

CHAPTER V

CONCLUSIONS AND SUGGESTIONS

A. Conclusions

Development of problem-based mathematics learning devices to improve students' mathematical reasoning abilities. From the results of the research that has been done, the conclusions that can be described in this study are:

- ❖ Learning tools developed with problem-based approaches to improve mathematical reasoning students have met valid criteria, namely for Learning Device Plans (RPP), Student Activity Sheets (LAS) covering aspects format, language and content. Tests of students' mathematical reasoning abilities are incategories **valid**.
- ❖ Learning tools developed with a problem-based approach to improve students' mathematical reasoning skills are already practically used, namely the average implementation, the average student response and the average teacher response have met the indicators of practicality of learning devices in good categories so that the developed learning tools are **practical** .
- ❖ Learning devices developed with a problem-based approach to improve students' mathematical reasoning have been effective to use because they have met the learning completeness criteria seen from the results of classical student mastery learning. The percentage of classical completeness has met the criteria for student mastery, namely $\geq 85\%$ of the total number of students. The ability of teachers to use learning tools is in the "good" category. Student activities are obtained on the limits of learning effectiveness criteria so that they are in the effective category. From all the results obtained in the field trial it was concluded that the learning device developed was **effective**, so thatobtained, **the Final Draft was** namely a learning device that was feasible to use.

- ❖ Learning devices developed with problem-based approaches can improve students' mathematical reasoning abilities. The highest increase is found in the fifth aspect, which is to draw logical conclusions, while the lowest increase is found in the fourth aspect, namely estimating the answer and the solution process.

B. Suggestion

Based on the results of the research and the conclusions above, it can be suggested several things as follows:

- ❖ This tool for mass-based learning needs to be tested in other schools so that the coverage and quality of these devices can be met.
- ❖ Schools and teachers are expected to be able to create creative and innovative learning to be able to attract interest and increase student motivation by developing problem-based mathematics learning tools using other learning approaches to be varied and can improve student motivation and learning outcomes.
- ❖ For other researchers who want to conduct research using the same learning as this research, it is recommended to minimize the weaknesses found in the study, especially in the indicator of reasoning about estimating answers and the solution process.
- ❖ The researcher suggests readers and education practitioners to be able to carry out similar research that is more in depth until the last stage is dissemination. And add other mathematical abilities such as representation, communication, connection and problem solving.