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Local Szpiro conjecture and rational points on $X_E(6k)$

Motivated by the Szpiro conjecture, we conjecture that for any prime p , any integer M , and any integer $l > 6$, if E is a semistable elliptic curve with minimal discriminant $p^r M^l$, then $r \leq 6$. We prove this conjecture for many primes p and $l = 6k$ by looking for perfect powers in certain elliptic nets.