

Chedsada Rattanabunterng 2014: The Study of Mathematics Learning Achievement and Word Problem Solving Ability of Mathayomsuksa Two Students on “Quadratic Equation with One Variable” by Using Heuristics Problem Solving at Samutsakornburana School, Changwat Samut Sakhon. Master of Education (Teaching Mathematics), Major Field: Teaching Mathematics, Department of Education. Thesis Advisor: Assistant Professor Chanon Chuntra, Ph.D. 197 pages.

The purposes of this research were 1) to study mathematics learning achievement on “Quadratic Equation with One Variable” by using heuristics problem solving, 2) to study ability in mathematical word problem solving on “Quadratic Equation with One Variable” by using heuristics problem solving, and 3) to study students’ opinion related to learning management on “Quadratic Equation with One Variable” by using heuristics problem solving of mathayomsuksa two students at Samutsakornburana School, Changwat Samut Sakhon.

The sample was 40 mathayomsuksa two students of one classroom at Samutsakornburana School, Changwat Samut Sakhon in the second semester of the academic year 2013 that was selected by cluster random sampling from 12 classrooms. The instruments in data collection consisted of 12 lesson plans on “Quadratic Equation with One Variable”, mathematics learning achievement test on “Quadratic Equation with One Variable”, ability evaluation forms in solving mathematical word problem on “Quadratic Equation with One Variable”, and students’ opinion questionnaire toward learning management by using heuristics problem solving on “Quadratic Equation with One Variable”. Percentage, mean, standard deviation, and t-test were used for analyzing data and presented by tables with their corresponding description.

The research results showed that the mathematics learning achievement of students on “Quadratic Equation with One Variable” by using heuristics problem solving after learning was higher than before learning and higher than 60% at the .05 level of significance. The students had ability in the mathematical word problems solving on “Quadratic Equation with One Variable” at the “good” level. Almost all students strongly agreed that the learning management by using heuristics problem solving was appropriate.

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Student’s signature

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Thesis Advisor’s signature