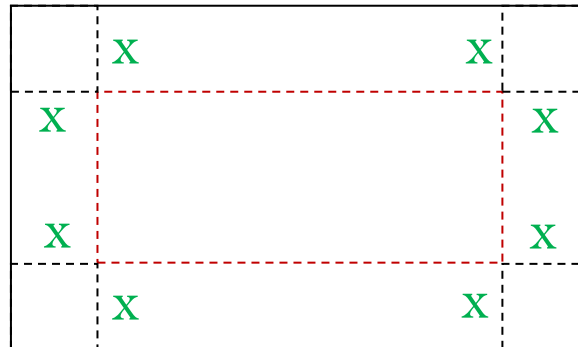


1297 - Largest Box

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 $(x \times x)$ 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	Case 1: 4.513804324
2 10	Case 2: 2.2268848896
3.590 2.719	Case 3: 33.412886
8.1991 7.189	