Real Analysis qualifying review big list

Students at University of Michigan

Sunday 27th June, 2021

- 1 Categorized (without solutions)
- 2 Categorized (with solutions)
- 3 Uncategorized

Problem 1 (Date: September 2011, tags:). Let $f \in L_1([0,1],dx)$. Find

$$\lim_{n \to \infty} \frac{1}{n} \int_0^1 \log \left(1 + e^{nf(x)} \right) dx.$$