C. Coin Troubles

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

In the Isle of Guernsey there are n different types of coins. For each i $(1 \le i \le n)$, coin of type i is worth a_i cents. It is possible that $a_i = a_j$ for some i and j $(i \ne j)$.

Bessie has some set of these coins totaling t cents. She tells Jessie q pairs of integers. For each i $(1 \le i \le q)$, the pair b_i, c_i tells Jessie that Bessie has a strictly greater number of coins of type b_i than coins of type c_i. It is known that all b_i are distinct and all c_i are distinct.

Help Jessie find the number of possible combinations of coins Bessie could have. Two combinations are considered different if there is some i $(1 \le i \le n)$, such that the number of coins Bessie has of type i is different in the two combinations. Since the answer can be very large, output it modulo 1000000007 $(10^9 + 7)$.

If there are no possible combinations of coins totaling t cents that satisfy Bessie's conditions, output 0.

Input

The first line contains three space-separated integers, n, q and t $(1 \le n \le 300;\ 0 \le q \le n;\ 1 \le t \le 10^5)$. The second line contains n space separated integers, $a_1, a_2, ..., a_n$ $(1 \le a_i \le 10^5)$. The next q lines each contain two distinct space-separated integers, b_i and c_i $(1 \le b_i, c_i \le n;\ b_i \ne c_i)$.

It's guaranteed that all b_i are distinct and all c_i are distinct.

Output

A single integer, the number of valid coin combinations that Bessie could have, modulo 1000000007 $(10^9 + 7)$.

Examples

input

```
4 2 17
3 1 2 5
4 2
3 4
```

output

```
3
```

input

```
3 2 6
3 1 1
1 2
2 3
```

output

```
0
```

input

```
3 2 10
1 2 3
1 2
2 1
```

output

```
0
```

Note

For the first sample, the following 3 combinations give a total of 17 cents and satisfy the given conditions: $\{0\ of\ type\ 1, 1\ of\ type\ 2, 3\ of\ type\ 3, 2\ of\ type\ 4\}, \{0, 0, 6, 1\}, \{2, 0, 3, 1\}$.

No other combinations exist. Note that even though 4 occurs in both b_i and c_i, the problem conditions are still satisfied because all b_i are distinct and all c_i are distinct.