

1. generating function, polynomial exp. $O(t \log t)$.
 2. By inclusion-exclusion, the answer is $\sum_{i=0}^n (-1)^i \cdot \binom{n}{i} \cdot \binom{t-1-i \cdot k}{n-1}$. It suffices to compute the factorials mod P of $O(d)$ numbers, each number is at most t . $\tilde{O}(n + \sqrt{t})$, or $\tilde{O}(n)$ if we directly compute the binomials (i.e. the multiplication of $O(n)$ consecutive integers).
- <https://leetcode-cn.com/problems/number-of-dice-rolls-with-target-sum/solution/3chong-jie-fa-rang-ni-yi-ci-chi-tou-lc11-3inj/>

References