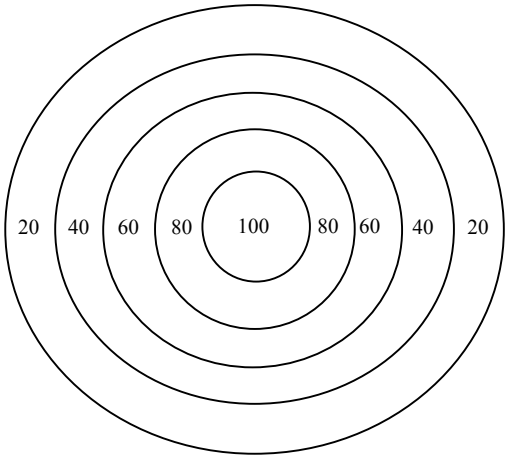
Problem
Darts

Input File: DartsIn.txt
Output File: DartsOut.txt
Project File: Darts

Because of the arguments over the scoring of the dart matches, your dart club has decided to computerize the scoring process. The dart board consists of concentric rings of radii 3", 6", 9", 12", and 15" with each ring given a point value as shown below.

A match is between two players, each player throwing three darts. Each dart thrown is awarded the point value of the ring in which it lands. If a dart lands exactly on a circle, it is award the higher (inner ring) point value. A dart landing outside of the outer circle is awarded zero points. A player's score is the sum of the points awarded for the three darts thrown. The player with the highest score wins the match.



Write a program that computes the scores of the two players in a match and then determines who, if anyone, wins the match.

Inputs

The input consists of one or more data sets, one data set per line. Each data set consists of six pairs of (x,y) coordinates that locate the six darts on a Cartesian plane whose origin is at the center of the inner circle. The range of x and y is -20.0<= x,y <= 20.0 . The first six number on a line locates player one's darts, and the last six numbers locates player two's darts. The input data sets are terminated when the first value in a data set is greater than 20.0.

Outputs

The output will be one line per match with the line containing three numbers: the score of player one, followed by the score of player two, followed by the number of the winning player (1 or 2). In the event of a tie, the word "tie" will be the third output on the line. The terminator line is not a valid match and should not be part of the output.

Sample input

```
0.0   0.0   -3.0   0.0   0.0   6.0   0.0   15.0   -12.0  0.0   0.0   9.0
0.0   0.0   -3.0   0.0   0.0   6.0   0.0   0.0    -3.0   0.0   0.0   6.0
4.0   -1.0  19.0   0.0   -4.1  -8.1  -4.0  -1.0   -4.0   -8.1  -4.1  -8.1
50.0  0.0   -3.0   0.0   0.0   6.0   0.0   15.0   -12.0  0.0   0.0   9.0
```

Sample output

```
280 120 1
280 280 tie
120 160 2
```