# **Java Loops**



### **Problem Statement**

In this problem you will test your knowledge of Java loops. Given three integers \$a\$, \$b\$, and \$n\$, output the following series:

$$a+2^{0}b, a+2^{0}b+2^{1}b,..., a+2^{0}b+2^{1}b+...+2^{n-1}b$$

# **Input Format**

The first line will contain the number of integers, \$t\$. Each of the next \$t\$ lines will have three integers, \$a\$, \$b\$, and \$n\$.

Constraints:

\$0 \le a, b \le 50\$ \$1 \le n \le 15\$

# **Output Format**

Print the answer to each test case in seperate lines.

## **Sample Input**

### **Sample Output**

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

## **Explanation**

In the first case:

1st term=0+1\*2=2 2nd term=0+1\*2+2\*2=6 3rd term=0+1\*2+2\*2+4\*2=14

and so on.