H   🏠 Domains   🕐 Contests   🏅 Rank   🏆 Leaderboard   💼 Jobs

All Domains > Algorithms > Bit Manipulation > AND product

Badge Progress
⭐ ⭐ ⭐ ⭐

Points: 2300.44 Rank: 1301

AND product

by shaka_shadows

| Problem | Submissions | Leaderboard | Discussions | Editorial |

You will be given two integers A and B. You are required to compute the bitwise AND amongst all natural numbers lying between A and B, both inclusive.

Input Format

First line of the input contains **T**, the number of testcases to follow.
Each testcase in a newline contains A and B separated by a single space.

Constraints

$1 \leq T \leq 200$
$0 \leq A \leq B < 2^{32}$

Output Format

Output one line per test case with the required bitwise AND.

Sample Input

```
3
12 15
2 3
8 13
```

Sample Output

```
12
2
8
```

Explanation

For the first testcase,

```
12 & 13 & 14 & 15 = 12
```

For second testcase,

```
2 & 3 = 2
```

For the third testcase,

```
8 & 9 & 10 & 11 & 12 & 13 = 8
```

Submissions: 3501

Max Score: 40

Difficulty: Moderate

More

Current Buffer (saved locally, editable)　⌥ ⟲　　　　　　　Java 8 ⌄

```java
1  import java.io.*;
2  import java.util.*;
3
4  public class Solution {
5
6      public static void main(String[] args) {
7          /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named
   Solution. */
8      }
9  }
```

Line: 1 Col: 1

⬆ Upload Code as File　　☐ **Test against custom input**　　　Run Code　　Submit Code

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