

Problem K. K-pop Strings

Input file: *standard input*
Output file: *standard output*
Time limit: 7 seconds
Memory limit: 512 mebibytes

A substring $s[l..r]$ is a tandem repeat if $r - l + 1$ is even and $s[l \dots \frac{l+r-1}{2}] = s[\frac{l+r+1}{2} \dots r]$.

Recently Gennady came up with a method to calculate the number of tandem repeats in a string using suffix structures, and now he came up with a new type of strings based on tandem repeats. Gennady thinks that string s of length n is a K-pop string if there are no tandem repeats of length $\geq n - k$.

Help him find the number of K-pop strings consisting only of the characters '1', '2', ..., '9', 'a', 'b', ..., 'z', modulo 998 244 353.

Input

The first line of input contains two integers n and k : the required length of string and the parameter ($1 \leq n \leq 100$, $0 \leq k \leq 16$).

Output

Output one integer: the number of K-pop strings of length n for the given k , consisting only of nonzero digits and lowercase alphabetic characters, modulo 998 244 353.

Examples

standard input	standard output
1 16	35
4 0	1499400
15 5	911125634

Note

The answer for the first example is 35 because all strings of length 1 are possible: "1", "2", ..., "9", "a", "b", ..., "z".

The answer for the second example is $35^4 - 35^2$.