The number of prime factors in h-free and h-full polynomials over function fields

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Abstract. We study the distribution of the number of prime divisors function Ω over polynomials of the function field $\mathbb{F}_q(T)$ when restricted to h-free polynomials and to h-full polynomials. We use an adaptation of the Selberg–Delange method to arithmetical semigroups due to Warlimont to compute the first and second moments in each case and show that a generalization of the Erdős–Kac Theorem is true.

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