms of the x and y axis what it means to integrate first with respect to x and then with respect to y .
- Why would you want to change the order of integration?

MATHEMATICA COMMANDS AND TASKS YOU NEED TO KNOW

No new commands.