

Cabri or Geometry as a Computing Tool for Modeling in Math and Sciences

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Abstract

Computer has become an everyday computing tool for the mathematician to help him in thinking and modeling. It is nowadays possible to easily test conjectures to support or reject hypotheses, e.g. in letting the computer carry out computations otherwise out of reach. Most often this is done in interacting with numerical simulations and/or CAS (Computer Algebra Systems). In this presentation I will show how Cabri, originally a computer environment developed to interact dynamically with geometrical objects, is (or can be) used in many cases where, previously, people were using numerical and/or algebraic systems. Illustrative examples will be exposed where Cabri, operating with mathematical objects under direct manipulation, is used in very powerful manner, in algebra, calculus, kinematics, mechanics and/or physics.