1056-11-360 **Yakov I Berchenko-Kogan*** (yashabk@caltech.edu), 1200 E California Blvd, MSC 134, Pasadena, CA 91126. *Minimal product sets sizes in nonabelian groups.*

For a group G and integers r and s, we consider $\mu_G(r,s)$, the minimum cardinality of the product set AB, where A and B are subsets of G of cardinality r and s, respectively. We compute μ_G for all nonabelian groups of order pq, where p and q are distinct odd primes, thus proving a conjecture of Deckelbaum. In addition, we apply a theorem of Eliahou and Kervaire to compute μ_G for all groups of order p^3, where p is a prime. (Received September 01, 2009)