



Java Loops II ★

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Problem

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

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

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, \dots, 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, \dots, s_{n-1} :



- $s_1 = 5 + 1 \cdot 3 + 2 \cdot 3 = 14$
- $s_2 = 5 + 1 \cdot 3 + 2 \cdot 3 + 4 \cdot 3 = 26$
- $s_3 = 5 + 1 \cdot 3 + 2 \cdot 3 + 4 \cdot 3 + 8 \cdot 3 = 50$
- $s_4 = 5 + 1 \cdot 3 + 2 \cdot 3 + 4 \cdot 3 + 8 \cdot 3 + 16 \cdot 3 = 98$

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

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 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 sum = 0;
8          int t=in.nextInt();
9          for(int i=0;i<t;i++){
10             int a = in.nextInt();
11             int b = in.nextInt();
12             int n = in.nextInt();
13             if( (n>=1&&n<=15) && (a>=0&&a<=50) && (b>=0&&b<=50) ){
14                 int j=0;
15                 while(j<n){
16                     int s = (int)Math.pow(2,j)*b;
17                     sum = sum+s;
18                     int ss = sum+a;
19                     System.out.print(ss + " ");
20                     j++;
21                 }
22                 sum = 0;
23                 int ss = 0;
24             }
25             System.out.println("");
26         }
27         in.close();
28     }
29 }
30

```

Line: 30 Col: 1

[Upload Code as File](#)
☐ Test against custom input

Run Code

Submit Code

You have earned 10.00 points!

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80%

45/50



Congratulations

You solved this challenge. Would you like to challenge your friends?

Next Challenge

Test case 0

Compiler Message

Test case 1

Success

Test case 2

Input (stdin)

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1 2
2 0 2 10
3 5 3 5

Test case 3

Test case 4

Expected Output

Download

1 2 6 14 30 62 126 254 510 1022 2046
2 8 14 26 50 98