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Irreducible elements and irreducible polynomials

If f is a polynomial with integer coefficients which is a prime number for infinitely many specializations, then it is clear that f must be irreducible over the rational number field. An analogous result over number fields is not true due to the possible presence of infinitely many units. However, using Siegel's theorem on integral points of curves of genus ≥ 1, we show that an analogous result is "almost true" and the obstruction is the presence of "Mersenne-like" primes in a number field. We also discuss the case of a function field over a finite field. (This is joint work with Jasbir Chahal.)