MATH 249

Today

1. 14.7b Global Extrema (Understand how to optimize a function of two or more variables on a closed and bounded region.)

2. WeBWorK

3. Homefun/Python

14.7b Global Extrema

1. Theorem (MVEVT): If f is continuous on a closed, bounded set D, then f attains a maximum and a minimum on D.

2. Procedure:

   (a) Find the critical points.
   (b) Analyze f on the boundary.
   (c) Take the extreme values from (a) and (b). The largest is the global maximum; the smallest is the global minimum.

3. Examples p. 930: #31, 35, 38

Next Time

1. Watch 14.8 [$\sim$ 18 minutes]