



# Java Loops II 🚖

Problem Submissions Leaderboard

### RATE THIS CHALLENGE



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

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

Editorial

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,  $oldsymbol{q}$  , 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

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

### **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

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.

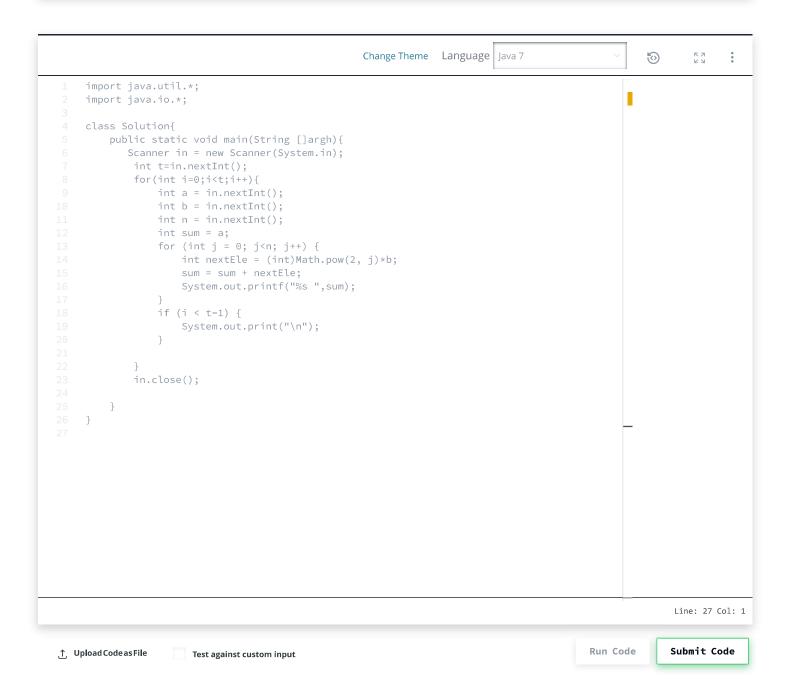
Once we hit n=10, we print the first ten terms as a single line of space-separated integers.

2. We use a=5, b=3, and n=5 to produce some series  $s_0, s_1, \ldots, s_{n-1}$ :

•  $s_0 = 5 + 1 \cdot 3 = 8$ 



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• 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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