Problem No. 11 (Fall 2011 Series)

There are $n$ men in a warehouse, with no three in a straight line, and so that the distances between pairs of men are distinct.

Each man has a loaded pistol. At a signal, each shoots the man closest to him. Show that if $n$ is odd, then at least one man remains alive. Show also that if $n$ is even, then it is possible that every man dies.