Problem A
Rearrangement

Time limit: 1 second

Memory limit: 2048 megabytes

Problem Description

You are provided with two integer arrays, a and b, both of length n. Your objective is to rearrange the elements within array b to maximize the sum $\sum_{i=1}^{n} a_i b_i$. This sum represents the total of products obtained by pairing elements from a and b with the same indices. Output the maximum attainable sum.

Input Format

The first line of the input contains an integer n. The second line of the input contains n space-separated integers $a_1, \ldots, a_n$ denoting the elements in a. The third line of the input contains n space-separated integers $b_1, \ldots, b_n$ denoting the elements in b.

Output Format

Output the maximum attainable sum if the elements in b can be rearranged in any order.

Technical Specification

- $1 \leq n \leq 2 \times 10^5$
- $1 \leq a_i \leq 100$ for $i = 1, 2, \ldots, n$
- $1 \leq b_i \leq 100$ for $i = 1, 2, \ldots, n$

Scoring

1. (5 points) $1 \leq n \leq 3$
2. (7 points) $1 \leq n \leq 1000$
3. (8 points) No additional constraints.

Sample Input 1

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

Sample Output 1

```
27
```

Sample Input 2

```
5
37 28 10 100 4
48 76 34 87 63
```

Sample Output 2

```
13892
```