

ANALISIS KESALAHAN MENYELESAIKAN SOAL MATEMATIKA BARISAN DAN DERET MENGGUNAKAN LANGKAH – LANGKAH POLYA PADA SISWA KELAS XI DI SMA NEGERI 4 SINGARAJA

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ABSTRAK

Penelitian ini bertujuan untuk mengidentifikasi kesalahan-kesalahan siswa dalam menyelesaikan soal barisan dan deret aritmatika, mengetahui faktor-faktor penyebab kesalahan siswa dalam menyelesaikan soal barisan dan deret aritmatika, dan mendiskripsikan solusi yang dapat meminimalisir kesalahan siswa dalam menyelesaikan soal barisan dan deret aritmatika. Penelitian ini termasuk ke dalam penelitian kualitatif dengan menggunakan pendekatan studi kasus. Teknik pengumpulan data pada penelitian ini berupa tes dan wawancara. Tes digunakan untuk mengetahui kesalahan siswa dalam menyelesaikan soal matematika materi barisan dan deret aritmatika dan wawancara digunakan untuk menelusuri kesalahan siswa secara lebih mendalam. Analisis data pada penelitian ini meliputi reduksi data, penyajian data dan verifikasi data. Subjek penelitian yang digunakan yaitu siswa kelas XI MIPA SMA Negeri 4 Singaraja sebanyak 40 dari 193 siswa. Subjek penelitian dibagi menjadi tiga kelompok berdasarkan nilai rata – rata siswa dan standar deviasi. Pada penelitian ini, analisis kesalahan didasarkan pada langkah – langkah Polya yang meliputi kesalahan memahami, kesalahan menyusun rencana penyelesaian, kesalahan melaksanakan rencana penyelesaian dan kesalahan memeriksa kembali. Berdasarkan hasil analisis tes tertulis dan wawancara, diperoleh bahwa siswa melakukan kesalahan karena tidak memahami soal dengan baik, kurang teliti dalam membaca soal, tidak bisa dalam menentukan strategi untuk memecahkan permasalahan dalam soal, kurang teliti dan tergesa – gesa saat proses perhitungan dan jarang menuliskan kesimpulan akhir.

Kata kunci: analisis kesalahan, barisan dan deret, analisis berdasarkan langkah – langkah Polya.

**ERROR ANALYSIS OF SOLVING MATHEMATICS PROBLEMS USING
POLYA STEP ON CLASS XI STUDENTS AT SMA NEGERI 4
SINGARAJA**

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ABSTRACT

This study aims to identify student errors in solving arithmetic sequences and series problems, determine the factors that cause student errors in solving arithmetic sequences and series questions, and describe solutions that can minimize student errors in solving arithmetic sequences and series problems. This research is a qualitative research using a case study approach. Data collection techniques in this study were in the form of tests and interviews. The test is used to find out students' mistakes in solving math problems with arithmetic sequences and series and interviews are used to explore students' mistakes in more depth. Data analysis in this study includes data reduction, data presentation and data verification. The research subjects used were students of class XI MIPA SMA Negeri 4 Singaraja as many as 40 of 193 students. The research subjects were divided into three groups based on the students' average score and standard deviation. In this study, error analysis was based on Polya's steps which included misunderstandings, errors in compiling a settlement plan, errors in implementing the completion plan and errors in re-checking. Based on the results of the analysis of written tests and interviews, it was found that students made mistakes because they did not understand the questions well, were not careful in reading the questions, could not determine strategies to solve problems in the questions, were less thorough and in a hurry during the calculation process and rarely wrote conclusions end.

Keywords: *error analysis, sequences and series, analysis based on Polya steps.*