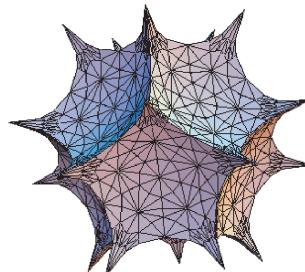
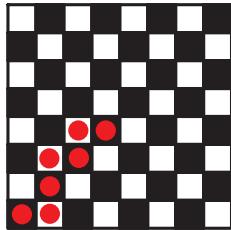


Willamette Math Problem of the Break



December 3 2007 Checkering into a Corner



Abner and Beatrice play a game on a regular 8x8 chessboard. First Abner plays a checker on a corner square, then Beatrice plays on an adjacent square (vertically or horizontally, not diagonally). They continue playing adjacent to the previous checker. The first person who is unable to play loses. Find a winning strategy for one of the players.

Submit all solutions before the appearance of the next problem to Josh Laison in person, by e-mail (jliaison@willamette.edu), or by sleigh pulled by flying reindeer. The first correct solution gets a prize; all correct solutions get fame and glory. Preference for the prize goes to problem-solvers who haven't won one yet. **Note: Solutions will be accepted anytime before the beginning of spring semester!**

I'm also still accepting solutions to **Deterministic Poker**: The game of Deterministic Five-Card Draw is played as follows. A deck of cards is spread face-up on a table. Anton chooses five of them. Then Brandi chooses five of the remaining cards from the deck. Then Anton discards any number of his cards and replaces them from the deck, and then Brandi does the same. The player with the best poker hand wins. If the two hands are equally good, Brandi wins. Find a winning strategy for one of the players.

Solution to *A Fair Shake*: Congratulations to **Kyle Evans**, who solved the problem and won a face painting set.

All 9 people other than Alexi shook hands with a different number of people, but each person shook hands with at most 8 people, since there are at most 8 people at the party they don't know. So they must have shaken hands with 0, 1, 2, 3, 4, 5, 6, 7, and 8 people, respectively. Label the party attendees by the number of people they shook hands with. Then 8 and 0 are married, since 8 shook hands with everyone but his spouse. So everyone else shook hands with 8, and so 7 and 1 are married, by similar reasoning. The pattern continues: 6 and 2 are married, and 5 and 3 are married. So Bindi shook hands with 4 people.



Past problems of the week, solutions, and solvers can be found at
<http://www.willamette.edu/~jliaison/problem.html>

