

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

Homework Assignment 25

Assigned Tuesday April 1; due Friday April 11, 2PM at SS 1071

web version: <http://www.math.toronto.edu/~drorbn/classes/0203/157AnalysisI/HW25/HW25.html>

“God created the integers, all else is the work of man.”
(Leopold Kronecker, 1823–1891)

Required reading. All of Spivak Chapters 25 and 26 and the web-only handout “What Went Wrong with Term Exam 4?”.

To be handed in. Problems 1–3 (even parts) and 9 of Spivak’s Chapter 25.

Recommended for extra practice. Problems 1–3 (odd parts), 4 and 10 of Spivak’s Chapter 25 and problem 5 of Spivak’s Chapter 26.

Just for fun. Check that for any complex number z ,

$$z^2 = \frac{1}{\frac{1}{z-\frac{1}{2}} - \frac{1}{z+\frac{1}{2}}} + \frac{1}{4},$$

play with my former student’s Dori Eldar’s Squaring Machine and read his “Linkages as Functions” page to understand how the two parts of this question are related. Links to the relevant web sites are on the web version of this assignment.

