

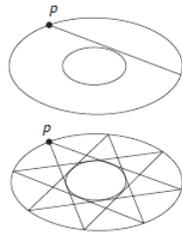
A Tale of Two Mathematicians

(It was the best of times. . . for mathematics)

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Abstract

This is the story of some of the mathematical work of two mathematicians, Jean Victor Poncelet and Niels Henrik Abel. They were contemporaries in the early 19th century who never met and who were not even aware of each other's work. However, between them Poncelet and Abel laid the cornerstones of the modern field of algebraic geometry, a field that is central to current work in geometry, arithmetic and theoretical physics. In this talk I will try to explain what each of them did, Poncelet in geometry and Abel in analysis, and how the fusion of their work revealed one of the deepest aspects of mathematics. This fusion is captured by an amazing property of playing billiards on a table formed by two ellipses.



The periodicity of the billiard shot is independent of the starting point p .