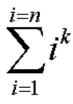
## **Sum of Powers**

Given two integers N and K you have to calculate:



## Input

The first line of the input is T ( $1 \le T \le 10^5$ ), the number of test cases each test case in one line.

then T lines each line consist of N (1  $\leq N \leq 10^{18}$ ) and K (0  $\leq K \leq 5$ )

## Output

print the answer modulo  $100,000,007 (10^8 + 7)$ 

## Example