

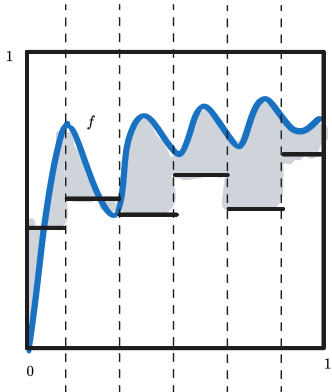
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## $(\epsilon, n)$ -measurable function

A measurable function

$$f : [0, 1] \rightarrow [0, 1]$$

is  $(\epsilon, n)$ -measurable if there exists a function  $g$  on  $[0, 1]$  which is constant on the dyadic intervals  $2^{-n}[i, i + i]$



and differs from  $f$  in  $L^1$ -norm by at most  $\epsilon$

$$\|f - g\|_1 \leq \epsilon$$

Current note has 0 direct children and 0 total descendants.

- stem
  - subobjects of and functions on  $\mathbb{R}^n, S^n, \mathbb{C}^n$  and its quotients  $\Gamma \backslash \mathbb{R}^n, \Gamma \backslash \mathbb{C}^n$ 
    - Lebesgue measurable subsets of and functions on  $\mathbb{R}^n, T^n, S^n$ 
      - $(\epsilon, n)$ -measurable function

And it has 15 siblings.

- stem
  - subobjects of and functions on  $\mathbb{R}^n, S^n, \mathbb{C}^n$  and its quotients  $\Gamma \backslash \mathbb{R}^n, \Gamma \backslash \mathbb{C}^n$ 
    - Lebesgue measurable subsets of and functions on  $\mathbb{R}^n, T^n, S^n$ 
      - Functions with uniformly bounded mean oscillations on cubes
      - Decomposition of  $f \in L^p$  into bounded and unbounded parts
      - Calderon-Zygmund decomposition
      - Lebesgue density of measurable sets
      - Functions with uniformly bounded mean oscillations on dyadic cubes
      - Volterra operator  $\int_{[0, \cdot]} : L^1_{\text{loc}}[0, 1] \rightarrow C[0, 1]$
      - Measurable functions on  $\mathbb{R}^n$
      - $(\epsilon, n)$ -measurable function
      - Integrability and integral of measurable functions on  $\mathbb{R}^n$
      - Hardy-Littlewood maximal functions of  $L^1_{\text{loc}}(\mathbb{R}^n)$
      - Lebesgue averaging and differentiation
      - Integrals of a monotonically converging sequence of functions
      - Lebesgue integral from measure of undergraph
      - $L^{p, q}$
      - $E([0, 1]) = E(0, 1), E([- \pi, \pi]) = E(S^1)$