

# Operation Bits

Operation bits - A new operation conducted by the secret team currently working on a project on security enhancement. Mr.Abay, the team head, has found a new pattern on the perfect squares. This can be used as a outer cover for his project as its securing power is low. So he assign you this problem to find the key based on the given conditions:

"An two adjacent perfect squares have their absolute difference as an odd number except when a and b are equal. Your task is to find the key which is deined as:

key(a,b) where a and b are perfect squares is ( ( AND( absolute difference betwen every adjacent perfect squares in [a,b]) ) AND ( XOR( absolute difference betwen every adjacent perfect squares in [a,b]) ) )"

Find the key for the given inputs :)

## Input

The input begins with a number T ( $1 \leq T \leq 1000$ ) where T is the number of testcases.

T lines follow

Each line has two numbers a and b ( $0 < a \leq b \leq 10^6$ )

It is assured that a and b are perfect squares.

## Output

For each test case print the corresponding key

## Example

**Input:**

2

1 4

25 49

**Output:**

3

0

for test case 1 we have key=(3)&(3)=3