

Problem F6401

Beyond Fibonacci

You have heard of the famous Fibonacci numbers, and you know how to compute the Fibonacci numbers by recursive function. So in this problem you are asked to compute n -th term of a similar number sequence defined as the following.

$$F_n = \begin{cases} a, & \text{if } n = 1 \\ b, & \text{if } n = 2 \\ c, & \text{if } n = 3 \\ a * F_{n-1} + b * F_{n-2} + c * F_{n-3}, & \text{if } n > 3 \end{cases}$$

Input

The first line consist of a single integer n ($1 \leq n \leq 10$), denoting the index of the term to be computed.

The second line consist of a space separated integers a, b, c , each of them is between 1 and 5.

Output

Print a single integer on a line, the term F_n of the given sequence.

Sample Input

```
4
1 2 3
```

Sample Output

```
10
```