

# Construction of mathematical knowledge using graphic calculators (TI-84 plus & CAS) in the mathematics classroom

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Lecture Proposal for the TI-Nspire & Derive Strand

## ABSTRACT

Mathematics education researchers are asking themselves about why technology has impacted heavily on the social environment and not in the mathematics classroom. The use of technology in the mathematics classroom has not had the expected impact, as it has been its use in everyday life (f.e. cell phone). Mathematics teachers can be divided into three categories: Those with a boundless overflow (enthusiasm) that want to use the technology without worrying much about the construction of mathematical concepts, those who reject outright the use of technology because they think that their use inhibits the development of mathematical skills, and others that reflect on the balance that must exist between paper-pencil activities and use of technology. The mathematics teacher not having clear examples that support this last option about the balance of paper-pencil activities and technology, opt for one of the extreme positions outlined above. In this paper, we show the results of research on the implementation of activities in an environment of paper-pencil and calculator (TI-84 Plus & CAS) in the mathematics classroom, regarding mathematical modeling in secondary school and the training of teachers of mathematics in that level.

We note also that with the development of technology on the use of electronic tablets and interactive whiteboards, these activities will take on greater momentum in the near future.

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### **Keywords**

Learning Mathematics, calculators, environment, mathematical activity