# Fibonacci

(Time Limit: 1 second)

**Problem Description**

Fibonacci is well known. This is a similar task. Let f(3)=f(2)=f(1)=1, and F(i)=a\*f(i-1)+b\*f(i-2)+c\*f(i-3) for all i>3, where a, b, and c are given constants. Given a positive integer n and a prime p, find f(n) (mod p).

**Technical Specification**

* + The number of test cases is at most 10.
  + a, b, and c are positive integers less than 10.
  + n and p are positive 31-bit integers.

**Input Format**

The test file contains several test cases. Each line is a test case and contains 5 integers n, p, a, b, and c, separated by a space.

**Output Format**

For each test case, output the result in one line.

**Example**

|  |  |
| --- | --- |
| **Sample Input:** | **Sample Output:** |
| 6 7 1 2 3 | 5 |