

Color rocks

1 second, 256 MB

You are given a sequence of N color rocks. The i -th rock has color C_i where C_i is an integer. After you receive each rock, you put them at the top of a vertical pile. It turns out that if there are K consecutive rocks of the same color in the pile, they will magically disappear. (**Note:** In this task, K can be 2 or 3 depending on test cases. The case where $K = 2$ is simpler, and you can score 50% of the points in this task by working only on this case.)

Consider the following example. Suppose that $N=11$ and $K=2$. Suppose that the rocks that you get have the following colors (in order): 1, 2, 4, 4, 3, 5, 5, 2, 2, 3, 9. This is what is going to happen in your pile of rocks.

Steps:	1	2	3	4	5	6	7	8	9	10	11
				4		5	5	2	2	3	
			4	4	3	3	3	3	3	3	9
		2	2	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1	1	1	1

Note that in steps 4, 7, 9, and 10, K consecutive rocks of the same colors disappear (shown in orange). In the end you have 3 rocks left.

Consider another example where $K=3$ and $N=11$. Suppose the the sequence of rocks are of the following colors: 1, 1, 2, 5, 5, 4, 4, 4, 5, 2, 2.

Steps:	1	2	3	4	5	6	7	8	9	10	11
								4			
						4	4	4			
					5	5	5	5	5		2
			5	5	5	5	5	5	5	2	2
		2	2	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1	1	1	1
	1	1	1	1	1	1	1	1	1	1	1

In this example, you have 2 rocks left.

Your task is to write a program that takes the sequence of color rocks and find out **the number of rocks left** after the process. In examples above, the answers are 3 and 2, consecutively.

Input

The first line contains two integers N and K ($1 \leq N \leq 100,000$; $2 \leq K \leq 3$). **For 50% of test cases, $K=2$.**

The second line contains N integers representing the colors of the rocks. More specifically, for $1 \leq i \leq N$, the i -th integer C_i is the color of the i -th rock ($1 \leq C_i \leq 1,000,000$).

Output

Your program should output one integer: the number of rocks in the pile at the end of the process.

Example 1

Input	Output
11 2 1 2 4 4 3 5 5 2 2 3 9	3

Example 2

Input	Output
11 3 1 1 2 5 5 4 4 4 5 2 2	2