

Compute the number of paths in 3D cartesian space from $(0, 0, 0)$ to (n, m, k) , where n, m, k are positive integers, such that each step consist of going from (x, y, z) to one of

$\{(x+1, y+1, z+1), (x, y+1, z+1), (x+1, y, z+1), (x+1, y+1, z), (x+1, y, z), (x, y+1, z), (x, y, z+1)\}$

Additionally, in at least one of the steps in each path, we end up going from (x, y, z) to one of $\{(x+1, y+1, z+1), (x, y+1, z+1), (x+1, y, z+1), (x+1, y+1, z)\}$.

Input

A number of of inputs (≤ 200), with n, m, k on each line separated by a single space, such that $0 < n, m, k \leq 1000$.

Output

For each input, output the number of paths *modulo* 1000000007.

Sample Input

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

Sample Output

```
7
179
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