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Abstract

We present a general convolution formula involving the generalized Stirling numbers of Hsu and Shiue and the degenerate Bernoulli polynomials of Carlitz. As special cases, this formula yields new convolution formulas for weighted Stirling numbers of both kinds, Bernoulli polynomials of both kinds, binomial coefficients, and harmonic numbers. The formula also encompasses several familiar recurrences for these combinatorial sequences.