

Inversions

Calculate the number of ways that k things can be 'chosen' from a set of n things.

Input

The first line of input is the number of tests $t \leq 100000$. Next t lines contains two integers each n and k , separated with a single space. $0 \leq k \leq n \leq 100000$.

Output

For each test output the number of ways that k things can be 'chosen' from a set of n things modulo 1000000007.

Example

Input:

```
3
9876 5432
100 50
100000 50000
```

Output:

```
266875274
538992043
149033233
```