

Hidden Toys

Input file: *standard input*
Output file: *standard output*
Time limit: 3 seconds
Memory limit: 512 MB

There are $N + 2$ rooms and K indistinguishable toys. The rooms are numbered $0, 1, 2, \dots, N + 1$. Alice, Bob and Charles play a friendly game to win candies.

First of all, the game master distributes the K toys into the $N + 2$ rooms (a room may receive any number of toys, including zero).

After that, Alice, Bob and Charles go one by one into room number 0 to search for toys, and each reports honestly to the master how many toys they found (the toys never leave the room). Because they do not have time to search the entire room, each child may find a different number of toys, **independently** of the others: a child may find at least 0 and at most the number of toys placed in room 0.

Finally, if a child found x toys, the master gives that child x candies.

The master is interested in the number of possible *scenarios*, modulo 998 244 353. Two scenarios are considered different if either there exists a room i whose number of toys differs between the two scenarios, or some child reports a different number of found toys between the two scenarios.

You have to answer T independent test cases.

Input

The first line of the input contains a single integer T ($1 \leq T \leq 2 \cdot 10^5$), the number of test cases.

Each of the next T lines contains two integers N and K ($1 \leq K \leq N \leq 5 \cdot 10^6$).

Output

For each test case, output a single line containing the number of possible scenarios modulo 998 244 353.

Example

standard input	standard output
2	10
1 1	69
3 2	