# Computer Virus

Suppose we have an *n-dimensional* supercomputer with an infinite number of processors. Every processor has a vector of $n$ integers as its (*n-dimensional*) coordinates and can be thought of as a point in the $n$-dimensional space. Furthermore, at every $n$-dimensional lattice point, there is a processor. Two processors are called *neighbors* if their coordinate vectors are different in only one position, and the absolute difference of the numbers in that position is equal to $1$. For example $(0,0,0)$ and $(1,0,0)$ are neighbors, and so are $(-1,2,3,4)$ and $(-1,2,3,3)$. But $(0,0,0)$ and $(1,0,1)$, and $(1,2,3,4)$ and $(1,2,3,2)$, are not neighbors.

Some processors of this computer are infected by a virus. At time $0$, only one processor is infected. After every second, all uninfected processors that are neighbors with infected ones become infected too. Given $n$ and $t$, calculate the number of processors that are infected after $t$ seconds, modulo $(10^9+7)$.

**Input Format**

The first line contains an integer $Q$, the number of test cases.
Each of the next $Q$ lines contains two integers $n$ and $t$, separated by a space.

**Output Format**

For every test case, write the answer in a single line.

**Constraints**

$1 \leq Q \leq 10^5$
$1 \leq n \leq 5 \times 10^6$
$0 \leq t \leq 10^{18}$
The sum of all $n$'s in one file does not exceed $5 \times 10^6$

**Sample Input**

```
5
2 0
2 1
2 2
3 1
1 10
```

**Sample Output**

```
1
5
13
7
21
```

**Explanation**