Rock Fight

Ruth and Bleminda are playing a game with their rock collections. Each person owns a set of rocks. The game works as follows: each person chooses a rock from their collection and places it on the table. The person with the smaller rock has their rock captured. This continues until both players have used all their rocks. A rock may not be used in more than one round.

Bleminda spent hours figuring out the optimal order to play her rocks, but accidentally lost her ordered list of moves. Ruth found Bleminda's moves and wants to minimize the sum of her captured pieces.

If both players play a rock with the same size, then Bleminda wins the rock.

Grading

Correctness & Efficiency: 80%

- Passes 75 test cases: 80%
- Passes 50 to 74 test cases: 60%
- Passes 25 to 49 test cases: 40%
- Passes 1 to 24 test cases: 20%
- Passes 0 test cases: 0%

Code Quality: 20%

Input Format

Each test case begins with an integer N, the number of rocks that Ruth and Bleminda have respectively. The next line contains N space separated integers, the weights of Ruth's rocks. The line after that contains N space separated integers, the weights of Bleminda's rocks. The weights of Bleminda's rocks are given in the order they will be played.

Constraints

$1 \leq N \leq 10000$

$1 \leq \text{weight of a rock} \leq 10^9$

Output Format

Output a single line containing a single integer: the minimum amount of weight that is captured from Ruth.

Sample Input 0

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

Sample Output 0

```
1
```

Explanation 0

Ruth should play the 1 against the 6, the 2 against the 1, and the 5 against the 4. Only the 1 rock is captured then.

Sample Input 1

```
4
1 2 3 4
7 7 7 7
```

Sample Output 1

```
10
```

Explanation 1

No matter what order Ruth plays her rocks, she will lose every single one. Her rocks have a total weight of 10.