



Electronics Shop ☆

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Problem

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Monica wants to buy a keyboard and a USB drive from her favorite electronics store. The store has several models of each. Monica wants to spend as much as possible for the **2** items, given her budget. Given the price lists for the store's keyboards and USB drives, and Monica's budget, find and print the amount of money Monica will spend. If she doesn't have enough money to both a keyboard and a USB drive, print **-1** instead. She will buy only the two required items.

For example, suppose she has $s = 60$ to spend. Three types of keyboards cost $keyboards = [40, 50, 60]$. Two USB drives cost $drives = [5, 8, 12]$. She could purchase a **40 keyboard + 12 USB drive = 52**, or a **50 keyboard + 8 USB drive = 58**. She chooses the latter. She can't buy more than **2** items so she can't spend exactly **60**.

Input Format

The first line contains three space-separated integers b , n , and m , her budget, the number of keyboard models and the number of USB drive models.

The second line contains n space-separated integers $keyboard[i]$, the prices of each keyboard model.

The third line contains m space-separated integers $drives$, the prices of the USB drives.

Constraints

- $1 \leq n, m \leq 1000$
- $1 \leq b \leq 10^6$
- The price of each item is in the inclusive range $[1, 10^6]$.

Output Format

Print a single integer denoting the amount of money Monica will spend. If she doesn't have enough money to buy one keyboard and one USB drive, print **-1** instead.

Sample Input 0

```
10 2 3
3 1
5 2 8
```



Sample Output 0

9

Explanation 0

She can buy the 2^{nd} keyboard and the 3^{rd} USB drive for a total cost of $8 + 1 = 9$.

Sample Input 1

5 1 1
4
5

Sample Output 1

-1

Explanation 1

There is no way to buy one keyboard and one USB drive because $4 + 5 > 5$, so we print -1 .