

2. ค่าดัชนีประสิทธิผลของแผนการจัดกิจกรรมการเรียนรู้การแก้โจทย์ปัญหา การบวกและการลบตามแนวคิดของโพลยา โดยการเรียนรู้แบบร่วมมือ กลุ่มสาระการเรียนรู้ คณิตศาสตร์ ชั้นประถมศึกษาปีที่ 1 มีค่าเท่ากับ 0.7437 หมายความว่าผู้เรียนมีความรู้เพิ่มขึ้น ร้อยละ 74.37

3. ความสามารถในการแก้โจทย์ปัญหาการบวกและการลบตามแนวคิดของโพลยา โดยการเรียนรู้แบบร่วมมือหลังเรียนสูงกว่าก่อนเรียนอย่างมีนัยสำคัญทางสถิติที่ระดับ .05



มหาวิทยาลัยราชภัฏมหาสารคาม
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TITLE : A Development of Learning Activities of Polya Mathematical Problem Solving Method with Cooperative Learning in Addition and Subtraction.

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ABSTRACT

The purposes of this research aimed to 1) develop Learning Activities of Polya mathematical Problem Solving Method with cooperative learning in addition and subtraction as standardized criteria of 80/80. 2) study the students' achievement before and after using the Learning Activities with the cooperative learning activities. 3) compare the students' achievements before and after using the Learning Activities with the cooperative learning activities. The samples of this research consisted of 12 students who studied in second semester, academic year 2010. They were Prathom Suksa 1 students, Ban Non Kaset School, Wangchai Sub District, Borabu District, Office of Maha Sarakham Primary Educational Area Zone 1. The data were collected by instruction package, achievement test, and post- test of Polya mathematical Problem Solving Method with cooperative learning in addition and subtraction. The data were analyzed by using percentage, mean, standard deviation, and The Willcoxon Matched Pair Singled- Range Test.

The research finding were as follows ;

1. The developed package on of Polya mathematical Problem Solving Method with cooperative learning in addition and subtraction for Prathom Suksa 1, Ban Non Kaset School, Wangchai Sub District, Borabu District, Office of Maha Sarakham Primary Educational Area Zone 1 were effective since the criteria were found at 84.83/82.92 which were higher than the standardized criteria of 80/80.

2. The effectiveness index of instruction package on basic science process was at 0.7437, it means that the students' achievement scores increased at 74.37 percents.

3. It was found that the sample's instruction package after using the packages was statistically higher than that before using the packages at .05 level of significant.



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