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Font Moll, Vicenç; Trigueros, María; Badillo, Edelmira; Rubio, Norma

Mathematical objects through the lens of two different theoretical perspectives: APOS and OSA.

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Summary: This paper presents a networking of two theories, the APOS Theory and the ontosemiotic approach (OSA), to compare and contrast how they conceptualize the notion of a mathematical object. As context of reflection, we designed an APOS genetic decomposition for the derivative and analyzed it from the point of view of OSA. Results of this study show some commonalities and some links between these theories and signal the complementary nature of their constructs.

Classification: C30 D20
Keywords: networking of theories; mathematical objects; onto-semiotic approach; APOS theory; encapsulation; thematization; derivative
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