

ABSTRAK

Rika Risgita Br Ginting, NIM 4213111044 (2025). Penerapan Model Pembelajaran *Problem Based Learning* Berbantuan Desmos Untuk Meningkatkan Kemampuan Pemecahan Masalah Matematis Siswa

Penelitian ini bertujuan (1) untuk meningkatkan kemampuan pemecahan masalah matematika siswa di kelas XI MATLANKO-1 SMA Negeri 1 Percut Sei Tuan pada tahun ajaran 2025/2026 melalui penerapan model pembelajaran *problem based learning* berbantuan *software* desmos. (2) untuk mendeskripsikan keefektifan model pembelajaran *problem based learning* berbantuan desmos dalam meningkatkan ketuntasan klasikal di kelas XI MATLANKO-1 SMA Negeri 1 Percut Sei Tuan. Jenis penelitian ini adalah penelitian tindakan kelas. Subjek penelitian ini adalah siswa/siswi kelas XI MATLANKO-1 SMA Negeri 1 Percut Sei Tuan yang berjumlah 33 siswa. Objek penelitian ini adalah peningkatan kemampuan pemecahan masalah matematis siswa pada materi komposisi fungsi dan fungsi invers dengan model pembelajaran *problem based learning* berbantuan desmos di kelas XI MATLANKO-1 SMA Negeri 1 Percut Sei Tuan tahun ajaran 2025/20226. Penelitian ini terdiri dari dua siklus, dimana di akhir setiap siklus diberikan tes kemampuan pemecahan masalah untuk mengetahui kemampuan pemecahan masalah siswa. Berdasarkan hasil analisis data pada siklus I di kelas XI MATLANKO-1 sebanyak 33 siswa, terdapat 20 siswa atau 60,61 % telah mencapai ketuntasan belajar sedangkan 13 siswa atau 39,39 % belum tuntas. Dengan rata-rata kelas 71,31. Pada siklus II terdapat 29 siswa atau 86,7% telah mencapai ketuntasan belajar sedangkan 4 siswa atau 12,12% belum tuntas dengan rata-rata kelas 83,53. Tingkat penguasaan siswa dari tes kemampuan pemecahan masalah II telah mencapai kriteria tinggi (baik), maka pembelajaran ini dikatakan telah tercapai. Berdasarkan uraian-uraian diatas disimpulkan bahwa kemampuan pemecahan masalah siswa meningkat dengan menerapkan model pembelajaran *problem based learning* berbantuan desmos pada materi komposisi fungsi dan fungsi invers di kelas XI MATLANKO-1 SMA Negeri 1 Percut Sei Tuan Tahun Ajaran 2025/2026.

Kata Kunci: Pembelajaran *Problem Based Learning* Berbantuan Desmos, Kemampuan Pemecahan Masalah

ABSTRACT

Rika Risgita Br Ginting, NIM 4213111044 (2025). Implementation of the Problem Based Learning Model Assisted by Desmos to Improve Students' Mathematical Problem-Solving Skills

This study aims (1) to improve the mathematical problem-solving skills of Grade XI MATLANKO-1 students at SMA Negeri 1 Percut Sei Tuan in the 2025/2026 academic year through the implementation of the Problem-Based Learning (PBL) model assisted by Desmos, and (2) to describe the effectiveness of the Problem-Based Learning model assisted by Desmos in improving classical mastery learning in Grade XI MATLANKO-1 at SMA Negeri 1 Percut Sei Tuan. This research is a classroom action research (CAR). The subjects of the study were 33 students of Grade XI MATLANKO-1 at SMA Negeri 1 Percut Sei Tuan. The object of the study was the improvement of students' mathematical problem-solving skills on the topic of function composition and inverse functions through the implementation of the Problem-Based Learning model assisted by Desmos in Grade XI MATLANKO-1 at SMA Negeri 1 Percut Sei Tuan in the 2025/2026 academic year. The research consisted of two cycles, with a problem-solving skills test administered at the end of each cycle to assess students' problem-solving abilities. Based on the data analysis results in Cycle I, out of 33 students in Grade XI MATLANKO-1, 20 students (60.61%) achieved mastery learning, while 13 students (39.39%) had not yet achieved mastery. The class average score was 71.31. In Cycle II, 29 students (86.7%) achieved mastery learning, while 4 students (12.12%) had not, with a class average score of 83.53. The students' mastery level in the second problem-solving skills test met the high (good) criteria, indicating that the learning objectives had been achieved. Based on these findings, it is concluded that students' mathematical problem-solving skills improved through the implementation of the Problem-Based Learning model assisted by Desmos on the topic of function composition and inverse functions in Grade XI MATLANKO-1 at SMA Negeri 1 Percut Sei Tuan in the 2025/2026 academic year.

Keywords: Problem Based Learning assisted by Desmos, Problem-Solving Ability