

Problem C. Balls and Holes

Input file: *standard input*
Output file: *standard output*
Time limit: 0.5 seconds
Memory limit: 512 mebibytes

bobo invents a game and keeps playing.

A game $(\{a_1, a_2, \dots, a_m\}, \{b_1, b_2, \dots, b_l\})$ is played on the axis. First, bobo places m balls at $a_1, a_2, \dots, a_m$, respectively. Then bobo digs l holes at $b_1 + 0.5, b_2 + 0.5, \dots, b_l + 0.5$. Finally bobo pushes all balls forward so that the balls fall into the holes. bobo wins if and only if there are odd number of holes containing at least one ball.

Now bobo has n sets $S_1, S_2, \dots, S_n$, and he wants to know how many games as (S_i, S_j) ($i < j$) he can win.

Input

The first line contains an integer n ($2 \leq n \leq 5000$).

Each of the following n lines contains an integer k_i , which denotes the size of S_i , followed by k_i distinct integers $S_{i,1}, S_{i,2}, \dots, S_{i,k_i}$ which denotes the set S_i ($1 \leq k_i \leq 50, 1 \leq S_{i,j} \leq 50$).

Output

A single integer denotes the number games bobo can win.

Examples

standard input	standard output
2 1 1 2 1 2	1
2 2 1 2 2 2 1	0