Problem F. Old Problem

Input file:	*standard input*
Output file:	*standard output*
Time limit:	5 seconds
Memory limit:	256 mebibytes

Chiaki has an $n \times m$ grid of unit squares. In total, there are $(n+1) \times (m+1)$ square corners on the grid. She would like to know the number of right triangles with vertices in square corners and area equal to $\frac{s}{2}$.

Input

There are multiple test cases. The first line of the input contains an integer T ($1 \le T \le 10\,000$), indicating the number of test cases. For each test case:

The first line contains three integers, n, m, and s ($1 \le n, m, s \le 10^8$).

Output

For each test case, output the answer modulo $(10^9 + 7)$.

Example

standard input	standard output
2 1 1 1 2 2 2	4 24