

Problem of the Week #2

Assigned: 1300 9 Sep 10

Due: 1300 16 Sep 10

A Chess Problem

MAJ Thibeault and MAJ Marks are handing over Department Duty Officer responsibilities when they realize that the shredder has not yet been emptied. In order to decide who empties the shredder, MAJ Thibeault (who considers himself a top notch chess player) proposes the following game:

"You (MAJ Marks) place your king on a corner cell of a chessboard and I (MAJ Thibeault) will place my knight on the corner cell diagonally opposite. We shall have no other pieces on the board, and I, MAJ Thibeault, shall move first. If I can place your king in check within 64 moves (the number of squares on the chessboard), you lose and must empty the shredder. If you can avoid check for more than 64 moves, then you win and I shall empty the shredder."

For how many moves can MAJ Marks be certain to avoid check? What is his best strategy?

Email solutions to Christopher.marks@usma.edu with subject line: POTW.

Solutions can be emailed in the form of: an email (plain text) no attachment, a word document, a mathematica file, an excel workbook, or a scanned adobe file of your work.

If none of these options work for you, you may drop a hardcopy off at my office TH239C, just annotate the time of submission.