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Prime-producing quadratics.

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The author takes us on a delightful tour of the subject of quadratic prime-producing polynomials such as Euler’s $x^2 - x + 41$ (which is prime for $x = 1, 2, \dots, 40$). This is an excellent and thorough survey paper, that describes developments stretching from the 18th century right up to the present day. Results relating the arithmetic of quadratic fields to these polynomials are presented ab initio, important conjectures in the area are discussed, and there are many interesting asides.

{Reviewer’s remark: The author’s reporting of the paper “Quadratics representing primes,” by the reviewer and M. L. Greenwood [*Amer. Math. Monthly* **102** (1995), no. 7, 595–599; MR1349871 (96g:11154)] is a little inaccurate—in particular, the challenge at the end is not to find a polynomial representing 50 distinct primes for consecutive values of x , but rather for every other value of x .} *Nigel Boston* (1-IL)