

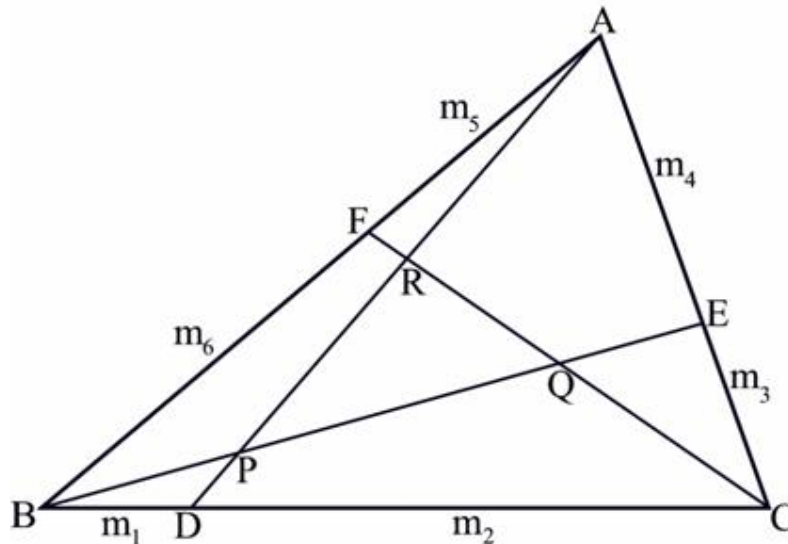
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Triangle Hazard

Input: Standard Input
Output: Standard Output



In the picture below you can see a triangle **ABC**. Point **D**, **E** and **F** divides the sides **BC**, **CA** and **AB** into $m_1:m_2$, $m_3:m_4$ and $m_5:m_6$ ratios respectively. **A**, **D**; **B**, **E** and **C**, **F** are connected. **AD** and **BE** intersects at **P**, **BE** and **CF** intersects at **Q** and **CF** and **AD** intersects at **R**.



So now a new triangle **PQR** is formed. Given triangle **ABC** it is very easy to find triangle **PQR**, but given triangle **PQR** it is not straight forward to find **ABC**. Your task is now to do that.

Input

First line of the input file contains an integer **N** ($0 < N < 25001$) which denotes how many sets of inputs are there. Input for each set contains six floating-point number $P_x, P_y, Q_x, Q_y, R_x, R_y$. ($0 \leq P_x, P_y, Q_x, Q_y, R_x, R_y \leq 10000$) in one line and six positive integers $m_1, m_2, m_3, m_4, m_5, m_6$ ($m_1 < m_2, m_3 < m_4$ and $m_5 < m_6$) in another line. These six numbers denote that the coordinate of points **P**, **Q** and **R** are (P_x, P_y) , (Q_x, Q_y) and (R_x, R_y) respectively. **P**, **Q** and **R** will never be collinear and will be distinct and there will always be a triangle **ABC** for the given input triangle **PQR**. Also note that **P**, **Q** and **R** will be given in counter clockwise order in the input.

Output

For each line of input produce one line of output. This line contains six floating-point numbers. These six integers denote the coordinates of **A**, **B** and **C**. That is the first two integers denote the coordinate of **A**, the third and fourth integers denote the coordinate of **B** and fifth and sixth integers denotes the coordinate of **C**. **A**, **B** and **C** will appear counter clockwise order. All the output numbers should have eight digits after the decimal point.

Sample Input

```
3
4467.61586728 8492.59551366 7060.96479020 6775.46633005 6725.89311907 9028.87449315
11 56 38 97 49 60
5779.32806104 1918.19337634 7490.69623286 4845.34535926 6419.53729066 4864.56878239
18 80 56 87 58 59
8991.93033007 6724.32910758 7219.48100000 7527.95330769 8549.92222645 3068.19948096
13 86 11 44 20 35
```

Output for Sample Input

9231.81800000	9623.96300000	3537.20000000	9108.65000000	7337.89000000	4913.10199999
7424.76700001	9490.84399999	4757.24799999	170.01100001	9262.77299999	4813.54299999
8242.99300000	529.39300000	9373.35300000	6551.39300000	6655.90700000	9417.10200000

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