

Contest Duration: 2025-11-08(Sat) 23:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20251108T2100&p1=248>) - 2025-11-09(Sun) 00:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20251108T2240&p1=248>) (local time) (100 minutes)

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## C - Robot Factory

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Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 300 points

### Problem Statement

Takahashi can combine a head part and a body part to create a robot. A robot falls over if the weight of the head part is greater than the weight of the body part.

Currently, he has  $N$  head parts and  $M$  body parts. The weight of the  $i$ -th ( $1 \leq i \leq N$ ) head part is  $H_i$  grams, and the weight of the  $i$ -th ( $1 \leq i \leq M$ ) body part is  $B_i$  grams.

He wants to create a total of  $K$  robots that do not fall over by appropriately combining the parts he has. Determine whether he can achieve his goal by combining the parts well.

Here, a part cannot be used to create multiple robots, and two or more head parts (or two or more body parts) cannot be used to create one robot.

### Constraints

- $1 \leq N \leq 2 \times 10^5$
- $1 \leq M \leq 2 \times 10^5$
- $1 \leq K \leq \min\{N, M\}$
- $1 \leq H_i \leq 10^9$  ( $1 \leq i \leq N$ )
- $1 \leq B_i \leq 10^9$  ( $1 \leq i \leq M$ )
- All input values are integers.

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## Input

The input is given from Standard Input in the following format:

```
N M K  
H1 H2 ... HN  
B1 B2 ... BM
```

## Output

Print Yes if Takahashi can combine the parts well to create  $K$  robots that do not fall over; otherwise, print No.

---

### Sample Input 1

Copy

```
6 6 3  
2 7 1 8 2 8  
1 8 2 8 4 5
```

Copy

---

### Sample Output 1

Copy

```
Yes
```

Copy

If we denote combining the  $i$ -th head part and the  $j$ -th body part as  $(i, j)$ , then Takahashi can create three robots that do not fall over by combining them as  $(1, 2)$ ,  $(2, 4)$ ,  $(3, 6)$ , for example.

Thus, print Yes.

---

### Sample Input 2

Copy

```
1 1 1  
43  
1
```

Copy

---

### Sample Output 2

Copy

```
No
```

Copy

His head part is too heavy, so he cannot create any robot that does not fall over.

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## Sample Input 3

Copy

```
1 1 1  
100  
100
```

Copy

## Sample Output 3

Copy

```
Yes
```

Copy

Note that a robot does not fall over if the head and body have equal weights.

## Sample Input 4

Copy

```
12 15 12  
748 169 586 329 972 529 432 519 408 587 138 249  
656 114 632 299 984 755 404 772 155 506 832 854 353 465 387
```

Copy

## Sample Output 4

Copy

```
Yes
```

Copy

'#telegram)

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