

An  $N$ -based number is beautiful if all of the digits from 0 to  $N - 1$  are used in that number and the difference between any two adjacent digits is exactly 1 (one). For example, 9876543210 is a 10-based beautiful number. You have to calculate the number beautiful numbers that has got atmost  $M$  digits...

**Note:** No leading zero is allowed in a beautiful number.

## Input

The first line of input is an integer  $T$  ( $T < 100$ ) that indicates the number of test cases. Each case starts with a line containing two integers  $N$  and  $M$  ( $2 \leq N \leq 10$  &  $0 \leq M \leq 100$ ).

## Output

For each case, output the number of beautiful  $N$ -based numbers, which are using less than or equal to  $M$  digits in a single line. You have to give your output modulo 1000000007.

## Sample Input

```
3
2 4
3 7
10 10
```

## Sample Output

```
3
31
1
```