Problem C
Piers of the Great Lake

In Tresno's hometown lies a great lake. This lake can be represented by a grid with N rows (numbered from 1 to N) and $100\,000$ columns (numbered from 1 to $100\,000$). The cell in row i and column j is denoted by (i, j).

Initially, all cells are **water cells**. Call an integer sequence **valid** if all its elements are between 0 and $100\,000$ (inclusive).

Tresno will choose a valid sequence of integers $(A_1, A_2, \ldots, A_N)$. In row i, Tresno will build a pier consisting of the first A_i cells, transforming them into **pier cells**. If $A_i = 0$, no pier is built in that row. The **utility** of that sequence is the maximum area of a rectangular subgrid consisting entirely of pier cells.

Formally, the utility of the sequence is the maximum value of $(r_2 - r_1 + 1) \times (c_2 - c_1 + 1)$ over all integers r_1, r_2, c_1, and c_2 such that $1 \le r_1 \le r_2 \le N$, $1 \le c_1 \le c_2 \le 100\,000$, and every cell (r', c') satisfying $r_1 \le r' \le r_2$ and $c_1 \le c' \le c_2$ is a pier cell.

If there are no pier cells, the utility is 0.

Given two integers N and K, count the number of valid integer sequences of length N with utility **exactly** K, modulo $998\,244\,353$.

Input

Two space-separated integers N and K ($1 \le N, K \le 100\,000$), denoting the length of the sequence and the desired utility.

Output

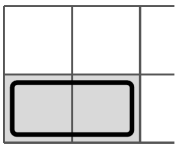
Output a single integer denoting the number of valid integer sequences of length N with utility exactly K, modulo $998\,244\,353$.

Sample 1

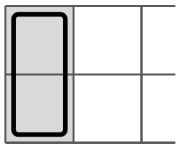
Sample Input	Sample Output
2 2	5

Explanation of Sample 1: The 5 valid sequences of length 2 with utility 2 can be illustrated as follows.

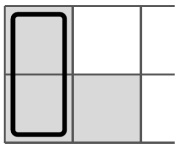
White cells are water cells, and grey cells are pier cells. In each illustration, one rectangular subgrid consisting entirely of pier cells and having the maximum possible area is outlined with a thick black border.



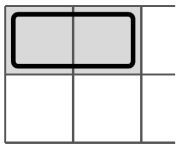
$(0, 2)$



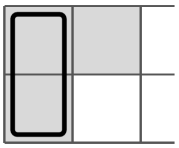
$(1, 1)$



$(1, 2)$



$(2, 0)$

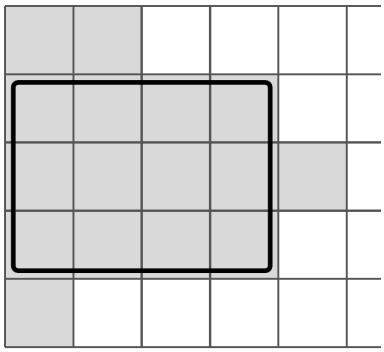


$(2, 1)$

Sample 2

Sample Input	Sample Output
5 12	54150

Explanation of Sample 2: One valid sequence of length 5 with utility 12 is $(2, 4, 5, 4, 1)$, which can be illustrated as follows.



$(2, 4, 5, 4, 1)$

Sample 3

Sample Input	Sample Output
10 23	176385890

Explanation of Sample 3: There are $496\,303\,829\,331$ valid sequences of length 10 with utility 23. Therefore, the output is $496\,303\,829\,331$ modulo $998\,244\,353$, which is $176\,385\,890$.