GlobeX Cup '19 J1 - Chess Master Winnie

Time limit: 2.0s **Memory limit:** 64M

Winnie has become the best person on earth in chess, however she wants to be the best chess player in the universe. Winnie has decided to create a spaceship and participate in an intergalactic chess tournament. She is participating in a tournament with N other aliens. Winnie has a rating in chess, a number that approximates her skill level. Her current rating is M. If Winnie wins a game, she will gain A rating. If Winnie loses, she will lose B rating. Winnie will play C games at this tournament. Each alien is numbered from 1 to N. Winnie will always lose against some alien, but will always win against others. Help Winnie determine her rating after the tournament.

Input Specification

The first line of input will contain 5 integers N, M, A, B, C.

The next line of input will contain N integers that are either `1` or `0`. `1` indicates that Winnie can always beat the X_i^{th} alien, and `0` indicates that Winnie will always lose against the X_i^{th} alien.

The next line of input will contain C integers Y_i. Y_i is the i^{th} opponent Winnie will face.

If Winnie is very unlucky, her rating can be negative during and after the tournament.

Output Specification

Output Winnie's rating after the tournament.

Constraints

$1 \leq N, M, A, B, C \leq 10^3$
$1 \leq Y_i \leq N$

Sample Input 1

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

Sample Output 1

```
3
```

Explanation 1

Winnie will win against players 1 and 3, but will lose against player 2 twice. Since she gains the same rating for winning as for losing, her rating will not change and stay at 3.