

Counting

Given integers **N** and **M**, output in how many ways you can take **N distinct** positive integers such that sum of those integers is $\leq M$. Since the result can be huge, output it modulo **100000007** ($10^9 + 7$)

$N \leq 20$

$M \leq 100000$

Input

First line of input is number **t**, number of test cases. Each test case consists only of 2 numbers **N** and **M**, in that order.

Output

Output the answer asked for in the description.

Example

Input:

```
4
6 16
4 16
1 14
3 7
```

Output:

```
0
27
14
2
```