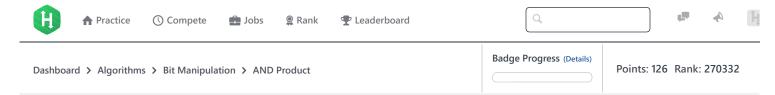
16/11/2017 HackerRank







Problem	Submissions	Leaderboard	Discussions	Editorial 🖀	

Consider two non-negative long integers, a and b, where  $a \le b$ . The bitwise AND of all long integers in the inclusive range between a and b can be expressed as a & (a+1) & ... & (b-1) & b, where a is the bitwise AND operator.

Given n pairs of long integers,  $a_i$  and  $b_i$ , compute and print the bitwise AND of all natural numbers in the inclusive range between  $a_i$  and  $b_i$ .

#### **Input Format**

The first line contains a single integer, n, denoting the number of intervals to calculate results for. Each line i of the n subsequent lines contains two space-separated long integers describing the respective values of  $a_i$  and  $b_i$ .

# **Constraints**

- $1 \le n \le 200$
- $0 \le a \le b \le 2^{32}$

### **Output Format**

For each pair of long integers, print the bitwise AND of all numbers in the inclusive range between  $a_i$  and  $b_i$  on a new line.

### **Sample Input**

# **Sample Output**

12 2 8

# **Explanation**

There are three pairs to compute results for:

- 2. a = 2 and b = 32 & 3 = 2, so we print 2 on a new line.
- 3. a = 8 and b = 138 & 9 & 10 & 11 & 12 & 13 = 8, so we print 8 on a new line.

16/11/2017 HackerRank

Submissions:<u>11233</u>
Max Score:40
Difficulty: Medium
Rate This Challenge:
☆ ☆ ☆ ☆ ☆

```
Current Buffer (saved locally, editable) & 🗗
                                                                                           Java 7
                                                                                                                             \Diamond
 1 ▼ import java.io.*;
 2 import java.util.*;
 3 import java.text.*;
    import java.math.*;
    import java.util.regex.*;
 6
 7 ▼ public class Solution {
 8
 9 ▼
         public static void main(String[] args) {
             /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
10 ▼
11
12 }
                                                                                                                     Line: 1 Col: 1
                      Test against custom input
                                                                                                        Run Code
                                                                                                                      Submit Code
Upload Code as File
```

Join us on IRC at #hackerrank on freenode for hugs or bugs.

Contest Calendar | Blog | Scoring | Environment | FAQ | About Us | Support | Careers | Terms Of Service | Privacy Policy | Request a Feature