Problem B. Cactus Competition

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	1024 megabytes

In Byteland, there is a school with an enormously large playground. The playground is an $N \times M$ grid. Since the playground is so large, the weather may differ in different squares of the grid. For $1 \le i \le N, 1 \le j \le M$, cell (i, j) has a temperature of $A_i + B_j$. The sequences A and B are known in advance.

Sunghyeon wants to organize a relay race competition in the playground. The race will start in cell $(S, 1)$ and end in cell (T, M), where S and T are integers that are to be determined. In the race, students will only run to the right and down. In other words, a student in cell (i, j) can move directly to cells $(i, j + 1)$ or $(i + 1, j)$. From this, it is clear that $1 \le S \le T \le N$ must hold for the race to be valid.

The people of Byteland love cacti. Therefore, all students will hold a cactus while in the race. Since cacti can't endure cold weather, all cells in the racetrack should satisfy $A_i + B_j \ge 0$.

There are $\frac{N(N+1)}{2}$ candidate races over all candidate pairs of S and T. Please find the number of valid pairs - a pair is valid if the corresponding race can be completed given the constraints due to the cacti.

Input

The first line contains two space-separated integers N, M $(1 \le N, M \le 200\,000)$.

The second line contains N space-separated integers $A_1, A_2, \cdots, A_N$ $(-10^9 \le A_i \le 10^9)$.

The third and final line contains M space-separated integers $B_1, B_2, \cdots, B_M$ $(-10^9 \le B_i \le 10^9)$.

Output

Print the number of valid pairs of S and T.

Examples

standard input	standard output
3 3 -1 0 1 -1 0 1	1
3 3 -1 0 1 1 0 1	5