| B	Trapezium Drawing

Little Jerry is now in a trouble. The teacher gave him a task. He needs to draw a trapezium from the lengths of the sides. Little Jerry has started the drawing and he has drawn the bigger parallel side but cannot proceed from here. So he asks for your help. As he has already got two points of the trapezium, you just need to tell him the other two points so that he can complete his drawing. More specifically, consider a Trapezium **ABCD** where the points are in counter clockwise order and **AB** is the larger parallel side. You are given point **A**, point **B** and the lengths **BC, CD, DA**. You need to find points **C** and **D**.
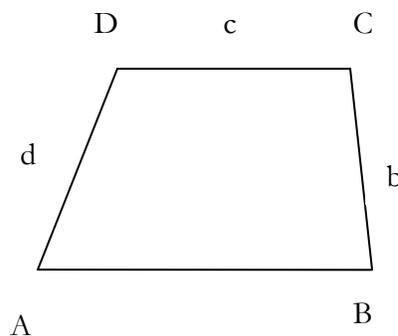
Input
Input starts with an integer **T (≤ 500)**, denoting the number of test cases.

Each case starts with a line containing seven integer numbers x_1, y_1, x_2, y_2, **b, c, d**. Here (x_1, y_1) is the coordinate of point **A**, (x_2, y_2) is the coordinate of point **B**. **b, c** and **d** are the lengths of the segments **BC, CD** and **DA** respectively. All the coordinates will be in the range **[-10000, 10000]** and the lengths will be in the range **[1, 10000]**. You may assume that a valid trapezium is possible with the given data and the length of **CD** will be strictly less than the length of **AB**.

Output
For each line of input produce two lines of output. The first line will contain the case number and the second line will contain four real numbers x_3, y_3, x_4, y_4 where (x_3, y_3) is the coordinate of point **C** and (x_4, y_4) is the coordinate of point **D**. Errors less than 10^{-6} will be ignored.

Sample Input	Output for Sample Input
1 0 0 20 0 10 14 8	Case 1: 14.00000000 8.00000000 0.00000000 8.00000000

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