Problem E. Multiplication and Division by 2

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	512 mebibytes

Consider the number x stored in `uint32` data type. We can multiply or divide it by 2 any number of times in any order. Can we obtain the number y after some sequence of operations?

When a is stored in an `uint32`, and we multiply it by 2, it transforms into $(a \cdot 2) \bmod 2^{32}$. For example, $(3 \cdot 2) \bmod 2^{32} = 6$, and $(2\,147\,483\,649 \cdot 2) \bmod 2^{32} = 2$.

When a is stored in an `uint32`, and we divide it by 2, it transforms into $\left\lfloor \frac{a}{2} \right\rfloor$. For example, $\left\lfloor \frac{6}{2} \right\rfloor = 3$, and $\left\lfloor \frac{3}{2} \right\rfloor = 1$.

Input

The first line contains an integer t, the number of test cases ($1 \le t \le 1000$). The next t lines describe test cases, one per line. Each test case is given by two integers x and y ($0 \le x, y < 2^{32}$).

Output

For each test case, print a single word on a separate line: "`Yes`" if we can turn x into y using the allowed operations, or "`No`" otherwise.

Example

standard input	standard output
2 2147483649 1 9 13	Yes No

Explanation

In the first test case, we can multiply x by 2, and then divide the result by 2 to get y.

In the second test case, there is no way to turn x into y.