# **Cutting out rectangles**

We are given some scrap gold pieces shaped as in Picture 1. Dimensions A,B,C,D are given in millimeters. A rectangle, having the largest possible area, is now cut out from this piece. Calculate the area which is left after cutting out such a rectangle.



### Input

Standard input contains N ( $2 \le N \le 20000$ ) lines, each containing four values A,B,C,D ( $0 \le C \le A \le 1000000, 0 \le D \le B \le 1000000$ ) separated by spaces. In line N+1 there are four zeros separated by spaces. Do not process this test case.

## Output

Write N lines to standard output. Each should contain a single number, equal to the area in square millimeters which is left after cutting out the largest rectangle possible. The relative error of your result should not exceed 0.000001.

## Example

#### Input:

11 10 3 6 12 10 2 4 0 0 0 0

#### Output:

28.00 37.733333

# Scoring

For solving this problem you will score 10 points.