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# 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:

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

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

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

#### **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 spaceseparated 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  $s_0,s_1,\ldots,s_{n-1}$ :
- $s_0 = 0 + 1 \cdot 2 = 2$
- $s_1 = 0 + 1 \cdot 2 + 2 \cdot 2 = 6$
- $s_2 = 0 + 1 \cdot 2 + 2 \cdot 2 + 4 \cdot 2 = 14$

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  $s_0,s_1,\ldots,s_{n-1}$ :
- $s_0 = 5 + 1 \cdot 3 = 8$
- $s_1 = 5 + 1 \cdot 3 + 2 \cdot 3 = 14$
- $\circ \ \ s_2 = 5 + 1 \cdot 3 + 2 \cdot 3 + 4 \cdot 3 = 26$
- $s_3 = 5 + 1 \cdot 3 + 2 \cdot 3 + 4 \cdot 3 + 8 \cdot 3 = 50$
- $\circ \ \ s_4 = 5 + 1 \cdot 3 + 2 \cdot 3 + 4 \cdot 3 + 8 \cdot 3 + 16 \cdot 3 = 98$

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

Shafaet Difficulty Easy Max Score 10 Submitted By 235447

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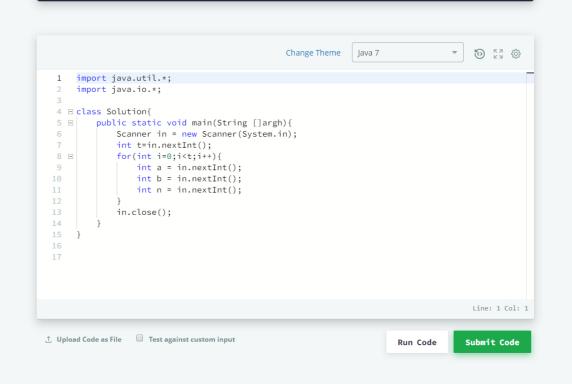
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