

## Problem of the Week 8, Fall 2005

### Additional questions.

1. Prove that in a  $3 \times 3$  board Oscar has a winning strategy.
2. Prove that in a  $7 \times 7$  board, it is impossible for Oscar to win! That is, regardless of Xochitl's plays, she always wins.
3. In the  $7 \times 7$  board, what if we allow Oscar to take two consecutive turns after each time Xochitl takes her turn? Is it still possible for Xochitl to have a winning strategy?
4. What happens in larger boards?