

**ZMATH 2015e.00653**

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**Technology-enhanced discovery.**

Math. Teach. (Reston) 107, No. 9, 660-665 (2014).

From the text: Exploration, innovation, proof: For students, teachers, and others who are curious, keeping an open mind and being ready to investigate unusual or unexpected properties will always lead to learning something new. Technology can further this process, allowing various behaviors to be analyzed that were previously memorized or poorly understood. This article shares the adventure of one such discovery of exploration, innovation, and proof that was uncovered when a teacher tried to find a smoother way to model conic sections using dynamic technology. When an unexpected pattern regarding the locus of an ellipse's or hyperbola's foci emerged, he pitched the problem to a ninth grader as a challenge, resulting in a marvelous adventure for both teacher and student. Beginning with the evolution of the ideas that led to the discovery of the focal locus and ending with the significant student-written proof and conclusion, we hope to inspire further classroom use of technology to enhance student learning and discovery.

*Classification:* G70 U70

*Keywords:* educational technology; geometry; conic sections; technology-enhanced discoveries

<http://www.nctm.org/publications/article.aspx?id=42065>