

ZMATH 2016f.01431

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Teaching locus with a conserved property by integrating mathematical tools and dynamic geometric software.

Aust. Sr. Math. J. 30, No. 1, 25-44 (2016).

Summary: In this article, we present investigative tasks that concern loci, which integrate the use of dynamic geometry software (DGS) with mathematics for proving the obtained figures. Additional conditions were added to the loci: ellipse, parabola and circle, which result in the emergence of new loci, similar in form to the original loci. The mathematical relation between the parameters of the original and new loci was found by the learners. A mathematical explanation for the general case, using the “surprising” results obtained in the investigative tasks, is presented. Integrating DGS in mathematics instruction fosters an improved teaching and learning process. (ERIC)

Classification: U70 G70

Keywords: dynamic geometry software; use of technology; loci; ellipse; parabola; circle