The problems are available at `http://jan.ucc.nau.edu/ns46/pow`. Paper copies are provided outside the Math Office: Room 107, Adel Mathematics Building. Contact Nándor Sieben (Adel 175) if you have any questions about the problems. Please submit your solutions to the Math Office by Monday 3/8/10. Winning solutions and a summary of scores are at the POTW bulletin board in the Adel Math Building.

Research problems with unknown solutions are marked by (!). These problems might be hard or might be easy, we just do not know. A conjecture or a result about a special case or simply an idea about a possible solution method can be very valuable.

Fox trot

a. Is there an n, such that it is possible to walk the $4 \times n$ chessboard with a knight visiting each square exactly once so that with a last step the knight returns to its original position?

b. What happens if the knight is not required to return to the original position?

22. **PROBLEM OF THE WEEK** NAU Math. & Stat.

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