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Sommario/riassunto	"We introduce and study the bounded word problem and the precise word problem for groups given by means of generators and defining relations. For example, for every finitely presented group, the bounded word problem is in NP, i.e., it can be solved in nondeterministic polynomial time, and the precise word problem is in PSPACE, i.e., it can

be solved in polynomial space. The main technical result of the paper states that, for certain finite presentations of groups, which include the Baumslag-Solitar one-relator groups and free products of cyclic groups, the bounded word problem and the precise word problem can be solved in polylogarithmic space. As consequences of developed techniques that can be described as calculus of brackets, we obtain polylogarithmic space bounds for the computational complexity of the diagram problem for free groups, for the width problem for elements of free groups, and for computation of the area defined by polygonal singular closed curves in the plane. We also obtain polynomial time bounds for these problems"--