1023-05-1619   **Elizabeth Moseman*** (`elizabeth.moseman@dartmouth.edu`), Dept of Mathematics, Dartmouth College, 6188 Kemeny Hall, Hanover, NH 03755. *Combinatorial Methods in Coordinate Percolation.* Preliminary report.

In coordinate percolation, a random value is assigned to each line in the lattice $\mathbb{L}^2$. Each point is declared open or closed based on the sum of the values of the two lines it is on relative to a given threshold value. An open cluster is a maximal set of connected open points, where the path between points cannot pass through a closed point. What is the probability that there exists an infinite open cluster containing the origin? Although this question has not been answered precisely, combinatorial methods such as partial orders, recursion and counting have shed some light on the subject. (Received September 26, 2006)