F. Pacifist frogs

Thumbelina has had an accident. She has found herself on a little island in the middle of a swamp and wants to get to the shore very much.

One can get to the shore only by hills that are situated along a straight line that connects the little island with the shore. Let us assume that the hills are numbered from 1 to n and the number of a hill is equal to the distance in meters between it and the island. The distance between the n-th hill and the shore is also 1 meter.

Thumbelina is too small to make such jumps. Fortunately, a family of frogs living in the swamp suggests to help her. Each frog agrees to give Thumbelina a ride but Thumbelina should choose only one frog. Each frog has a certain jump length. If Thumbelina agrees to accept help from a frog whose jump length is d, the frog will jump from the island on the hill d, then — on the hill $2d$, then $3d$ and so on until they get to the shore (i.e. find itself beyond the hill n).

However, there is one more problem: mosquitoes also live in the swamp. At the moment they have a siesta, and they are having a nap on some hills. If the frog jumps on a hill with a mosquito the frog will smash it. The frogs Thumbelina has met are pacifists, so they will find the death of each mosquito very much sad. Help Thumbelina choose a frog that will bring her to the shore and smash as small number of mosquitoes as possible.

Input

The first line contains three integers n, m and k ($1 \le n \le 10^9$, $1 \le m, k \le 100$) — the number of hills, frogs and mosquitoes respectively. The second line contains m integers d_i ($1 \le d_i \le 10^9$) — the lengths of the frogs' jumps. The third line contains k integers — the numbers of the hills on which each mosquito is sleeping. No more than one mosquito can sleep on each hill. The numbers in the lines are separated by single spaces.

Output

In the first line output the number of frogs that smash the minimal number of mosquitoes, in the second line — their numbers in increasing order separated by spaces. The frogs are numbered from 1 to m in the order of the jump length given in the input data.

Examples

input
```
5 3 5
2 3 4
1 2 3 4 5
```

output
```
2
2 3
```

input
```
1000000000 2 3
2 5
999999995 999999998 999999996
```

output
```
1
2
```