

Set kth bit

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Given a number N and a value K . From the right, set the K th bit in the binary representation of N . The position of LSB(or last bit) is 0, second last bit is 1 and so on. Also, $0 \leq K < X$, where X is the number of bits in the binary representation of N .

Input:

First line of input contains a single integer T which denotes the number of test cases. T test cases follows. First line of each test case contains two space separated integers N and K .

Output:

For each test case, print the new number after setting the K th bit of N .

Constraints:

$1 \leq T \leq 100$

$1 \leq N \leq 1000$

Example:

Input:

2

10 2

15 3

Output:

14

15