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Harm Derksen (hderksen@umich.edu), Department of Mathematics, 2074 East Hall, 530 Church Street, University of Michigan, Ann Arbor, MI 48109, and Jiarui Fei* (jiarui@umich.edu), 1833 Lake Lila Dr. #B3, Ann Arbor, MI 48105. *General Presentations of Algebras.*

For any finite dimensional basic associative algebra, we study subrepresentations and the canonical decomposition of a general presentation. As a special case, we consider rigid presentations. We construct a simplicial complex governing the canonical decompositions of rigid presentations. We show how to complete a rigid presentation and study the number of nonisomorphic direct summands and different complements. (Received September 05, 2009)