ABSTRACT

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This study aims to analyze students' abstract thinking abilities in solving mathematical problems in terms of logical-mathematical intelligence. The research method used is explorative qualitative. The data collection technique in this study was through the distribution of logical-mathematical intelligence scales, tests of abstract thinking skills, and interviews. The instruments used were the researcher himself as the main instrument and supporting instruments in the form of logical-mathematical intelligence scale sheets, and tests of abstract thinking abilities in the form of descriptions with Pythagorean theorem material. The research subjects were taken based on the results of the logical-mathematical intelligence scale and the results of the abstract thinking skills test. Students who answered the most abstract thinking ability test questions correctly from each category of logical-mathematical intelligence, and were able to account for the results of their work and had good communication skills were taken as subjects. The data analysis technique used is data reduction, data presentation, and drawing conclusions. The results of the study showed that (1) students with high logical-mathematical intelligence were able to answer all questions on the abstract thinking ability test correctly and meet all indicators of abstract thinking ability; (2) Students with moderate logical-mathematical intelligence are not yet able to manipulate abstract mathematical concepts and make generalizations; (3) Students in the low logical-mathematical intelligence category are only able to fulfill four indicators of abstract thinking skills, including identifying object characteristics through direct experience, representing objects in symbols and mathematical language, releasing the material properties of an object or carrying out idealization, and applying concept in the appropriate context.

Keywords: abstract thinking ability, logical-mathematical intelligence