Steve Job's Revolution

“You have to be burning with an idea, or a problem, or a wrong that you want to right. If you’re not passionate enough from the start, you’ll never stick it out.” - Steve Jobs

Steve Jobs, the co-founder of Apple Inc. was the pioneer of personal computer revolution along with **Steve Woznaik**. They are about to enter the mobile phone industry with the launch of the iphone. However for a flexible cost mechanic, the price of each iphone is decided by the sum of prices of previous **N** iphones modulo 10^9+7.

The first **N-1** iPhones designed were prototypes and therefore had a price of **0**$.

The N^{th} iphone was priced at 1$.

Today is the launch day and Job needs your help in deciding the price of M^{th} iphone.

Input Format

First line contains an integer **T**, the number of testcases.

T lines follow, each containing two integers **N** and **M** with a space in between.

Constraints

- $1 \leq T \leq 100$
- $1 \leq N \leq 10^6$
- $1 \leq M \leq 10^6$

Output Format

Print the cost of M^{th} iphone.

Sample Input 0

```
1
3 5
```

Sample Output 0

```
2
```

Explanation 0

The pricing list is as follows: 0 0 1 1 2 4

- The first **3-1=2** iphones are priced 0$ each.
- iphone 3 is priced at 1$.
- iphone 4 will be 0+0+1=1$.
- iphone 5 will be 0+1+1=2$.