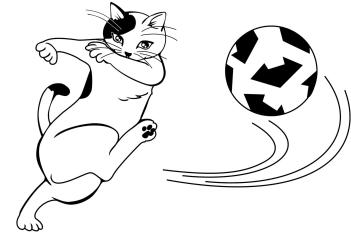


F Feline Friendship

Time limit: 2s

There is a big community of n cats in Delft. The cats are numbered from 1 to n . Each cat has a favourite playing partner, p_i (cats can be very egocentric, so $p_i = i$ is allowed). It turns out that no two cats share the same favourite playing partner, so the p_i are distinct.

You are organising a big game of Cats versus Coatis football¹, for which you will need exactly k cats in a team.



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To get k cats to join your game, you appoint one cat as team captain. Then the following process is repeated, starting with the team captain cat. A cat i selects its favourite playing partner p_i , adding p_i to the team. Subsequently, cat p_i will select its favourite playing partner, adding p_{p_i} to the team, and so on. The process only stops when a cat tries to invite a cat that is already on the team. If, for some choice of the team captain, the number of cats in the team is exactly k , the game can be played.

Sometimes, it is not possible to find a team of k cats in this way. Therefore, you have decided to convince some cats to change their favourite playing partner. Formally, you repeatedly select a cat i ($1 \leq i \leq n$) and choose an x ($1 \leq x \leq n$) and update the playing partner $p_i := x$. After the change, it can be the case that $p_1, p_2, p_3, \dots, p_n$ are no longer distinct, but that is fine.

What is the minimum number of times you need to convince a cat to change their favourite playing partner, such that the football game can be played?

Input

The input consists of:

- One line with two integers, n and k ($1 \leq n \leq 2 \cdot 10^5$, $1 \leq k \leq n$), the number of cats and the team size for the football game.
- One line with n integers, p_1, p_2, \dots, p_n ($1 \leq p_i \leq n$), where the i th integer is the favourite playing partner of cat i .

It is guaranteed that the p_i are all distinct.

Output

Output the minimum number of times you need to convince a cat to change their favourite playing partner, such that the football game can be played.

¹Non-American.

Sample Input 1

2 1
2 1

Sample Output 1

1

Sample Input 2

5 5
3 4 1 2 5

Sample Output 2

2
