

**IMPROVING OF STUDENTS MATHEMATICAL REASONING ABILITY  
BY APPLYING REALISTIC MATHEMATICS EDUCATION  
(RME) ON APPROACH SUBJECT SETS IN VII GRADE  
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**ABSTRACT**

The aim of this research is to improve students' mathematical reasoning in class VII SMP Negeri 1 Binjai in Sets topic by using realistic mathematics education. Subject on this research is students in class VII-7 SMP which total students is 36 students and object this research is process and learning outcomes in improvement of mathematical reasoning ability through realistic mathematics education. Instrument of this research are observation, interview, and test. This research is Class Action Research (CAR) which is divided into 2 cycles, This research had done in two cycles which each cycle had two meetings and the end of each meeting was given mathematical reasoning ability test. Initial test is given to students before teacher give learning to students. From cycle I, the average score of mathematics reasoning test I 67,90 and there are 24 students of 36 students individually accomplished and classically mastery learning is 67%, this shows that students' reasoning ability still low. In implementation of cycle II from score of mathematics reasoning test II got the average score of mathematics reasoning test II is 75,16 and classically mastery learning has achieved 89% or 32 students has completed the learning individually. Based on this research result is obtained that learning by using realistic mathematics education in the topic of sets in SMP Negeri 1 Binjai can improve students' mathematical reasoning. Based on criteria of classical mastery learning then this learning has achieved the target of mastery learning. The improvement can be concluded that through realistic learning, the mathematical reasoning ability in sets topic in class VII SMP Negeri 1 Binjai has improved. The suggestion which is recommended that teacher able to implemented the realistic mathematics education as alternative in learning process which can improve the students reasoning ability.