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Demo ticket

Session

ID: demo89NTYC-C85 Time limit: 120 min.

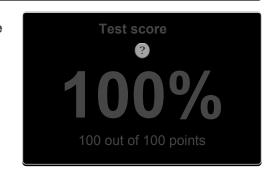
Status: closed

Created on: 2014-03-16 05:34 UTC Started on: 2014-03-16 05:34 UTC Finished on: 2014-03-16 05:42 UTC

Tasks in test

Task score

very small N and M



EASY

1. ChocolatesByNumbers

There are N chocolates in a circle. Count the number of chocolates you will eat.

score: 100 of 100

Task description

Two positive integers N and M are given. Integer N represents the number of chocolates arranged in a circle, numbered from 0 to N - 1. You start to eat the chocolates. After eating a chocolate you leave only a wrapper.

You begin with eating chocolate number 0. Then you omit the next M – 1 chocolates or wrappers on the circle, and eat the following one. More precisely, if you ate chocolate number X, then you will next eat the chocolate with number (X + M) modulo N (remainder of division). You stop eating when you encounter an empty wrapper.

For example, given integers N = 10 and M = 4. You will eat the following chocolates: 0, 4, 8, 2, 6.

The goal is to count the number of chocolates that you will eat, following the above rules.

Write a function:

def solution(N, M)

that, given two positive integers N and M, returns the number of chocolates that you will eat.

For example, given integers N = 10 and M = 4. the function should return 5, as explained above.

Assume that:

 N and M are integers within the range [1..1,000,000,000].

Complexity:

- expected worst-case time complexity is O(log(N+M));
- expected worst-case space complexity is O(1).

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0.050 s. **OK**

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simple simple test, N = 24, M = 18	0.050 s.	ок
small1 small tests	0.050 s.	ок
small2 small tests	0.050 s.	ок
medium medium tests	0.050 s.	ок
large large tests	0.050 s.	ок
large2 N = (3**9)*(2**14), M=(2**14)*(2**14)	0.050 s.	ок
extreme_large maximal and minimal values	0.050 s.	ок

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