

Algebraic thinking ability in basic education grade v and grade vii: Cross-sectional study

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Abstrak

The study aimed to describe 1) students' algebraic thinking ability of elementary school grade V, 2) students' algebraic thinking ability of junior high school grade VII, and 3) the development of students' algebraic thinking ability from elementary school kelas V to junior high school grade VII. This study was a cross-sectional design with quantitative descriptive approach. The subjects of this study were 77 students of elementary school grade V and 95 students of junior high school grade VII. The sampling technique method used was stratified purposive sampling techniques and of analysis techniques with a descriptive analysis. The instrument used were algebraic thinking problems that consist of 3 components, namely, generational, transformational, and global meta-level activity. The results showed that 1) the students' algebraic thinking ability of elementary school grade V was in the medium criteria; 2) the students' algebraic thinking ability of junior high school grade VII was in medium criteria; 3) the average of gain score of students in junior high school grade VII was higher than students in elementary school grade V and students in elementary school grade V because elementary school students grade V until junior high school grade VII undergo a transition of thinking processes from arithmetic thinking to algebra thinking gradually, from simple cases to more complex cases. Generally, students of grade V and VII have moderate algebraic thinking skills. However, the ability of students of grade VII is higher than students of grade V because they have formally obtained algebra material