MasterChef

Little Chanu is participating in the ultimate chef championship. Unfortunately he is stunned by a task, he has to quench the thirst of N kids. What better than his special chocolate shake, right!

To make the chocolate shake, he has to put the materials in churner, followed by cooling in blast freezer.

The championship has provided Chanu with A churners and B blast freezers. But all are of different types. Meaning the i'th churners takes X_i time to finish and the i'th freezer takes Y_i time to complete. He can use any number of available churner/freezer at a time, but each equipment can handle only one task at a time and it must finish that task before starting another one. Also to make a shake correctly we must chill it after churning.

Little Chanu is very lazy, he wants to know what is the minimum time he needs to feed those nasty kids. (Each kid gets only one shake)

Input:

First line contains 3 integers N, A and B.

Next A space separated numbers X_1, X_2, X_3 ….. X_A representing time of churners.

Next B space separated numbers Y_1, Y_2, Y_3 ….. Y_B representing time of blast freezers.

Output:

A single number denoting the minimum time needed to complete the task.

Constraints:

$1 <= N <= 10^6$

$1 <= A, B <= 10^5$

$1 <= X_i, Y_i <= 10^9$

Sample Input 1:

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1 1 1
1200
34
```

Sample Output 1:

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1234
```

Sample Input 2:

```
2 3 2
100 10 1
10 10
```

Sample Output 2:

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12
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