1. Let $f[i]$ denote the number of integers that $\&i = 0$, which can be computed in $O(U \log U)$ time using Möbius transformation. Enumerate two numbers, then count the number of valid third integers using f. $O(n^2 + U \log U)$.
2. Use fast Walsh-Hadamard transform. $O(n + U \log U)$.

References