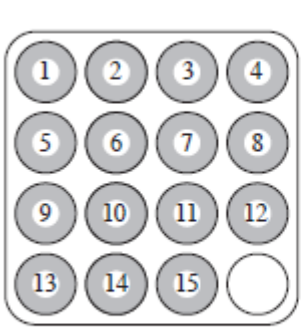
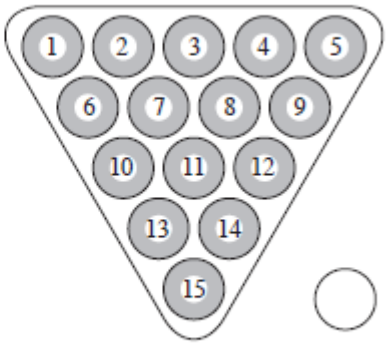
F. Everyone out of the Pool

When you rent a table at a pool hall, the proprietor gives you a 4-by-4 tray of 16 balls, as shown in Figure (a) below. One of these balls, called the "cue ball", is white, and the remaining 15 are numbered 1 through 15. At the beginning of a game, the numbered balls are racked up in a triangle (without the cue ball), as shown in Figure (b).



(a)



(b)

Now imagine other pool-like games where you have a cue ball and x numbered balls. You'd like to be able to rack up the x numbered balls in a triangle, and have all x+1 balls perfectly fill a square m-by-m tray. For what values of x is this possible? In this problem you'll be given an lower bound a and upper bound b, and asked how many numbers within this range have the above property.

Input:

Input for each test case will be one line containing two integers a b, where $0 < a < b \leq 10^9$. The line 0 0 will follow the last test case.

Output:

For each test case one line of output as follows:

`Case n: k`

if there are k integers x such that $a < x + 1 < b$, x balls can be racked up in a triangle, and $x + 1$ balls fill a square tray.

Sample Input	Sample Output
15 17 14 16 1 20 0 0	Case 1: 1 Case 2: 0 Case 3: 2