### SIENA COLLEGE

**22nd Annual**

### High School Programming Contest

##### April 3, 2009

###### **Problem #5: Penalty Box**

Background Information: In the sport of hockey, each team has their own penalty box. When a player commits an infraction, they are sent to their team's penalty box for either 2, 5, or 10 minutes, depending on the severity of their infraction. Immediately after serving the allotted time, the player is released and let back onto the ice. Often in penalty-filled contests, penalty boxes can become quite full due to many players being sent to the penalty box in a short span of time.

During the offseason, a statistically-minded fan decided to try to determine the most players that could have been in either team's penalty boxes during each game from the previous season (the most in any *one* penalty box at a time, not in both). He managed to convert the box scores from each game, which summarize a game's scoring and penalties, into a format that lists how many penalties were assessed in a game, and for each penalty, which team it was on (the home team or visiting team), how long it was for (2, 5, or 10 minutes), and when it was issued. Unfortunately, his conversion scrambled the order of the penalties so they no longer are listed in chronological order! He's asked for your help to write a program to read in his descriptions of a game's penalties and determine the maximum number of players that could have been in any one penalty box during that game.

In writing your program, you may ignore any issues regarding the physical size of the penalty boxes or the actual number of players on either team; the penalty boxes are large enough to fit any number of players, and there are at least as many players on each team as there are penalties assessed to that team. Finally, you may make no assumptions about the length of a game due to the possibility of overtimes to settle tie games.

###### Programming Problem:

Input: The input begins with a single integer N representing the number of games

you are to process. What follows are the descriptions of the penalties for N games.

Each game description begins with an integer M on its own line describing how many penalties were assessed during that game. M lines follow, each describing one penalty in the following format:

**C L T**

Where **C** is a single character, 'h' or 'v', describing which team the penalty is on. **L** is an integer describing the penalty length (2, 5, or 10). **T** is an integer describing the time that the penalty occurred as the number of *seconds* elapsed since the start of the game when the penalty was called.

Output: For each game, output a single number on its own line that represents the maximum number of players in either team's penalty box.

###### Sample Input: 3

2

h 2 0

a 2 0

3

h 10 60

a 2 0

h 2 0

3

h 10 120

a 2 0

h 2 0

Sample Output: 1

2

1