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A note on the distribution function of additive arithmetical functions in short intervals. (In English)

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Let f be an additive arithmetic function having a distribution F. For any sequence $1 \leq b(n) \leq n$, $b(n) \to \infty$, let

$$Q_n(b, f)(x) = card\{n \leq m \leq n + b(n) : f(m) \leq x\}/b(n).$$

In this note, we determine the slowest growing function b so that $Q_n(b, f)$ tends weakly to F, for various f.

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60F05 Weak limit theorems

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