Truncated Bernoulli-Carlitz and truncated Cauchy-Carlitz numbers

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We define the truncated Bernoulli-Carlitz numbers and the truncated Cauchy-Carlitz numbers as analogues of hypergeometric Bernoulli numbers and hypergeometric Cauchy numbers, and as extensions of Bernoulli-Carlitz numbers and the Cauchy-Carlitz numbers. These numbers can be expressed explicitly in terms of incomplete Stirling-Carlitz numbers. We also discuss hypergeometric numbers in positive characteristic, in terms of determinantal expressions.