

**THE IMPLEMENTATION OF PROBLEM BASED LEARNING MODEL TO IMPROVE  
STUDENT 'MATHEMATICAL COMMUNICATION ABILITY ON LINEAR  
PROGRAMMING TOPIC AT GRADE XI SMA NEGERI 1  
PERBAUNGAN A.Y. 2018/2019**

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**ABSTRACT**

The aim of this research is to increase students' mathematical communication ability through problem based learning model was done in SMA Negeri 1 Perbaungan. The type of this research is Classroom Action Research. The research had done respect to the student of XI Science in number 36 students. Instruments used to collect the data were mathematical communication ability test, observation sheet, and documentation. This research had done in two cycles which each cycle had three meetings and the end of each meeting was given mathematical communication ability test. Before given, at the first tests must be validity. Validity test done is contents validity where expert as validator. The result in this research had shown that learning by problem based learning model can increase students' mathematical communication ability. After given treatment the students had done the mathematical communication ability tests in cycle I of 36 students there were 9 students (25 % ) the score  $\geq 70$  with the average score of class was 63.61. It increased in cycle II which the average score of class was 84,49 with 36 students (100%). The observation sheet of teacher activity obtained the average score 3,14 is classified in good category . In cycle 2 increased to be 3,64 is classified in very good category. The observation sheet of student activity obtained the average score 2,83 is classified in good category . In cycle 2 increased to be 3,37 is classified in very good category.

**Keywords: Problem Based Learning Model, Mathematical Communication Ability**