Fall 2018: Barge Problem 8

What is Squaqq and Who is Felix?

Allie, Blake, Cliff, Derek, Ethan, and Felix were the participants in the first (and last) annual squaqq tornament held in the Mathematics Common Room. The idea was that whenever two of the participants were in the Common Room at the same time, they played a (single) game of squaqq. And on the first day, that is exactly what happened. Each of the participants entered the room exactly once, stayed for a while, played every participant they encountered there, and left. All times of entry and exit from the Common Room were different. The participants all turned in score sheets, but only recorded their wins (there are no draws in squaqq). Here were the results claimed on those score sheets.

Allie beat Blake and Ethan. Blake beat Felix. Cliff beat Derek and Felix. Derek beat Allie and Felix. Ethan beat Cliff and Blake. Felix beat Ethan.

a) Gary agreed to keep track of the results. When he considered the score sheets from the first day along with the other information given above, he discovered that the scores sheets could not all be correct. How did he determine this?

b) There was only one score sheet error. One participant had mistakenly included the results of a game that had happened the day before the tournament began. Which game was it?

Semester Prizes (per team)

First Prize $1000
Second Prize $750
Third Prize $500

Rules

1. Form a team with other Lafayette students. Each team must have 3, 4 or 5 members.
2. Solve the Problem of the Week with your team. The problem will be posted in the Math Department and be available electronically for everybody on the Barge Mailing List.
3. Get your solution to Tom Yuster (yustert@lafayette.edu) by submission deadline. Email is the preferred method of submission, since Prof. Yuster has no intention of ever being in his office on Saturday at 6 a.m.
4. No internet or other online sources may be consulted during the process of solving the problem and/or submitting a solution. Failure to abide by this rule may result in disqualification of the team.

Submission Deadline: Saturday, Nov 10 at 6:00 a.m.