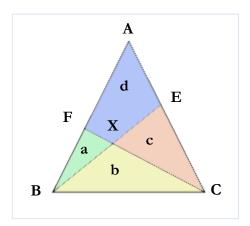# 1385 – Kingdom Division

The king of **Geometry-Land** was in deep trouble. His three sons quarrel all the time. The king tried a lot but in vain. "How about dividing the kingdom?" the king thought to himself. So, he called the advisors and described his plan. They opened the map...

The kingdom is triangular. The king denoted the three vertices as **A, B, C**. He drew a line from **B** to **E** (**E** is any point in segment **AC**) and another line from **C** to **F** (**F** is any point in segment **AB**). The intersection of **BE** and **CF** was denoted by **X**.

Then they got four parts - **a (triangle BFX), b (triangle BCX), c (triangle CEX)** and **d (quadrilateral AEXF)**. The king decided to give these areas - **a, b, c** to his three sons. And the area **d** would be the king's new kingdom.

Now, you are given the value of **a, b** and **c**. You have to find the area of **d**.

Input

Input starts with an integer **T (≤ 1000)**, denoting the number of test cases.

Each case starts with a line containing three positive real numbers **a b** and **c** which are not greater than **1000**. You can also assume that the numbers contain at most four places after the decimal point.

Output

For each case, print the case number first. Then if the area of **d** cannot be determined, print **"-1"**. Otherwise print the area of **d**. Errors less than 10^{-6} will be ignored.

Sample Input	Output for Sample Input
4 1 2 1 2 4 2 1 3 3 1.28 2.67 3.12	Case 1: 2 Case 2: 4 Case 3: 5 Case 4: 12.4063611138