Floor Coloring

You are given four different types of tiles that are denoted by R, G, B and Y Their quantity is given by N1, N2, N3 and N4 respectively. You are required to arrange these tiles in a straight line next to each other. However, in this arrangement, you want **no two tiles of the same type to be adjacent to each other**.

Your task is to determine the number of distinct arrangements of the tiles that can exist. If yes, print the answer modulo 10^9+7

Input Format

single line of the input contains four integers denoting the number of available tiles of each type.

Constraints

0 ≤ N1, N2, N3, N4 ≤ 20

Output Format

Print the required answer modulo 10^9+7

Sample Input 0

```
1 1 0 0
```

Sample Output 0

```
2
```

Explanation 0

As B and Y tiles are 0 There are 2 ways to arrange tiles:

```
R G

G R
```