Codility_

## Candidate Report: training2UXCX2-4VE

Check out Codility training tasks

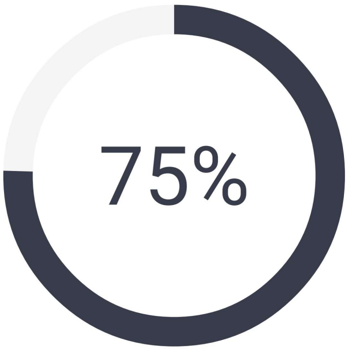
Test Name:

Summary Review (0) Timeline

### Tasks summary

| Task | Time spent | Score |
|---|---|---|
| **ChocolatesByNumbers**<br>Java 8 | 1 min | 75% |

### Total score



## Tasks Details

Easy

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

| Task Score | Correctness | Performance |
|---|---|---|
| 75% | 100% | 50% |

### 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:

```
class Solution { public int solution(int N, int 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.

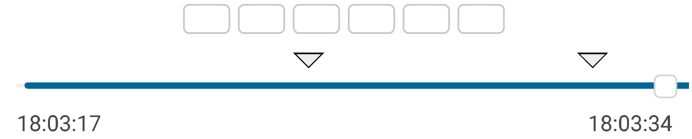
Write an **efficient** algorithm for the following assumptions:

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

### Solution

| | |
|---|---|
| Programming language used: | Java 8 |
| Total time used: | 1 minutes |
| Effective time used: | 1 minutes |
| Notes: | *not defined yet* |

### Task timeline



Code: 18:03:34 UTC, java, final, score: 75

show code in pop-up

```
// you can also use imports, for example:
// import java.util.*;

// you can write to stdout for debugging purposes, e.g.
// System.out.println("this is a debug message");

class Solution {
    public int solution(int N, int M) {//%75 because of
```

```
                // write your code in Java SE 8
                int count = 1, mod = M%N;

                while(mod!=0){
                    count ++;
                    mod = (M+mod)%N;
                }
                return count;
            }
}
```

## Analysis summary

The following issues have been detected: timeout errors.

For example, for the input `(1000000000, 1)` the solution exceeded the time limit.

## Analysis ?

| expand all | Example tests | |
|---|---|---|
| ▶ | example<br>example test | ✓ OK |
| expand all | Correctness tests | |
| ▶ | extreme_small<br>very small N and M | ✓ OK |
| ▶ | simple<br>simple test, N = 24, M = 18 | ✓ OK |
| ▶ | small1<br>small tests | ✓ OK |
| ▶ | small2<br>small tests | ✓ OK |
| expand all | Performance tests | |
| ▶ | medium<br>medium tests | ✓ OK |
| ▶ | large<br>large tests | ✗ TIMEOUT ERROR<br>running time: 1.420 sec., time limit: 0.100 sec. |
| ▶ | large2<br>N = (3**9)*(2**14), M=(2**14)*(2**14) | ✓ OK |
| ▶ | extreme_large<br>maximal and minimal values | ✗ TIMEOUT ERROR<br>Killed. Hard limit reached: 6.000 sec. |

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