Nikola is a passionate collector of albums with images of football players. He and his friends compete with each other in a game they invented based on the albums whose images are currently being collected. The images in that album are divided into $N$ teams, each of which has exactly $M$ football players. The main rule of the game is that the total number of points a person wins for $i^{th}$ team is $B_x$, where $x$ is the total number of unique pictures of football players of that team collected by the person. They have also agreed that the array $B$ is growing, i.e. having more unique images of football players of a team means having more or equal points.

Nikola would like to win as many points as possible in the game. For each team $x$ the amount of unique images Nikola currently owns of that team, $P_x$, is known.

Ivan is a friend of Nikola who has already collected the entire album twice and when he heard about the game Nikola plays with his friends, he decided to give him any $K$ images that Nikola wants. After finding out about this joyful news, Nikola wondered what is the maximal number of points he could have after Ivan gives him $K$ images. Too excited for this news, he is not able to count and begs you to answer his question.

## INPUT

In the first line there are integer numbers $N$, $M$ and $K$ ($1 \leq N, M \leq 500$, $1 \leq K \leq \min(N \cdot M, 500)$), numbers from the task's text.
In the second line there is an array $P$ consisting of $N$ non-negative integer numbers ($0 \leq P_i \leq M$).
In the third line there is an array $B$ consisting of $M$+1 non-negative integer numbers ($0 \leq B_i \leq 100\,000$), amount of points Nikola gets for $i$ ($0 \leq i \leq M$) unique images of a team.
For every $t$ between 0 and $M$-1 it holds $B_t \leq B_{t+1}$.
It is also holds that $K \leq N \cdot M - (P_1 + P_2 + \ldots + P_N)$.

## OUTPUT

In the only line print the answer to Nikola's question.

## SCORING

In test samples totally worth 20% of the points it will hold $K = 2$.

## SAMPLE TESTS

**input**

```
4 4 3
4 2 3 1
0 1 3 6 10
```

**output**

```
31
```

**input**

```
4 3 5
1 1 2 3
0 1 2 3
```

**output**

```
12
```

**input**

```
3 6 2
2 4 1
31 38 48 60 75 91 120
```

**output**

```
206
```

**Clarification of the first sample:**
Nikola is most likely to ask Ivan to give him an image of the third team and two from the second, so that his score is 31 (10 + 10 + 10 + 1).