B	Binary Substring

Binary string of an integer is the string representation of it in binary without any leading zero. For example binary string of 5 is "101" where binary string of 13 is "1101".

A substring is any contiguous portion of a string. For example "01" is a substring of "1011" but "00" and "111" are not.

Given **A**, **B** and **P**. Find the smallest integer **S** such that **P** is a binary substring of **S** and **A <= S** and **S <= B**. $1 <= A, B, P <= 10^{15}$ and **A <= B**.

For example, A = 9, B = 20, P = 5 ("101"). 10 ("1010") is the smallest number in that range containing P as a substring.

Input
Input starts with an integer **T**<= 1000, denoting the number of test cases followed by **T** test cases. Each of the following **T** lines will contain three space separated integers **A**, **B** and **P**.

Output
For each case, print a line of the form **Case <x>: <S>**, where **x** is the case number and **S** is the number (in decimal). If there is no valid **S**, then output "NONE"(quotes for clarity).

Sample Input	Sample Output
4 10 20 5 10 100 9 1 1000 7 10 20 21	Case 1: 10 Case 2: 18 Case 3: 7 Case 4: NONE

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