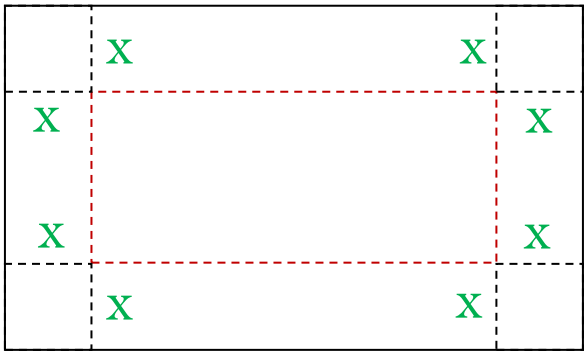
1297 – Largest Box

In the following figure you can see a rectangular card. The width of the card is **W** and length of the card is **L** and thickness is zero. Four **(x*x)** squares are cut from the four corners of the card shown by the black dotted lines. Then the card is folded along the magenta lines to make a box without a cover.



Given the width and height of the box, you will have to find the maximum volume of the box you can make for any value of **x**.

Input

Input starts with an integer **T (≤ 10000)**, denoting the number of test cases.

Each case starts with a line containing two real numbers **L** and **W (0 < L, W < 100)**.

Output

For each case, print the case number and the maximum volume of the box that can be made. Errors less than 10^{-6} will be ignored.

Sample Input	Output for Sample Input
3 2 10 3.590 2.719 8.1991 7.189	Case 1: 4.513804324 Case 2: 2.2268848896 Case 3: 33.412886