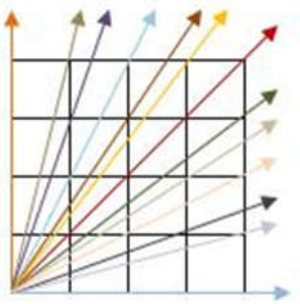
A. Khoai shooting

Time limited: 5 seconds

Problem Description

Khoai is standing at a point (0, 0) on a rectangular grid n * m. On all points in the rectangle there are enemies of Khoai (except points (0, 0)), Khoai's mission is to shoot down all enemies, each shot will kill all enemies on the bullet line. Find the minimum number of shots that Khoai have to fire. For example with rectangle 4 * 4 shoot at least 13 times:



Input

Starting with T is the number of test cases per line. T line after each line consists of two numbers n and m.

(1 <= T <= 100, 0 <= n, m <= 10^9 , min(n, m) <= 10^6)

Output

Print out the results in the form “Case “ + number_test + “: “ + result for each test

Example

2	Case 1: 13
4 4	Case 2: 65
10 10	