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Infinite locally soluble k -Engel groups. (English) Zbl 0791.20038

Atti Accad. Naz. Lincei, Cl. Sci. Fis. Mat. Nat., IX. Ser., Rend. Lincei, Mat. Appl. 3, No. 3, 177-183 (1992).

Summary: We deal with the class \mathcal{E}_k^* of groups G for which whenever we choose two infinite subsets X, Y there exist two elements $x \in X, y \in Y$ such that $[x, \underbrace{y, \dots, y}_k] = 1$. We prove that an infinite finitely generated soluble group in the class \mathcal{E}_k^* is in the class \mathcal{E}_k of k -Engel groups. Furthermore, with $k = 2$, we show that if $G \in \mathcal{E}_2^*$ is an infinite locally soluble or hyperabelian group then $G \in \mathcal{E}_2$.

MSC:

- 20F45 Engel conditions
- 20F19 Generalizations of solvable and nilpotent groups
- 20E25 Local properties of groups
- 20E10 Quasivarieties and varieties of groups
- 20E34 General structure theorems for groups

Cited in **1** Review
Cited in **3** Documents

Keywords:

infinite subsets; finitely generated soluble group; k -Engel groups; infinite locally soluble; hyperabelian group

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