



## Análisis de dificultades surgidas al resolver problemas de variación [

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Analítica

Failing in Differential Calculus courses of the first cycle in university has been reported internationally (Artigue, 1995, Diaz, 2009) as a big problem, assuming as one of the causes the lack of knowledge in mathematics that graduated high school students have. In this work we report elements of a research focused on the difficulties that first year university students face when they solve problems that involve variation situations. Specifically, difficulties associated to the mathematical process development, comparison and training of procedures (MEN, 1998). At first, we analyzed a diagnostic test of a pre-calculus course in which newly enrolled university students participated. It was found that students have difficulties to establish relationships and differences between different notations of real numbers and to decide on their use in a given situation. Further, the difficulties of using the representations and recognizing the effect of using one representation or another in the resolution of the problem were evident. The identification and characterization of these difficulties may allow to calculus teachers to take important decisions about their didactic planning

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