Round Table Killers

Attempted by: **876** / Accuracy: **51%** / Maximum Score: **10** / ★★★★☆ 12 Votes

Tag(s): Basic Programming, Very-Easy

There is a round table in which N people are sitting. You can look at the image for their seating arrangement. Initially the person numbered X holds a gun. In addition to it there is a special number K that helps in determining the persons to be killed. The killing starts as follows - Firstly the person numbered X starts and he kills a total of $X\%K$ people sitting clockwise of him and he gives gun to the person i who is sitting just next to the last person killed. Now that person also kills the next $i\%K$ people and this goes on. If at any instant the total persons that are remaining is not greater than $i\%K$ where i is the number of person holding the gun then the person i wins. You can show that sooner or later only one person remains. So your job is to decide which numbered person will win this killing game.

$X\%K$ is the remainder when X is divided by K

Input

First line contains three numbers N , K and X as input.

Output

In the output you have to tell the number of the player who will be the winner.

Constraints

$1 \leq N \leq 10^3$

$2 \leq K < N$

$1 \leq X \leq N$

SAMPLE INPUT

```
5 2 3
```

SAMPLE OUTPUT

```
3
```

Explanation

Initially the gun is with person 3. Value of $3\%2$ is 1 so he kills only one person to his clockwise i.e. 4 dies. Now gun is with person 5. $5\%2$ is 1 so person 1 is killed and gun is passed to person 2. $2\%2$ is zero and the gun is passed to 3 without killing anyone. Now again $3\%2$ is 1 so 5 gets killed and gun is passed to 2. Then the gun is passed to 3 again and finally he kills person 2.

Time Limit:	1.0 sec(s) for each input file.
Memory Limit:	256 MB
Source Limit:	1024 KB
Marking Scheme:	Marks are awarded when all the testcases pass.
Allowed Languages:	C, C++, C++14, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, R(RScript), Racket, Ruby, Rust, Scala, Swift, Visual Basic

CODE EDITOR

Enter your code or Upload your code as file. Save C (gcc 5.4.0)

```c
#include <stdio.h>

int main()
{
    printf("Hello World!\n");
    return 0;
}

```

1:1

Provide custom input

Press Ctrl-space for autocomplete suggestions.

COMPILE & TEST SUBMIT

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PROGRAMMERS WHO SOLVED THIS PROBLEM ALSO SOLVED

Batman And Tick-Tack-Toe

Attempted By: **936** / Accuracy: **87**

The Great Kian

Attempted By: **7496** / Accuracy: **76**

Min-Max

Attempted By: **7030** / Accuracy: **90**