

Dror Bar-Natan: Classes: 2002-03: Math 157 - Analysis I:

Homework Assignment 5

Assigned Tuesday October 8; due Friday October 18, 2PM at SS 1071

web version: <http://www.math.toronto.edu/~drorbn/classes/0203/157AnalysisI/HW05/HW05.html>

Required reading

All of Spivak Chapter 6.

To be handed in

From Spivak Chapter 6: 1(i)-(iii), 3, 12, 14

Recommended for extra practice

From Spivak Chapter 6: 1(iv), 4, 10, 13, 16 parts (a) through (c).

Just for fun

Solve Spivak's problem 16 parts (d) and (e) and also the following problem:

Problem. Could there be a non-constant continuous function defined on the entire “unit” interval $[0, 1]$, which is constant on certain open subintervals of $[0, 1]$ whose total length is exactly equal to 1? (Obviously, I wouldn't be asking this question if the answer wasn't ____).