Java Loops II ★

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Problem

We use the integers \boldsymbol{a} , \boldsymbol{b} , and \boldsymbol{n} to create the following series:

Submissions

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

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 j subsequent lines contains three space-separated integers describing the respective j, and j, and j 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 $m{n}$ 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} :

 $\circ \ s_0=0+1\cdot 2=2$

 $\circ \ s_1 = 0 + 1 \cdot 2 + 2 \cdot 2 = 6$

 $\circ \ \ s_2 = 0 + 1 \cdot 2 + 2 \cdot 2 + 4 \cdot 2 = 14$

... 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} :

 $s_0 = 5 + 1 \cdot 3 = 8$

 $s_1 = 5 + 1 \cdot 3 + 2 \cdot 3 = 14$

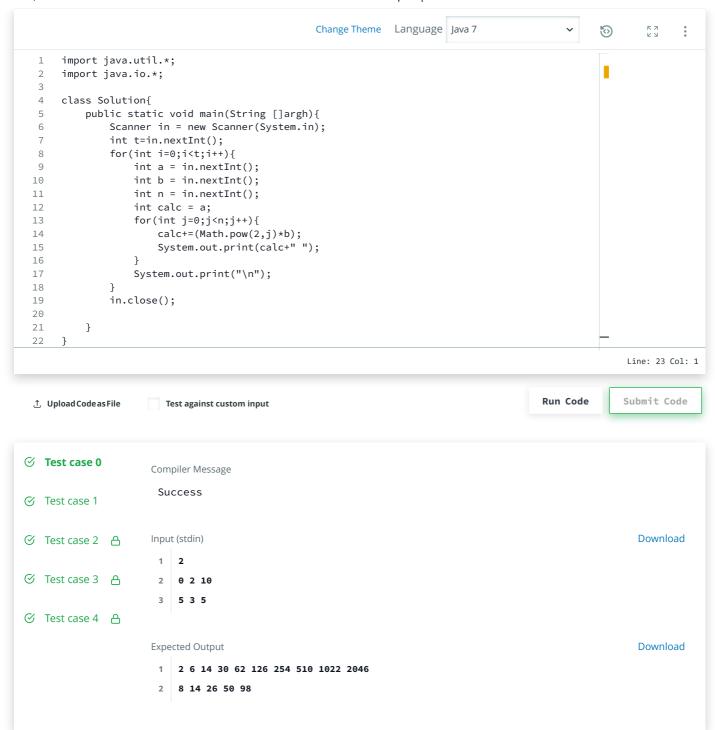
 $\circ \ \ s_2 = 5 + 1 \cdot 3 + 2 \cdot 3 + 4 \cdot 3 = 26$

 \circ $s_3 = 5 + 1 \cdot 3 + 2 \cdot 3 + 4 \cdot 3 + 8 \cdot 3 = 50$

 \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.





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