Assignment #15

Processing Race Results

Consider a race in which the score of each entrant is the place in which they finish, and the score of a team is the sum of the scores of its first three finishers. Any finishers from a team after the third do not contribute to that team's score; teams with fewer than three finishers are eliminated. The team with the lowest overall score places first, that with the next lowest score places second, and so forth.

Registration data for all entrants is stored in a file, with each line consisting of the race number, personal name, and team name for that entrant; for example:

```
152 Ned Green
117 Amy Blue
213 Jim Green
```

Assume, for simplicity, that both personal names and team names are single words. Race numbers are all distinct; personal and team names need not be.

Write a Python program which will first read in this data file, and then read in from the keyboard, one per line, the race numbers of entrants in the order in which they finish. Invalid race numbers should trigger an error message, but otherwise be ignored. The number `0` signals the end of the keyboard input.

As soon as the third member of a team finishes, the program should output the team place, the team score, the team name, and the names of the three scoring members in their finishing order; for example:

```
PLACE =  2   SCORE =  15   TEAM = Green    : Jim, Pam, Ken
```

This data should both be printed on the screen, and also written into a file of team results (allow 2 spaces for the place, 3 for the score, and 8 for the team name).

The program should contain a main function:

```
RaceResults( entries, results )
```

which performs the entire task described above; here, '`entries`' and '`results`' are, respectively, the names of the input file (the registration data) and the output file (the final team results). The program may also contain other helper functions, as appropriate.

Program Submission:

Store the function definitions in a file named '`a15.py`', and turn it in for grading by typing:

```
submit-cs1117 a15.py
```

Due Date: Fri Feb 5, 10:30am