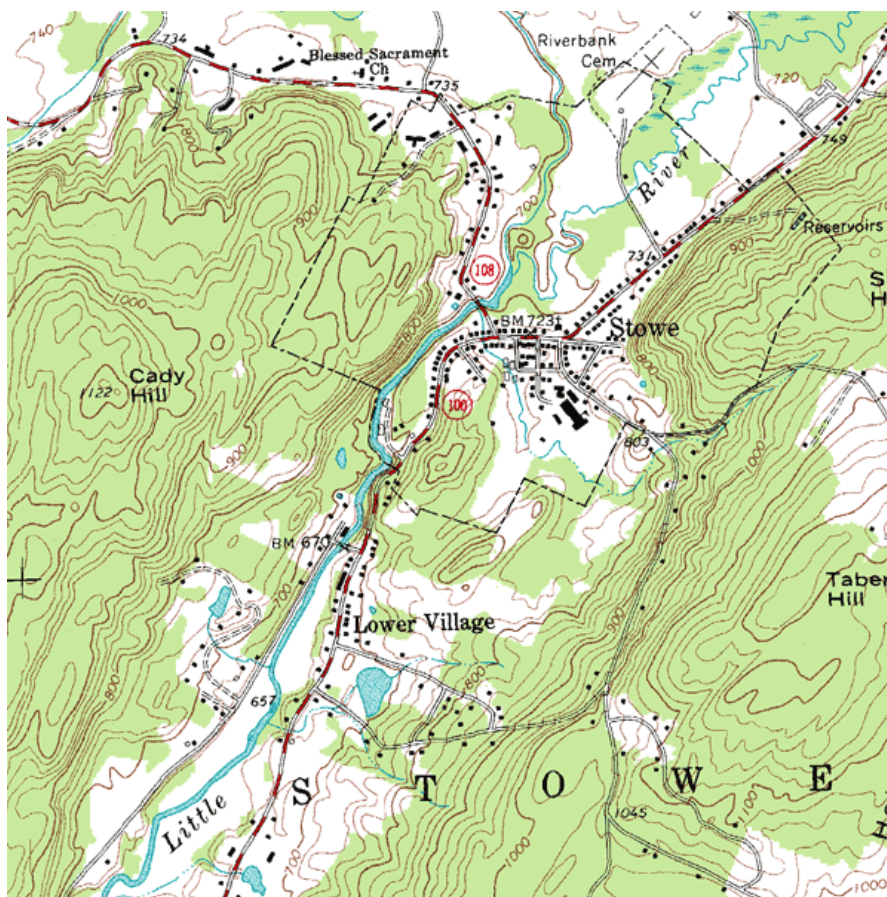


Chapter 4: Functions of Two Variables

PreCalculus Idea -- Topographical Maps

If you've ever hiked, you have probably seen a topographical map. Here is part of a topographic map of Stowe, Vermont, USA (courtesy of United States Geological Survey and http://en.wikipedia.org/wiki/File:Topographic_map_example.png).



Points with the same elevation are connected with curves, so you can read not only your east-west and your north-south location, but also your elevation. You may have also seen weather maps that use the same principle – points with the same temperature are connected with curves (isotherms), or points with the same atmospheric pressure are connected with curves (isobars). These maps let you read not only a place's location but also its temperature or atmospheric pressure.

In this chapter, we'll use that same idea to make graphs of functions of two variables.