AB-nacci

Time Limit: 1s
Memory Limit: 256 MB

Description

Given **t** number of testcases, where each testcase contains an integer **a**, **b**, and **k**, find the **k**-th term of the fibonacci sequence starting with **a** and **b** as the 0th and 1st term (**a**, **b**, **a** + **b**, ...)

Input Format

The first line contains an integer **t**, the number of testcases
The next **t** lines contain **a**, **b**, the 0th and 1st term of the fibonacci sequence, and **k**, the k-th term that you need to find

Output Format

t lines containing the k-th term from each fibonacci sequence

Constraints

$1 \leq t,\ a,\ b,\ k \leq 100$

Example

Input
2 0 2 6 2 5 9
Output
16 212

Explanation

For the first testcase, the fibonacci sequence starts with 0 and 2, so the first 10 terms of the sequence will look like this

0, 2, 2, 4, 6, 10, 16, 26, 42, 68

Again, note that the sequence index starts from 0. Therefore the 6th term of the above sequence is 16

For the second testcase, the fibonacci sequence starts with 2 and 5, and the first 10 terms will be as follows

2, 5, 7, 12, 19, 31, 50, 81, 131, 212

The 9th term from the above sequence will be 212

Hint

Remember the fibonacci function you have seen on previous occasion? You just need to change the base case, then add the code to handle multiple test cases. Happy solving!