

Dodgeball 2

2024/2025 SEASON – SIXTH ROUND



After winning the national championship, Valentin's and Viktor's teams qualified for the *dodgeball world championship*. After the main squads proved themselves as champions (in the task 'dodgeball'), the two boys set out to collect data on children who would be good alternatives to the main players. Valentin wants M substitutes for his squad, while Viktor wants K .

Each of the N players are characterized by 2 integers: a_i, b_i – the amount of contribution if they are chosen in the team of respectively Valentin or Viktor. It is known that $M + K \leq N$ and some children may not be chosen. Your goal is to distribute the children between the two teams such that the total amount of contribution for both teams is maximized.

Input

The first line of the file **dodgeball2.in** contains the integers N, M and K . The second line consists of N integers - $a_1, a_2, \dots, a_N$ – the amounts of contribution of the students if they join Valentin's team. The third line consists of the integers $b_1, b_2, \dots, b_N$ – the amounts of contribution of the students if they join Viktor's team.

Output

In the file **dodgeball2.out** print the maximum total contribution for both teams.

Constraints

$$N = 2 * 10^5$$

$$1 \leq M, K \leq N$$

$$2 \leq K + M \leq N$$

$$1 \leq a_i, b_i \leq 2 * 10^5$$

Time limit: 0.6 sec.

Memory limit: 256 MB

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Sample test

Input (dodgeball2.in)	Output (dodgeball2.out)
6 3 2 3 6 1 2 7 4 3 3 4 5 1 2	26

Sample test explanation

If students with indices 2, 5 and 6 join Valentin's team, while students with indices 3 and 4 - Viktor's, the total contribution will be $6 + 7 + 4 + 4 + 5 = 26$