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Luise-Charlotte Kappe* (menger@math.binghamton.edu), Binghamton University, Department of Mathematical Sciences, Binghamton, NY 139026000, and **H. Heineken** and **R. F. Morse**. *A GAP-conjecture and its solution: isomorphism classes of capable special p -groups of rank 2.*

A group is said to be capable if it is a central quotient group and a p -group is special of rank 2 if its center is elementary abelian of rank 2 and equal to its commutator subgroup. In 1990, Heineken showed that if G is a capable special p -group of rank 2, then $p^5 \leq |G| \leq p^7$. Over a decade ago we asked GAP to determine the number of isomorphism classes of capable special p -groups of rank 2 for small primes p . GAP told us that in these cases, the number of isomorphism classes of special p -groups of rank 2 grows with p . However, for the capable among them the number of isomorphism classes is independent of the prime p . Finally, we were able to show that what GAP conjectured is true for all primes p . (Received August 11, 2016)