

na osnovu Lebegove teoreme o monotonij konvergenciji dobijamo

$$\int_X \left(\sum_{i=1}^{\infty} f_i \right) d\mu = \lim_{n \rightarrow \infty} \int_X \left(\sum_{i=1}^n f_i \right) d\mu = \lim_{n \rightarrow \infty} \sum_{i=1}^n \int_X f_i d\mu = \sum_{i=1}^{\infty} \int_X f_i d\mu$$