



Problem Tutorial: “Math”

Note that if $k^2 = a_i^2 + a_j$, then $(k - a_i)(k + a_i) = a_j$. We can iterate over all pairs of numbers x and y such that $x \cdot y \leq \max(a)$ and check if they produce valid pair of a_i, a_j . It will happen iff numbers $x \cdot y$ and $\frac{x-y}{2}$ both lie in our array. It's well known that number of such pairs is $O(\max(a) \log(\max(a)))$.