Independent Ryuk

Problem:

On Independence Day, Light Yagami gave **N** apples to Ryuk. For every apple **i,** Ryuk knows the amount of energy **E[i]** the apple initially contains. Taking one bite from an apple decreases the energy of apple by 1. Ryuk can only take one bite from an apple in one day, but can take as many bite(s) as he can from different apples on the same day. Ryuk plans to last the apples at most **K** days . For each day **i,** Light tells Ryuk **A[i]**, the number of apples he can take bite(s) from. Being the friend of Ryuk, can you find a strategy of eating apples in order to maximize the number of days the apples can last. Ryuk will stop after the day **i** when he can't take bite(s) from **A[i]** apples.

Input:

- The first line contains **T** ,the no. of test cases.
- The second line contains two integers **N** and **K** .
- The third line contains **N** integers representing the initial energies of apples.
- Next line contains **K** integers representing the number of apples Ryuk is required to eat.

Output:

Print a single integer denoting the number of maximum days the apples can last.

Constraints:

- $1 \leq T \leq 10$
- $1 \leq N,K \leq 10^5$
- $1 \leq E[i],A[i] \leq 10^5$

Example:

INPUT
1
4 5
1 2 5 4
1 2 3 4 3
OUTPUT
4

One strategy for lasting apples 4 days would be:
1 2 4 4 - after day 1
1 2 3 3 - after day 2
1 1 2 2 - after day 3
0 0 1 1 - after day 4
Since Ryuk cannot take bite(s) from 3 apples next day hence apples will last 4 days.

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