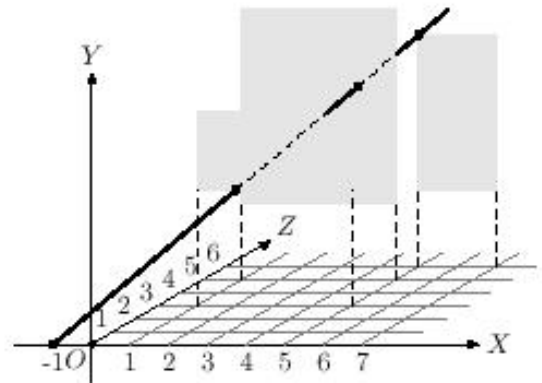


## 3219 Gunman

Consider a 3D scene with  $OXYZ$  coordinate system. Axis  $OX$  points to the right, axis  $OY$  points up, and axis  $OZ$  points away from you. There is a number of rectangular windows on the scene. The plane of each window is parallel to  $OXY$ , its sides are parallel to  $OX$  and  $OY$ . All windows are situated at different depths on the scene (different coordinates  $z > 0$ ).

A gunman with a rifle moves along  $OX$  axis ( $y = 0$  and  $z = 0$ ). He can shoot a bullet in a straight line. His goal is to shoot a single bullet through all the windows. Just touching a window edge is enough.

Your task is to determine how to make such shot.



### Input

Input file consists of several test cases. The first line of each case contains a single integer number  $n$  ( $2 \leq n \leq 100$ ) — the number of windows on the scene. The following  $n$  lines describe the windows. Each line contains five integer numbers  $x_{1i}, y_{1i}, x_{2i}, y_{2i}, z_i$  ( $0 < x_{1i}, y_{1i}, x_{2i}, y_{2i}, z_i < 1000$ ). Here  $(x_{1i}, y_{1i}, z_i)$  are coordinates of the bottom left corner of the window, and  $(x_{2i}, y_{2i}, z_i)$  are coordinates of the top right corner of the window ( $x_{1i} < x_{2i}, y_{1i} < y_{2i}$ ). Windows are ordered by  $z$  coordinate ( $z_i > z_{i-1}$  for  $2 \leq i \leq n$ ).

### Output

For each test case, the output must be as follows:

Write the single word 'UNSOLVABLE' if the gunman cannot reach the goal of shooting a bullet through all the windows.

Otherwise, on the first line output a word 'SOLUTION'. On the next line output  $x$  coordinate of the point from which the gunman must fire a bullet. On the following  $n$  lines output  $x, y, z$  coordinates of the points where the bullet goes through the consecutive windows. All coordinates in the output file must be printed with six digits after decimal point.

Separate the output for consecutive cases by a single blank line.

### Sample Input

```

3
1 3 5 5 3
1 2 5 7 5
5 2 7 6 6
3
2 1 5 4 1
3 5 6 8 2
4 3 8 6 4

```

**Sample Output**

SOLUTION

-1.000000

2.000000 3.000000 3.000000

4.000000 5.000000 5.000000

5.000000 6.000000 6.000000

UNSOLVABLE