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Title: A Menon–Sury-type identity for arithmetic functions on $\mathbb{F}_q[T]$

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Let $\mathbb{A} = \mathbb{F}_q[T]$ be the polynomial ring over the finite field \mathbb{F}_q . In this paper, we prove a Menon–Sury’s identity with several multiplicative and additive characters for any arithmetic function f on \mathbb{A} . Our result implies several interesting identities which may be viewed as the analogues of known ones in \mathbb{Z} .

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