

Note 153 : Les différentielles et l'étudiant

ARTIGUE M., MENIGAUX J.& VIENNOT L. (1990) Some aspects of students, conceptions and difficulties about differentials, *European Journal of Physics*, **11**, 262-267.

<http://iopscience.iop.org/0143-0807/11/5/002>

Abstract

Students' conceptions and difficulties about differentials have been investigated in mathematics and physics in an interdisciplinary investigation. The first results suggest that different conception of differentials coexist in students, linked with different contexts: an algebraic object in mathematics, a pure fiction or a 'little bit of something' in physics. Moreover, differentials and integral procedures are commonly used by students without any clear idea of what can require and legitimate them. Most often, the need as well as the validation rely in the students' minds on key words such as, for example, 'elementary'. These points and corresponding difficulties are discussed and some pedagogical suggestions are made.