
12. Yahtzee

Program Name: Yahtzee.java

Input File: yahtzee.dat

Yahtzee is a game that is played with 5 standard six-sided dice with numbers one through six. While playing the game of Yahtzee, the person who rolls a "Yahtzee" has great possibility of winning the game. A Yahtzee has been rolled when all five dice have the same number. The rules for playing Yahtzee are as follows:

- Each player rolls his dice once.
- Each player may then roll zero or more of his dice a second time.
- Each player may then roll zero or more of his dice a third time.
- After the third roll, the players compare their five dice to see who has the best "hand".

For the purpose of this program, you will be given the outcome of the final roll of each of the three players. You are to determine if any of the players has a Yahtzee and, if more than one player has a Yahtzee, which player or players have the highest Yahtzee. A hand consisting of five ones is the lowest Yahtzee and a hand consisting of five sixes is the highest Yahtzee.

Input

- The first line of input will contain a single integer n that indicates the number of games to be played.
- For each game:
 - There will be three lines, one for each player in the game.
 - Each line will have a person's first name followed by the numbers on each of the five dice the player had after the third roll.
 - There will be a single space following the player's name and the numbers on the dice will each be separated by a space.

Output

For each game:

- If there is exactly one person with a Yahtzee, you will print the name of that person.
- If there is more than one person with a Yahtzee, you will print the name of the person with the highest Yahtzee. For example, a roll of 5 5 5 5 5 would beat a person with a roll of 4 4 4 4 4.
- If there are two or more people with the same roll, then there is a tie and you will print, on a single line, the word "TIE" followed by the names of the players who were tied in alphabetical order and separated by a space.
- If no hands contain Yahtzee, you will print "NO WINNER".

Example Input File

```
3
MARY 5 5 5 5 5
JOAN 4 4 4 4 4
ART 3 3 3 3 3
RON 1 1 1 1 1
ALEX 1 1 1 1 1
CHEZ 1 1 1 1 2
AMY 6 6 3 6 6
REX 6 4 6 6 6
RICK 6 2 6 6 6
```

Example Output to Screen

```
MARY
TIE ALEX RON
NO WINNER
```