



**Title:** An Investigation of Mathematical Problem Solving Ability and Metacognitive Awareness by Using Metacognitive Processes of Mathayom Sueksa 3 Students, Buddhist Scripture School, Kalasin..

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**Rajabhat Maha Sarkham University, 2012**

### **ABSTRACT**

This research aimed to investigate Mathayomsueksa 3 students' ability in solving mathematical problems and their Metacognitive awareness by using Metacognitive processes. Subjects for this study were 30 Mathayom Sueksa 3 students studying in the second semester of the academic year 2011 at Wat Klang Buddhist Scripture School, Muang District, Kalasin Province; who were obtained by using cluster random sampling. There were two instruments used for collecting data in this study 1) a test of mathematical solving ability through Metacognitive processes, with its congruence index(IOC) of 0.67-1.00, difficulty range (P) of 0.38-0.78, discrimination power(D) of 0.38-0.54, and 0.86 reliability; and 2) a test for assessing the students' Metacognition or thinking awareness through Metacognitive processes, having its congruence index (IOC) of 0.67 – 1.00, discrimination power( $r_{xy}$ ) within 0.46 – 0.79, and 0.85 reliability. Basic statistics, mean and standard deviation, were used in analyzing the collected data.

Results were as follows:

The students' overall ability in mathematical problem solving through Metacognitive processes was found at a good level ( $\bar{X}$  = 2.22 , S.D = 0.82) and the students' thinking awareness by using Metacognitive processes was found at a high level of practice ( $\bar{X}$  = 2.61 , S.D = 0.80).