Write a complete C++ program, including a good top comment, to do the following:

**Outline:**
The program will compute football statistics. The program will read in the id number and the won-lost-tie record of a football team. It will compute various things about the team, and it will print everything out. Repeat the process for a new team, over and over again, until the entire set of data has been taken care of. At the end, print the number of teams.

**Here are the details:**
1. The program will read in the id number of a team (see step 6 below). The program will read in the number of wins this team has, the number of losses, and the number of ties. For example, the program could read in the following four pieces of data (and it will print everything read in):
   
   1234 3 5 5  
   [team 1234 has 3 wins, 5 losses, 5 ties]

2. The program will compute and print the total number of games played, which is simply the number of wins plus the number of losses plus the number of ties. The program will also compute and print the number of games remaining, which is 16 minus the total number of games played.

   If the total number of games played is exactly 16, the program will print a message saying the season is finished. If the total is less than 16, the program will print how many games are left. Assume that no team has played more than 16 games (see optional 3 below).

   For example, for the team shown above, the total number of games played is 13, and there are 3 games left (16 – 13 = 3).

3. The program will compute the team's winning average, which is a decimal value between 0 and 1.

   The winning average is defined to be the number of games won divided by the total number of games played. For the team shown above, the winning average is 3 divided by 13 = 0.2308. The program should print this out as shown, with exactly 4 decimal places.

4. The program will compare the number of games tied to both the number of games won and to the number of games lost, printing two separate messages (one for each comparison).

   First, the program will determine whether or not the number of games tied is greater than or equal to the number of games won. It will print an appropriate message in either case (greater than or equal to or not greater than or equal to).

   Then the program will determine whether or not the number of games tied is greater than the number of games lost, and it will print an appropriate message in either case (greater than or not greater than).
Note that these two questions are not the same (*greater than or equal to* versus just *greater than*). You must test all possible answers to these two questions – see below.

5. Compute the **final team score**, which is two times the number of games won plus the number of games tied minus the number of games lost. The final team score can never be below 0; if it would turn out to be negative, your program should make it 0 instead.

For the team shown above, the final team score is 6 [since $2 \times 3 + 5 - 5 = 6$].

6. Then the program should skip a few lines of output and repeat the entire series of steps for the next team, and so on, until the last team has been processed. You must decide how to recognize that the last team has been processed. **Mention this method in a comment.**

7. At that point, **print the total number of teams** in the league, then stop.

**DATA:** Read in data for at least 8-10 football teams. Make sure that at least three teams have completed their season, and at least five teams have not. Have a team with only wins, one with only ties, and one with only losses. For each of the questions in step 4, be sure to cover all cases (including equal for each question). Make sure that two or three times the final team score works out to be negative, but your program sets it equal to 0. (It is up to you whether you read in from the keyboard or from a file.)

**In general, make sure that every possible path is covered by a group of data.**

Here is a complete set of output for a typical team:

```
team 9867
4 wins  7 losses  5 ties
total number of games played is 16  the season is finished
the winning average is 0.2500
number of games tied is greater than or equal to the number of games won
number of games tied is not greater than the number of games lost
final team score is 6
```

**OPTIONALS:** 1. For each team that has not completed the season, compute the team’s record if it wins all of the remaining games (give the won-lost-tie record and the winning average), and the record if it loses all of the remaining games.

2. Keep track of the team with the best winning average that is not exactly 1. Print this out at the end of the processing. Do the same just for those teams that have completed their season.

3. If a team has completed more than 16 games, print an error message, ask the user to
type in new data (repeat if necessary).