Mathematics > Number Theory

The normality of digits in almost constant additive functions

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We consider numbers formed by concatenating some of the base b digits from additive functions f(n) that closely resemble the prime counting function \Omega(n). If we concatenate the last \lceil y \frac{\log \log \log n}{\log b} \rceil digits of each f(n) in succession, then the number so created will be normal if and only if 0 < y \le 1/2. This provides insight into the randomness of digit patterns of additive function after the Erdos-Kac theorem becomes ineffective.

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