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 $s_0, s_1, \ldots, s_{n-1}$.

Change Theme Language Java 7

```
import java.util.*;
import java.io.*;
class Solution{
    public static void main(String []argh){
        Scanner in = new Scanner(System.in);
        int sum = 0;
        int t=in.nextInt();
        for(int i=0;i<t;i++){
            int a = in.nextInt();
            int b = in.nextInt();
            int n = in.nextInt();
            if( (n>=1&&n<=15) && (a>=0&&a<=50) && (b>=0&&b<=50) ){
           int j=0;
           while(j<n){
                int s = (int)Math.pow(2,j)*b;
                sum = sum+s;
                int ss = sum+a;
                System.out.print(ss + " ");
                j++;
            }
         sum = 0;
         int ss = 0;
           }
            System.out.println("");
        }
        in.close();
    }
}

```

Line: 29 Col: 1

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Explanation

We have two queries:

1. We use $a = 0$, $b = 2$, and $n = 10$ to produce some series $s_0, s_1, \ldots, s_{n-1}$.

```
24              System.out.println("");
25          }
26          in.close();
27      }
28  }
29
```

Line: 29 Col: 1

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Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

Sample Test case 0

Sample Test case 1

Input (stdin) — Download

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

Your Output (stdout)

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

Expected Output — Download

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