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Teaching Mathematics and Computer Science

## Development of high school students' geometric thinking with particular emphasis on mathematically talented students

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Abstract. We carried out research using Zalman Usiskin's test (1982) and also a modified version of his test to see how the geometric approach of secondary school students (Grades 8-10) specialized in mathematics had changed. We observed two groups of students for several years. Our aim was to find a relation between the change of the mean of the van Hiele level of the students and the structure of the geometry syllabus. We also observed if there was a change in the geometric approach of the students during the summer holidays and if so, in what way it changed.

 $Key\ words\ and\ phrases:$  Van Hiele theory, Levels of geometric thinking, Structure of the geometry syllabus, Summer holiday.

ZDM Subject Classification: D63, G13.

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