

ON THE TEACHING OF CONIC SECTION

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Abstract

By intersecting of a plane with cone surface, a many features on the resulting conical (hyperbola, parabola, ellipse) is one of the topics of interest of geometry since ancient times. In analytical geometry lessons, the equation for a conical is following:

$$Ax^2 + By^2 + Cxy + Dx + Ey + F = 0$$

where at least one of A, B, C is nonzero. This equation can be arranged, and the type of conic section is determined. When the coefficients of the equation are changed, corresponding curves are observed, and it will be helpful to understanding the features relating to a conic section. These applications are prepared in a computer using open sources as a dynamic mathematical software GeoGebra. In this paper, problems like the definition of conical, derivation of the equation, finding the focus of ellipse etc. was visualized by preparing to computer applications and the process of understanding these issues of students is investigated.

Keywords: Mathematics education, conic sections, conical equations.