

Computation of the distribution of $\mathbf{X}_{N(k)}$ for an arbitrary $k \geq 2$ is much more complex, but manageable. Computation of the limit distribution of $\mathbf{X}_{N(k)}$, properly linearly standardized, as k tends to infinity, is an open problem. For the univariate case we refer to Galambos (1987, Section 6.4).

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