

Check if a number is power of another number

Given two positive numbers x and y, check if y is a power of x or not.

Input:

First line contains an integer, the number of test cases 'T'. Each test case should contain two positive numbers x and y.

Output:

Print 1 if y is a power of x, else print 0.

Constraints:

$1 \leq T \leq 30$

$1 \leq x \leq 1000$

$1 \leq y \leq 1000000000$

Example:

Input:

2

2 8

1 3

Output:

1

0

Explanation: 8 is a power of 2, but 3 is not a power of 1.