1021-14-33   **Benjamin J Howard*** (`bhoward@math.umd.edu`), Mathematics Dept., University of Maryland, College Park, MD 20742, **John Millson** (`jjm@math.umd.edu`), Mathematics Dept., University of Maryland, College Park, MD 20742, **Andrew Snowden** (`asnowden@math.princeton.edu`), Mathematics Dept., Princeton University, Princeton, NJ 08544, and **Ravi Vakil** (`vakil@math.stanford.edu`), Mathematics Dept., Stanford University, Stanford, CA 94305. *The moduli space of n points on the line is cut out by quadrics when n is not six.*

We determine the equations which cut out the GIT quotients of n-tuples of points on the projective line modulo automorphisms of the line. A particularly simple set of quadrics cut out the space (under any linearization) with the single exception of the Segre cubic threefold. (Received July 11, 2006)