Problem A. Chat Group

Input file: standard input
Output file: standard output

It is said that a dormitory with 6 persons has 7 chat groups ^_^. But the number can be even larger: since every 3 or more persons could make a chat group, there can be 42 different chat groups.

Given N persons in a dormitory, and every K or more persons could make a chat group, how many different chat groups could there be?

Input

The input starts with one line containing exactly one integer T which is the number of test cases.

Each test case contains one line with two integers N and K indicating the number of persons in a dormitory and the minimum number of persons that could make a chat group.

Output

For each test case, output one line containing "`Case #x: y`" where `x` is the test case number (starting from 1) and `y` is the number of different chat groups modulo 1000000007.

Limits

- $1 \leq T \leq 100$.
- $1 \leq N \leq 10^9$.
- $3 \leq K \leq 10^5$.

Example

standard input	standard output
1 6 3	Case #1: 42