

## A SAMPLE FROM ASTRONOMY TO PROPORTION AND PROPORTIONAL CONSIDERATION: THE SCALING SOLAR SYSTEM

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### Abstract

The goal of this study is to review proficiency of science teaching students in the terms of proportion and proportional consideration. With this purpose, studies on scaling solar system were done during activities related to astronomy in science laboratory. After activities to prepared a scale was done with by size and distance of sun and planets, students were asked to prepare a scale both by size and distance. The working group consists of 36 teachers who received training at third grade of science teaching program in a state university in Black Sea Region during the spring term of 2015-2016 education-training year. Necessary diameters and distances from sun were given as ready for students while the scale was prepared during the collection of data. Activities to prepare scale were done with students firstly with size of sun and planets- and in a way that the distance of Neptune outmost to Sun would be 30 meters. Students whose preknowledge occurred on the terms of proportion and proportional were asked to prepare a scale in a way that the distance between Sun-Mars would be 50 meters both by size and distance. Consequently, it was seen that students had difficulty in preparing the scale as using two variances together (size and distance). As suggestion, such studies to prepare a scale can be done in science courses in order that skills of considering proportional belonging to the term of abstract processes are developed.

**Keywords:** Proportion, proportional consideration, scale, science teaching, astronomy .