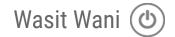
The TCS Global Coding Contest



02 Hr **33** Min **17** Sec

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ONLINE EDITOR (E)

Grooving Monkeys

+ Problem Description

N monkeys are invited to a party where they start dancing. They dance in a circular formation, very similar to a Gujarati Garba or a Drum Circle. The dance requires the monkeys to constantly change positions after every 1 second.

The change of position is not random & you, in the audience, observe a pattern. Monkeys are very disciplined & follow a specific pattern while dancing.

Consider N = 6, and an array monkeys = $\{3,6,5,4,1,2\}$.

This array (1-indexed) is the dancing pattern. The value at monkeys[i], indicates the new of position of the monkey who is standing at the ith position.

Given N & the array monkeys[], find the time after which all monkeys are in the initial positions for the 1st time.

+ Constraints

1<=t<=10 (test cases)

1<=N<=10000 (Number of monkeys)

+ Input Format

First line contains single integer t, denoting the number of test cases.

Each test case is as follows -

Integer N denoting the number of monkeys.

Next line contains N integer denoting the dancing pattern array, monkeys[].

+ Output

t lines,

Each line must contain a single integer T, where T is the minimum number of seconds after which all the monkeys are in their initial position.

+ Timeout

1

+ Explanation Example 1 Input 1 365412 Output Explanation Consider N = 6, and an array monkeys = $\{3,6,5,4,1,2\}$. Suppose monkeys are a,b,c,d,e,f, & Initial position (at t = 0) -> a,b,c,d,e,f At $t = 1 \rightarrow e,f,a,d,c,b$ a will move to 3rd position, b will move to 6th position, c will move to 5th position, d will move to 4th position, e will move to 1st position and f will move to 2nd position. Thus from a,b,c,d,e,f at t = 0, we get e,f,a,d,c,b at t = 1. Recursively applying same transpositions, we get following positions for different values of t. At $t = 2 \rightarrow c,b,e,d,a,f$ At $t = 3 \rightarrow a,f,c,d,e,b$ At $t = 4 \rightarrow e.b.a.d.c.f$ At $t = 5 \rightarrow c, f, e, d, a, b$ At $t = 6 \rightarrow a,b,c,d,e,f$ Since at t = 6, we got the original position, therefore the answer is 6. Upload Solution [Question : E] □ I, wasit wani confirm that the answer □ Took help from online sources (attributions) submitted is my own.

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