

Problem J. Good Permutations

Input file: *standard input*
Output file: *standard output*
Time limit: 7 seconds
Memory limit: 256 mebibytes

Let's call a permutation of n elements **good**, if there are exactly m triples i, j, k such that $1 \leq i < j < k \leq n$ and $p_i < p_j < p_k$.

You need to calculate the total number of inversions of all good permutations of n elements, modulo 998 244 353 (prime).

Input

The first line of input contains two integers n and m ($1 \leq n \leq 100\,000, 0 \leq m \leq 3$).

Output

Output one integer: the sum of the number of inversions of all permutations $p_1, p_2, \dots, p_n$, such that there are exactly m triples i, j, k such that $1 \leq i < j < k \leq n$ and $p_i < p_j < p_k$, modulo 998 244 353.

Examples

standard input	standard output
2 0	1
3 0	9
4 0	55
5 0	290
4 2	3
5 2	98
6 2	1074
5 3	21
6 3	484
7 3	5430