

## Problem G. Square Peg in a Round Hole

**Time Limit** 1000 ms

**Mem Limit** 1048576 kB

**OS** Linux

Mr. Johnson likes to build houses. In fact, he likes it so much that he has built a lot of houses that he has not yet placed on plots. He has recently acquired  $N$  circular plots. The city government has decided that there can be only one house on each plot, and a house cannot touch the boundary of the plot.

Mr. Johnson has  $M$  circular houses and  $K$  square houses. Help him figure out how many of the plots he can fill with houses so that he can get some money back on his investments.

### Input

The first line of input consists of 3 space-separated integers  $N$ ,  $M$ , and  $K$ . The second line contains  $N$  space-separated integers, where the  $i^{\text{th}}$  integer denotes the radius  $r_i$  of the  $i^{\text{th}}$  plot. The third line contains  $M$  space-separated integers, where the  $i^{\text{th}}$  integer denotes the radius  $r_i$  of the  $i^{\text{th}}$  circular house. The fourth line contains  $K$  space-separated integers, where the  $i^{\text{th}}$  integer denotes the side length  $s_i$  of the  $i^{\text{th}}$  square house.

### Output

Output the largest number of plots he can fill with houses.

### Limits

- $1 \leq N, M, K, r_i, s_i \leq 100$

### Sample 1

Input	Output
5 3 3 1 2 6 7 8 2 6 7 4 8 9	3