

Sherlock Holmes

Problem Statement:

Sherlock Holmes is a 16 year old teenager living in London. His father, Mycroft Holmes, a genius engineer makes him regularly solve puzzles because he wants Sherlock to become a successful detective when he grows up. Both Sherlock and Mycroft sit every week with N puzzles each (based on their difficulty level) and solve them together. The puzzles they solve are of a very high level difficulty and their difficulty can range from 0 to $2 \cdot 10^3$.

Mycroft has observed that if the difference of the sum of difficulty of all the puzzles that he solves and the sum of difficulty of all puzzles solved by Sherlock exceeds a certain threshold, Sherlock gets disheartened and starts thinking that maybe he is not meant to be a detective.

Mycroft does not want Sherlock to get disheartened. Find the number of ways in which they can solve the puzzles such that Sherlock does not get disheartened.

Input Format:

The first line contains N , the number of problems attempted by them in a particular week. The next line contains N space separated integers denoting A_i , the difficulty of the i th problem attempted by Mycroft. The next line contains N space separated integers denoting B_i , the difficulty of the i th problem attempted by Sherlock. The next line contains Q , the threshold value.

Output Format:

Print the number of ways in which they can solve the puzzles such that Sherlock does not get disheartened. Since the number of ways can be huge, output the answer modulo $10^9 + 7$.

Constraints:

- $1 \leq N \leq 200$
- $0 \leq A_i, B_i \leq 2 \cdot 10^3$
- $0 \leq Q \leq 10^6$

Sample Input:

2

4 5
1 2
2

Sample Output:

6