376   More Triangles ... THE AMBIGUOUS CASE

The ambiguous case in trigonometry calls for the solution of triangles when given two sides and the angle opposite one of them. You are to write a program that accepts such data and reports all solutions.

Input

The input data for each case will consist of a single input line containing three real numbers separated by an arbitrary number of spaces. The first two real numbers on each input line represent the lengths of two sides of a triangle. The third real number on each input line is an angle (measured in degrees) which is opposite the second of the two given sides. The stream of input cases is terminated when all three pieces of data are zero.

Output

Your program is to read the data and analyze the data for each case, and produce a report of the results according to the format shown below. Each case report consists of the number of solutions for the case, and the corresponding solutions (to two decimal places) when the number of solutions is nonzero. Please assign a case number to each set of data starting with 1.

Sample Input

```
2.00 2.00  30.00
2.00 3.00 130.00
1.00 1.00  90.00
```

Sample Output

```
Case    A      B     THETA  # of    Side   Side
 #     side   side   (deg)  Triags    1      2
  1    2.00   2.00   30.00     1     3.46
  2    2.00   3.00  130.00     1     1.29
  3    1.00   1.00   90.00     0

END OF REPORT for  3 cases
```