

Hubungan Kemampuan Matematika Dan Kemampuan Fisika Terhadap Hasil Belajar Siswa Kelas XI IPA SMA Pada Materi Termokimia

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Abstrak

Penelitian ini dilakukan untuk mengetahui apakah ada hubungan yang signifikan antara kemampuan matematika, kemampuan fisika terhadap hasil belajar kimia siswa, serta hubungan kemampuan matematika dan kemampuan fisika terhadap hasil belajar kimia. Sampel dalam penelitian ini terdiri dari satu kelas yang di ambil dengan teknik *random sampling* (undi). Instrumen yang digunakan adalah instrumen tes yang terdiri dari 3 jenis yaitu tes kemampuan matematika, tes kemampuan fisika dan tes hasil belajar kimia. Analisis data dilakukan dengan regresi sederhana dan regresi berganda, serta uji korelasi dan koefisien determinasi pada taraf signifikan $\alpha = 0,05$. Hasil penelitian menunjukkan bahwa ada hubungan yang signifikan antara kemampuan matematika terhadap hasil belajar kimia siswa, ada hubungan yang signifikan antara kemampuan fisika terhadap hasil belajar kimia siswa, selanjutnya diperiksa ada hubungan yang signifikan antara kemampuan matematika dan kemampuan fisika terhadap hasil belajar kimia siswa. Kontribusi kemampuan matematika dan kemampuan fisika terhadap hasil belajar siswa diperoleh 74,30%, berarti 25,70% lagi adalah kontribusi faktor lain.

Kata Kunci : Hasil Belajar, Kemampuan Matematika, Kemampuan Fisika, Regresi Sederhana, Regresi Berganda

**The Relationship between Mathematical Ability and Physics Ability on
Learning Outcomes of Class XI IPA High School Students in
Thermochemical Material**

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Abstract

This research was conducted to determine whether there is a significant relationship between mathematical skills, physics skills on students' chemistry learning outcomes, as well as the relationship between mathematical skills and physics skills on chemistry learning outcomes. The sample in this study consisted of one class which was taken using a random sampling technique (lottery). The instrument used was a test instrument which consisted of 3 types, namely a math skills test, a physics skills test and a chemistry learning outcome test. Data analysis was performed using simple regression and multiple regression, as well as the correlation test and the coefficient of determination at the significant level $\alpha = 0.05$. The results showed that there was a significant relationship between mathematical skills and students' chemistry learning outcomes, there was a significant relationship between physics skills and students' chemistry learning outcomes, then it was examined that there was a significant relationship between mathematical skills and physics skills on students' chemistry learning outcomes. The contribution of mathematical skills and physics skills to student learning outcomes was 74.30%, meaning that 25.70% was the contribution of other factors.

Keywords: Learning Outcomes, Mathematics Skills, Physical Skills, Simple Regression, Multiple Regression