H. Reform (16 Mb, 1 sec)

In Faraway Land there are a number of ministries. All the ministries are located along the same street and are numbered 1 to ***N***.
One day, the King decided to reform his government. He planned to dismiss each and every minister, and instantly appoint them to new ministerial positions. However, a condition was to be met: a minister can become the head of a new ministry if its distance from the previous ministry does not exceed ***K***. The court besought the King to set ***K***=0 but he noticed the catch because in this case the reform would have the only option: to appoint all ministers to the same positions. After some thought the King was close to not limiting ***K*** but the court astrologer (and mathematician) noted at once that in this case there would be ***N***! different variants, which is world known.
So, the King rejected his idea and decided to limit ***K***. Soon afterwards, he ordered to prepare the detailed plans of all possible appointments. Right by this time the neighboring kingdoms allowed Faraway Land to import a new supercomputer, and the hordes of programmers, which appeared during kingdom-wide computerization, were eager to do at King's behest.
We do not require you to fulfill the King's order in detail but try to find out the total number of distinct possible variants of the reform.
Write a program to calculate the total number of distinct reform variants for given ***N*** and ***K***.

Limitations

1 <= ***N*** <= 50
1 <= ***K*** <= 4

Input

Two integers ***N*** and ***K*** are given in the input file, on the first and second line, correspondingly.

Output

A single number should be written to the output file, the number of possible variants of the reform modulo 1,000,000 (i.e. the last 6 digits).

Sample Input 1	**Sample Output 1**
`6` `1`	`13`
Sample Input 2	**Sample Output 2**
`4` `2`	`14`
Sample Input 3	**Sample Output 3**
`6` `3`	`73`