

Problem M. Multiple Parentheses

Input file: *standard input*
Output file: *standard output*
Time limit: 2 seconds
Memory limit: 512 mebibytes

Consider strings consisting of the brackets '(' and ')'.

The regular bracket sequences are the strings which can be obtained by the following rules:

- Empty string is a regular bracket sequence.
- If A is a regular bracket sequence, then (A) is a regular bracket sequence.
- If A and B are regular bracket sequences, then the concatenation of A and B is a regular bracket sequence.

You are given N boxes numbered $1, 2, \dots, N$, and also two integers, M and K . Your task is to put exactly one regular bracket sequence in each of N boxes such that the following conditions are met:

- The total number of '(' brackets in all N boxes is equal to M .
- The regular bracket sequences of length $2 \cdot K$ cannot be put into the boxes.

Count the number of different ways to do that. Two distributions are considered different if there exists a number i such that box i contains different regular bracket sequences in those distributions.

Because the answer may be very large, print the answer modulo 998 244 353.

Input

The input contains one line with three integers N , M , and K in it ($1 \leq M, N \leq 10^6$, $1 \leq K \leq M$).

Output

Print the answer modulo 998 244 353.

Examples

standard input	standard output
2 2 1	4
1 1 1	0
24 120 30	379268651

Note

For the first example, the following distributions meet the conditions:

- $()()$, empty;
- $()()$, empty;
- empty, $()()$;
- empty, $()()$.

So, the answer is 4.