

Middle East Technical University
Department of Mathematics

GENERAL SEMINAR

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About length of a finite group

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Every finite group G has a normal series each of whose factors either is soluble or is a direct product of nonabelian simple groups. In recent joint work with E. Khukhro we defined the nonsoluble length $\lambda(G)$ as the number of nonsoluble factors in a shortest series of this kind. Upper bounds for $\lambda(G)$ appear in the study of various problems on finite, residually finite, and profinite groups. In particular, such bounds played important role in the Hall-Higman reduction theorem for the restricted Burnside problem. In the talk several new results on $\lambda(G)$ will be discussed.