

# Challenge of the Week

## *Challenge of the Week # 2 - January 18 to January 25, 2008*

The two people from last week's challenge are still playing games.

- (a) One coin is placed in the middle of a large rectangular table. Now the two people take turns placing coins on the table. The coins do not overlap and each lies entirely on the table. The player who places the last coin on the table wins. Can one of the players always win? If so, what is her/his winning strategy.
- (b) They change the rules of the game again. This game is the same as the last game, except that the first coin is **not** placed in the middle of the table. Who wins this game? If one player can always win, what is the winning strategy?

*Direct any questions concerning this week's challenge to Kamlesh Parwani, OM 3351*

### Rules and Awards

- Any undergraduate currently enrolled at EIU is eligible to participate.
- Each solution is to be the work of one individual and is to be submitted with the solver's name, year in school, email address, local address and home address.
- Each solution is to be written or typed and is due in the main Mathematics Department office (OM3611) by 2:00 p. m., Friday, January 25.
- Entries will be graded on the basis of clarity of exposition and elegance of solution.
- An award of \$20 will be given for the best solution. In the case of a two-way tie, the award will be split. If there are more than two 'best' solutions, a drawing will be held for the award. In case no award is made for this week's challenge, \$20 will be added to the next week's award.
- Names of all solvers will be posted on the Challenge of the Week bulletin board and on the Challenge of the Week homepage: <http://www.ux1.eiu.edu/~dmbroline/chalweek/index.html>