

Strophoid Research

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To apply the method of inversive generation in order to conclude and prove new properties of a strophoid. And also to find connection of a strophoid with other remarkable curves. Hypothesis: Inversion lets to conclude new properties and theorems from already existed ones. Also, strophoid is connected with other remarkable curves with not less interesting properties.

Stages of the research: Study inversion and its basic properties. Learn common properties of strophoid. Apply inversion to concluded strophoid's properties. Familiarity with cissoids Find connection of strophoid with cissoids Test procedure: Apply inversion to already known strophoid's properties; find connection of strophoid with other curves by using method of additional drawings and drawing analysis. Novelty of the research, degree of self-sufficiency: Strophoid has a lot of interesting properties and theorems. More often, they are investigated by using methods of analytical geometry. In this project, some new properties are deduced with the help of inversive generation. Also, connection of strophoid with another remarkable curve - cissoids was found Results of work: New theorems and methods of strophoid drawing, connection of strophoid and cissoids are found.

Conclusion: Strophoid has a lot of interesting properties which can be found using method of inversive generation. For their derivation it is convenient to use inversion to already known properties. Also, strophoid is connected with many other remarkable curve.