

Jiyada Udomlertpreecha 2014: The Study of Problem Solving Ability and Learning Achievement of Mathayomsuksa Two Students on “Pythagoras’ Theorem” by Using Open-Ended Problems at Sarawittaya School, Bangkok. Master of Education (Teaching Mathematics), Major Field: Teaching Mathematics, Department of Education. Thesis Advisor: Assistant Professor Songchai Ugsonkid, Ed.D. 151 pages.

The purposes of this research were to study of problem solving ability and learning achievement of mathayomsuksa two students on “Pythagoras’ Theorem” by using open-ended problems at Sarawittaya school, Bangkok.

The sample was 40 mathayomsuksa two students of one classroom at Sarawittaya School, Bangkok in the second semester of the academic year 2013 that was selected by cluster random sampling from 11 classrooms. The instruments in data collection consisted of 11 lesson plans on “Pythagoras’ Theorem”, the problems solving ability test on “Pythagoras’ Theorem”, and the learning achievement test on “Pythagoras’ Theorem”. Percentage, mean, standard deviation, and t-test were used for analyzing data and presented by tables with their corresponding description.

The research findings revealed that the students had the problems solving ability on “Pythagoras’ Theorem” with the average at the “good” level and the learning achievement on “Pythagoras’ Theorem” with the average of students after learning was higher than before learning and higher than 60% at the .05 level of significance.

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Thesis Advisor’s signature