ON UNIFORM DISTRIBUTED SEQUENCES AND UNBOUNDED INTEGRABLE FUNCTIONS

SIMONETTA SALVATI

ABSTRACT. For a class of unbounded and generalized Riemann integrable functions $f:[0,1] \to \mathbb{R}$, it is proved that any value in the set $[\int_0^1 f(t) dt, \infty]$ is the limit of the averages sequence $\{\frac{1}{n} \sum_{i=1}^n f(x_i)\}$ for an appropriate uniformly distributed sequence $\{x_i\}$.

Mathematical Subject classification: Primary 11K36 Keywords: generalized Riemann integral, uniformly distributed sequence

Dipartimento di Matematica, Politecnico di Milano salvati@mate.polimi.it