Summary: Currently, language competences in mathematics lessons gain more attention in Germany. The paper reports an interdisciplinary study of linguistics and mathematics education on reasoning. A model to rate the competences in arithmetic reasoning at primary level will be presented for discussion: mathematical reasoning is coded separately from its linguistic realization. In a pilot study, 243 students of 3rd, 4th and 6th grade solved different arithmetic reasoning tasks. The results show a one-dimensional scale for the model of reasoning. Its specific components provide differentiated requirements, which are formulated concretely in the coding guidelines. They may unfold didactical potential for language support in mathematical reasoning as well as in mathematics lessons itself at primary level.

Classification: E52 E53 C52 C53
Keywords: written reasoning; linguistic realization; arithmetic reasoning; language support