PROBLEM 5

Wheeling and Dealing

Input file: `dealin.txt`
Output file: `dealout.txt`

Time and memory limits: 1 second, 1 GB

There is an election taking place with N candidates (numbered from 1 to N) and M voters. Through extensive surveys, you know that the ith voter plans to vote for candidate V_i. To win the election, a candidate must receive **strictly more votes** than every other candidate.

You have a vested interest in candidate 1 winning the election, and have discovered that you can pay the ith voter P_i dollars to change their vote to any candidate of your choosing. What is the minimum amount of money you must pay so that candidate 1 wins?

Input

- The first line of input contains the integers N and M.
- The second line of input contains M integers describing the voters' plans. They are $V_1, V_2, \ldots, V_M$.
- The third line of input contains M integers describing the amount of money (in dollars) that you can pay each voter to change their vote. They are $P_1, P_2, \ldots, P_M$.

Output

Your program must output the minimum amount of money you must pay (in dollars) so that candidate 1 wins.

Sample input 1

```
5 6
1 5 4 4 3 3
0 8 9 1 4 7
```

Sample output 1

```
5
```

Sample input 2

```
2 5
2 2 2 2 2
3 6 1 2 4
```

Sample output 2

```
6
```

Sample input 3

```
3 4
2 1 3 1
8 2 1 5
```

Sample output 3

```
0
```

Explanation

In the first sample case, you can make candidate 1 win the election for a total of 5 dollars by:

- Paying 1 dollar to the fourth voter and asking them to vote for candidate 2.
- Paying 4 dollars to the fifth voter and asking them to vote for candidate 1.

In the second sample case, you can make candidate 1 win the election for a total of 6 dollars by:

- Paying 3 dollars to the first voter and asking them to vote for candidate 1.
- Paying 1 dollar to the third voter and asking them to vote for candidate 1.
- Paying 2 dollars to the fourth voter and asking them to vote for candidate 1.

In the third sample case, you don't need to do anything to make candidate 1 win.

Subtasks and constraints

For all subtasks:

- $2 \leq N \leq 100\,000$.
- $1 \leq M \leq 100\,000$.
- $1 \leq V_i \leq N$ for all i.
- $0 \leq P_i \leq 10\,000$ for all i.

Additionally:

- For Subtask 1 (15 marks), $N \leq 1000$, $M \leq 1000$, and $P_i = 1$ for all i.
- For Subtask 2 (15 marks), $P_i = 1$ for all i.
- For Subtask 3 (40 marks), $N \leq 100$ and $M \leq 100$.
- For Subtask 4 (30 marks), no special constraints apply.