Jumping on the Clouds: Revisited

by Shafaet

Aerith is playing a cloud game! In this game, there are n clouds numbered sequentially from 0 to $n-1$. Each cloud is either an *ordinary cloud* or a *thundercloud*.

Aerith starts out on cloud 0 with energy level $E = 100$. She can use 1 unit of energy to make a jump of size k to cloud $(i + k) \% n$ until she gets back to cloud 0. If Aerith lands on a thundercloud, her energy (E) decreases by 2 additional units. The game ends when Aerith lands back on cloud 0.

Given the values of n, k, and the configuration of the clouds, can you determine the final value of E after the game ends?

Note: Recall that $\%$ refers to the modulo operation.

Input Format

The first line contains two space-separated integers, n (the number of clouds) and k (the jump distance), respectively.
The second line contains n space-separated integers describing the respective values of clouds $c_0, c_1, \ldots, c_{n-1}$. Each cloud is described as follows:

- If $c_i = 0$, then cloud i is an *ordinary* cloud.
- If $c_i = 1$, then cloud i is a *thundercloud*.

Constraints

- $2 \leq n \leq 25$
- $1 \leq k \leq n$
- $n \% k = 0$
- $c_i \in \{0, 1\}$

Output Format

Print the final value of E on a new line.

Sample Input

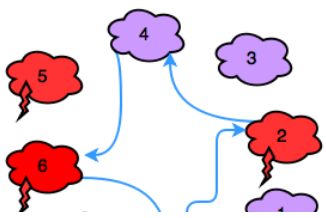
```
8 2
0 0 1 0 0 1 1 0
```

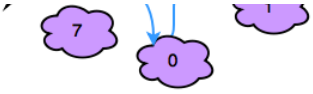
Sample Output

```
92
```

Explanation

In the diagram below, *red* clouds are thunderclouds and *purple* clouds are ordinary clouds:





Observe that our thunderclouds are the clouds numbered **2**, **5**, and **6**. Aerith makes the following sequence of moves:

1. Move: $0 \rightarrow 2$, Energy: $E = 100 - 1 - 2 = 97$.
2. Move: $2 \rightarrow 4$, Energy: $E = 97 - 1 = 96$.
3. Move: $4 \rightarrow 6$, Energy: $E = 96 - 1 - 2 = 93$.
4. Move: $6 \rightarrow 0$, Energy: $E = 93 - 1 = 92$.

Thus, we print **92** as our answer.

Submissions: 10195
Max Score: 15
Difficulty: Easy

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```
using System;
using System.Collections.Generic;
using System.IO;
using System.Linq;
class Solution {

    static void Main(String[] args) {
        string[] tokens_n = Console.ReadLine().Split(' ');
        int n = Convert.ToInt32(tokens_n[0]);
        int k = Convert.ToInt32(tokens_n[1]);
        int[] c = Array.ConvertAll(Console.ReadLine().Split(' '), e => int.Parse(e));

        int E = 100;
        for (int i = 0; i < n; i+=k)
        {
            if (c[i] == 0)
            {
                E--;
            }
            else
            {
                E -= 3;
            }
        }

        Console.WriteLine(E);
    }
}

```

Line: 18 Col: 21

Upload Code as File Test against custom input Run Code Submit Code

Congrats, you solved this challenge!

- ✔ Test Case #0
- ✔ Test Case #1
- ✔ Test Case #2
- ✔ Test Case #3
- ✔ Test Case #4
- ✔ Test Case #5
- ✔ Test Case #6
- ✔ Test Case #7

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