

Mathematics 3790H – Analysis I: Real Analysis

TRENT UNIVERSITY, Winter 2015

Assignment #7

γ is a funny constant

Due on Friday, 6 March, 2015.

1. Let $g_n = \left[\sum_{k=1}^n \frac{1}{k} \right] - \ln(n+1)$ for $n \geq 1$. Show that $\lim_{n \rightarrow \infty} g_n = \gamma$ for a real number γ with $\frac{1}{2} < \gamma < 1$. [10]