**Series AP**

[maths](http://www.practice.geeksforgeeks.org/tag-page.php?tag=maths&isCmp=0)

Given the first 2 terms of Arithmetic Series tell the nth term of the series.

**Input:**  
First line contains an integer, the number of test cases 'T'. Each test case in its first line should contain two positive integer a and b(First 2 terms of AP). In the second line of every test case it contains of an integer N.

**Output:**  
In each seperate line print the Nth term of the Arithmetic Progression.

**Constraints:**  
1<=T<=30  
-100<=a<=100  
-100<=b<=100  
1 <= N <= 100

**Example:**  
Input:  
2  
2 3  
4  
1 2  
10

Output:  
5  
10

\*\*For More Examples Use Expected Output\*\*

<http://www.practice.geeksforgeeks.org/problem-page.php?pid=247>

#include <iostream>

#include <stdio.h>

using namespace std;

int main() {

  int t,a,b,n;

  scanf("%d", &t);

  while(t--) {

     scanf("%d %d", &a, &b);

     scanf("%d", &n);

     int dif = b - a;

     int nth=1;

     int ans = -1;

     for(int i = a; nth <= n  ;i +=dif) {

         nth++;

         ans = i;

     }

     printf("%d**\n**", ans);

  }

  return 0;

}