

ZMATH 2016c.00927

Gilat, Talya; Amit, Miriam

Teaching for creativity: the interplay between mathematical modeling and mathematical creativity.

Tso, Tai-Yih (ed.), Proceedings of the 36th conference of the International Group for the Psychology of Mathematics Education “Opportunities to learn in mathematics education”, PME 36, Taipei, Taiwan, July 18–22, 2012, Vol. 2. Taipei: National Taiwan Normal University. 267-274 (2012).

Summary: The aim of this paper is to show how engaging students in “real-life” mathematical situations can stimulate their mathematical creative thinking. We analyzed the mathematical modeling of two girls, aged 10 and 13 years, as they worked on an authentic task involving the selection of a track team. The girls displayed several modeling cycles that revealed their thinking processes, as well as cognitive and affective features that may serve as the foundation for a methodology that uses model-eliciting activities to promote the mathematical creative process.

Classification: M13 M12 C33 C32

Keywords: creative thinking; modeling; authentic task; thinking processes; model-eliciting activities