

Functions of Multiple Variables

Reading

Sections 15.1

Problems

- Practice Problems 15.1: 7, 8, 9, 10, 27, 29, 33, 39
- Problems to turn in 15.1: 20, 28, 30, 32, 36

Topics to know

1. Examples of functions of 2 or more variables
2. Domain of function of two variables is an area in the plane.
3. Vertical traces (exercises 17, 18, 19)
4. Level curves, contour map. Importance of a constant contour interval.
5. Example 5 of elliptic paraboloid
6. Example 6 of hyperbolic paraboloid
7. Computing average rates of change from contour map, given a direction (example 8)