

An example of strong induction

Proposition: Suppose that n red dots and n blue dots are arranged in the plane so that no three dots lie on a single line. Then you can draw n line segments, each connecting one red dot to one blue dot, in such a way that no two line segments intersect.

Proof: with thanks to John Stevens, and his answer to Puzzling Stack Exchange question number 16643, for the problem and the idea of the proof.