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**A perspective on the conceptions of college freshmen regarding absolute value of real numbers.  
(Uma perspectiva das concepções de calouros universitários sobre o valor absoluto de números reais.)**

Bolema 17, No. 22, 63-81 (2004).

In this paper we begin with a somewhat pedagogical statement about what we think is the role of the absolute value concept in the mathematical context and we try to understand how a student learns this concept. The theoretical perspective of cognitive development is an extension of Piaget's ideas about reflective abstraction and it allows one's to describe the mental constructions present in a learning process of advanced mathematical concepts. Based on a initial cognitive model of how the absolute value may be learned an attempt to interpret the interviewee's data using the Action-Process-Object-Schema (APOS) theoretical framework is made. There is evidence showing that the level of abstraction of these starting college students enable them to have an adequate understanding of the absolute value. The results of the data analysis also made us consider the graphic representations and the cooperative learning as relevant factors of a pedagogical approach because they seem to lead a more efficient and meaningful knowledge.

*Classification:* C35

*Keywords:* learning theory; cognitive constructions; undergraduate mathematical knowledge; absolute value; real numbers