

## Big prime factors in orders of elliptic curves over finite fields

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**Abstract.** Let  $E$  be an elliptic curve over the finite field  $\mathbb{F}_q$ . We prove that, when  $n$  is a sufficiently large positive integer,  $\#E(\mathbb{F}_{q^n})$  has a prime factor exceeding  $n \exp(c \log n / \log \log n)$ .

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*Mathematics Subject Classification:* 11B37, 11G20.

*Key words and phrases:* prime factors, linear recurrent sequences.