

CHAPTER I

INTRODUCTION

A. Background

Word problems are the problems stated in the form of meaningful sentences and easily understood (Dharma, et al, 2016). In line with the opinion, Ashlock (2003) revealed that word problems can be presented in the form of oral or writing. Word problems illustrate the activities in daily life. Word problems are different from mathematics tasks in general so that the solutions are also different.

The solution of mathematics word problems is not as easy as the solution of another mathematics problems. The solution is not only to find the answers of questions that are being asked, but also more importantly the students must know and understand the processes or steps to get an answer. Students need the ability to solving mathematics word problems. Polya (1973) divided the abilities into: (1) the ability to write down the given aspects, (2) the ability to write down the asked aspects, (3) the ability to make the mathematical models, (4) the ability to complete the mathematical models, and (5) the ability to answer the given questions.

Various research results reveal that most students are in difficulty to solve mathematics word problems (Wahyudin, 2016; Dharma, et al, 2015; Nafi'an: 2011). In line with this, a mathematics teacher in SMA Negeri 8 Makassar revealed that students have difficulty when solving word problems. It is strengthened by the experience of the researcher herself in teaching in grade XI of MIPA I of SMA Negeri 8 Makassar. When the students work on the worksheet which contains a reserved mathematics word problems, students find difficulty to solve it.

The difficulties experienced by the students concerns understanding the question of word problems and changing the sentences into mathematical models. Students feel difficult to

determine which is given and asked in the question. This is in line with the research conducted by Yudianti, et al (2014) that students' difficulties in solving mathematics word problems caused by the lack of students' verbal ability.

Verbal ability is the ability concerns the understanding of the ideas expressed in words (Daniyati, et al, 2015). Verbal ability is the ability to understand the idea in the form of words (Manullang, 2003). According to Koyan (2003), the aspects of verbal ability include analogy of words, vocabularies, and the relationship of words. The verbal ability of persons can be seen by their ability in vocabulary, the ability to distinguish the opponents of words, the ability to complete the sentence with the right words, the ability complete the stories, the ability to interpretateof saying-adage, the ability to formthe analogies, the ability to know humors and follow instructions or written instructions (Manullang, 2003).

Low verbal ability is evidenced by the large number of students who have difficulties in doing the evaluation tests, especially for word problems that a specific analysis and the process of changing verbal language (reserved) into the mathematical form or mathematical equations. The average score of the students is low in mathematics word problems. Most of students do not like working on mathematics word problems and prefers working on a problem that has obvious operation. Based on the description that has been described above, the researcher feels interested to conduct the research about "Descriptions of students' abilities to solve mathematics word problems based on their verbal abilities on Grade XI MIPA 1 of SMA Negeri 8 Makassar "

B. Research Question

Based on the background above, then the research question of this research is "how is the descriptions of students' abilities to solve mathematics word problems based on their verbal

abilities with a level of high, medium, and low on Grade XI MIPA 1 of SMA Negeri 8 Makassar?"

C. Research Aims

Based on the research question above, so the aims of this research is to describe the students' abilities to solve mathematics word problems based on their verbal abilities with a level of high, medium, and low on Grade XI MIPA 1 of SMA Negeri 8 Makassar.

D. Research Benefits

The results of this research are expected to provide the following benefits:

1. The results of this research can be used as information for teachers or prospective teachers about students' abilities in solve mathematics word problems on the topic of the system of linear inequality of two variables based on verbal ability. So it can search for the exact learning model to accommodate the difference in students' verbal abilities, so the students' abilities to solve mathematics word problems can be provided.
2. The results of this research can be used as information for students to correct their self and measure their abilities to solve mathematics word problems on the topic of the system of linear inequality of two variables based on their verbal abilities.
3. The results of the research encompass a comparison and reference materials for further relevant research.

E. Terms Limitation

To avoid the different interpretations of terms used in this research, it is necessary to give term limitation as follows:

1. The description referred to this research is explaining systematically, factual and accurate regarding the condition of the object of research at the time, based on the facts that seem.

2. Mathematics word problems referred to this research is the problems in everyday life that presented in the form of stories and can be solved using mathematical models. The problems are related to the system of linear inequality of two variables.
3. The ability to solving math word problems referred in this research is an individual skill to finding the solution to the problem appears in the mathematics word problems with steps based on Polya, i.e. to understand the mathematics word problems, planning the solution, implement the solution of mathematics word problems, re-examine and interpretation of the results.
4. Verbal abilities referred in this research is the abilities to build ideas through words that include: (1) the ability to understand words, (2) the ability to interpret the words, (3) the ability to compose words, (4) the ability to communicate properly.