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Madison, WI 53705. *The least prime number represented by a binary quadratic form.*

Let $D < 0$ be a fundamental discriminant and $h(D)$ be the class number of $\mathbb{Q}(\sqrt{D})$. Let $R(X, D)$ be the number of classes of the binary quadratic forms of discriminant D which represent a prime number in the interval $[X, 2X]$. Moreover, assume that $\pi_D(X)$ is the number of primes, which split in $\mathbb{Q}(\sqrt{D})$ with norm in the interval $[X, 2X]$. We prove that

$$\left(\frac{\pi_D(X)}{\pi(X)}\right)^2 \ll \frac{R(X, D)}{h(D)} \left(1 + \frac{h(D)}{\pi(X)}\right),$$

where $\pi(X)$ is the number of primes in the interval $[X, 2X]$ and the implicit constant in \ll is independent of D and X . (Received August 29, 2019)