1022-05-147   **Joshua N. Cooper*** (`cooper@math.sc.edu`), Department of Mathematics, LeConte College, USC, 1523 Greene Street, Columbia, SC 29208. *Random Linear Extensions of Grids.*

A grid poset – or "grid" for short – is a product of chains. We ask, what does a random linear extension of a grid look like? This problem generalizes now-classical work on random plane partitions, and has surprising connections with the theory of random Ferrer diagrams, poset order dimension, representability theory in qualitative probability, and conjoint analysis (a subfield of marketing research). We show that the average "jump number," i.e., the number of times that two consecutive elements in a linear extension are incomparable in the poset, is close to its maximum possible value. The techniques employed rely on entropy arguments. We mention several interesting questions about this wide-open area. (Received September 12, 2006)