Java Loops II ★

32 more points to get your next star!

Rank: 358528 | Points: 118/150

Problem Submissions Leaderboard Editorial

RATE THIS CHALLENGE

★ ★ ★ ★ ★

We use the integers a, b, and n to create the following series:

$$(a + 2^0 \cdot b), (a + 2^0 \cdot b + 2^1 \cdot b), \ldots, (a + 2^0 \cdot b + 2^1 \cdot b + \ldots + 2^{n-1} \cdot b)$$

You are given q queries in the form of a, b, and n. For each query, print the series corresponding to the given a, b, and n values as a single line of n space-separated integers.

Input Format

The first line contains an integer, q, denoting the number of queries.

Each line i of the q subsequent lines contains three space-separated integers describing the respective a_i, b_i, and n_i values for that query.

Constraints

- $0 \leq q \leq 500$
- $0 \leq a, b \leq 50$
- $1 \leq n \leq 15$

Output Format

For each query, print the corresponding series on a new line. Each series must be printed in order as a single line of n space-separated integers.

Sample Input

```
2
0 2 10
5 3 5
```

Sample Output

```
2 6 14 30 62 126 254 510 1022 2046
8 14 26 50 98
```

Explanation

We have two queries:

1. We use $a = 0$, $b = 2$, and $n = 10$ to produce some series $s_0, s_1, \ldots, s_{n-1}$:
   - $s_0 = 0 + 1 \cdot 2 = 2$
   - $s_1 = 0 + 1 \cdot 2 + 2 \cdot 2 = 6$
   - $s_2 = 0 + 1 \cdot 2 + 2 \cdot 2 + 4 \cdot 2 = 14$

   ... and so on.

   Once we hit $n = 10$, we print the first ten terms as a single line of space-separated integers.
2. We use $a = 5$, $b = 3$, and $n = 5$ to produce some series $s_0, s_1, \ldots, s_{n-1}$:
   - $s_0 = 5 + 1 \cdot 3 = 8$
   - $s_1 = 5 + 1 \cdot 3 + 2 \cdot 3 = 14$
   - $s_2 = 5 + 1 \cdot 3 + 2 \cdot 3 + 4 \cdot 3 = 26$
   - $s_3 = 5 + 1 \cdot 3 + 2 \cdot 3 + 4 \cdot 3 + 8 \cdot 3 = 50$
   - $s_4 = 5 + 1 \cdot 3 + 2 \cdot 3 + 4 \cdot 3 + 8 \cdot 3 + 16 \cdot 3 = 98$

   We then print each element of our series as a single line of space-separated values.

Change Theme Language Java 7

```
1  import java.util.*;
2  import java.io.*;
3
4  class Solution{
5      public static void main(String []argh){
6          Scanner in = new Scanner(System.in);
7          int t=in.nextInt();
8          for(int i=0;i<t;i++){
9              int a = in.nextInt();
10             int b = in.nextInt();
11             int n = in.nextInt();
12             int calc = a;
13             for(int j=0;j<n;j++){
14                 calc+=(Math.pow(2,j)*b);
15                 System.out.print(calc+" ");
16             }
17             System.out.print("\n");
18         }
19         in.close();
20
21     }
22 }
```

Line: 23 Col: 1

Upload Code as File Test against custom input Run Code Submit Code

Test case 0
Test case 1
Test case 2
Test case 3
Test case 4

Compiler Message

Success

Input (stdin) Download

```
2
0 2 10
5 3 5
```

Expected Output Download

```
2 6 14 30 62 126 254 510 1022 2046
8 14 26 50 98
```