

Problem A. Water Problem

Time limit 1000 ms

Memory limit 256MB

Problem Description

Howard Lee is a legend in the competitive programming community, since he's the best coder we've ever seen. Howard is so good that during his legendary run in the ICPC World Final, he ACed every problem before the 3 hour mark and even finished setting a set of complicated problems.

Legend has it that one of the easiest problems in this set is,

"Given a recursive formula $F_i = a \cdot F_{i-1} + b \cdot F_{i-2} + c$, show us the value of F_n ."

Even though you might not be as good as Howard Lee, this problem should be easy enough for a motivated coder who wants to reach the height of Howard Lee; please try your best OwOb.

Input format

Input contains only one line of 6 integers, n, a, b, c, F_1 and F_2

- $3 \leq n \leq 10$
- $1 \leq a, b, F_1, F_2 \leq 100$
- $0 \leq c \leq 100$

Output format

One integer indicates the value of F_n

Subtask score

Subtask	Score	Additional Constraints
1	0	Sample testcases
2	100	No additional constraints

Sample

Sample Input 1

5 1 1 0 1 1

Sample Output 1

5

Sample Input 2

4 3 7 2 1 2

Sample Output 2

61

Notes

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