7571 Crazy Malvika discovers Crazy Fibonacci function

Malvika was getting bored of the usual Fibonacci problems, and decided to add a little twist to it. She defined a new function $f()$ with the following properties:

- She'll give you two integers, A and B. $f(1)$ is defined to be A and $f(2)$ is B.
- And for all integers $x \geq 2$, $f(x) = f(x-1) + f(x+1)$.

She'll give an integer N, and you have to find out what $f(N)$ is. Output the answers *modulo* 10^9+7.

Input

The first line of input contains a single integer T denoting number of test cases.

The only line of each test case contains three integers: A, B and N, denoting $f(1)$, $f(2)$ and the query.

Output

For each test case, output a line which contains a single integer, corresponding to $f(N)$ for the given input.

Constraints:

- $-10^9 \leq A, B \leq 10^9$
- $1 \leq N \leq 10^9$

Explanation:

In the first test case, $f(3) = 7$, and so that is the output.

In the second test case, $f(3) = -6$ and the answer *modulo* $10^9 + 7$ is 1000000001.

Sample Input

```
2
10 17 3
23 17 3
```

Sample Output

```
7
1000000001
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