CORRIGENDUM TO THE PAPER "QUADRATIC CLASS NUMBERS DIVISIBLE BY 3" $\,$

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In attempting to handle $N_+(X)$ the paper states that the Scholz reflection principle "yields 3|h(k) for any positive integer for which 3|h(-3k)". This is not correct, and one cannot establish a result for $N_+(X)$ in this way. However one may use a criterion of Honda [1, Proposition 10], which shows that if

$$27n^2 + du^2 = 4m^3$$

with positive integers n, u, m, d, then $3 \mid h(d)$ providing that (m, 3n) = 1 and the polynomial $X^3 - mX + n$ has no integer root. This latter condition is always satisfied if $3 \mid m-1$ and $3 \nmid n$, for example. An argument completely analogous to that used in the paper then recovers the stated bound $N_+(X) \gg_{\varepsilon} X^{9/10-\varepsilon}$.

References

[1] T. Honda, Isogenies, rational points and section points of group varieties, Japan J. Math. **30** (1960), 84–101.

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