1035-03-102   **Pavel R. Hrubes***, Mathematical Institute, Czech Academy of Sciences, 110 00 Prague, Czech Rep. *Proof complexity after NP $\neq$ coNP.*

I will give a few motives for the study of proof complexity. I will argue that investigation into lengths of proofs would be worthwhile even if our computability conjectures were decided. This will be illustrated by problems concerning lengths of proofs in propositional logic and predicate calculus, namely the shrinkage of proofs by definitions, the use of $=$ in predicate calculus, and others. (Received September 10, 2007)