1. We call a partition \( \{P_1, \ldots, P_k\} \) of \( [n] \) nice iff \( j + 1 \notin P_i \) for every \( i \in [k] \) and \( j \in P_i \).

Prove that number of nice partitions is equal to \( B(n - 1) \).
2. How many different 6-digit numbers have sum of their digits at most 47?
3. How many ways to put \( n \) indistinguishable balls into \( k \) different boxes if we have to put at least \( a_i \) balls into the box with number \( i \).