1046-05-1220 Martin J. Erickson* (erickson@truman.edu), Department of Mathematics and Computer Scienc, Truman State University, Kirksville, MO 63501. Enumerating Rook Paths and Queen Paths. Preliminary report.

How many ways can a chess Rook or Queen move from a corner cell to the opposite corner cell of an arbitrary size, arbitrary dimensional chess board, assuming that the piece moves with monotonically increasing coordinates at each step? Recurrence relations, generating functions, and asymptotic formulas are given for the number of paths. Also, some open problems are presented. (Received September 15, 2008)