

ZMATH 2016d.00646

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Shadow puppets. Exploring a context for similarity and dilations.

Math. Teach. (Reston) 109, No. 1, 20-27 (2015).

Summary: How can geometry teachers design great tasks that allow students to make connections among interrelated concepts and expand their geometric reasoning skills? Many curricular materials provide problems for students to apply a single geometric concept. However, these problems do not always promote reasoning opportunities for students, because students may not look for connections with other geometric ideas or explore alternative solution strategies. For classroom teachers, this detachment raises an important question: What does it take to transform a typical geometry exercise into a great task to promote students' geometric reasoning and sense making? the authors use the term task to refer to a problem as well as students' interpretation of what they should produce and students' use of resources and strategies to achieve that product. A great task begins with a problem, but it also includes how the teacher launches the problem and the work that students do to solve it. In this article, the authors illustrate how they transformed a typical geometry problem into a great task. (ERIC)

Classification: G40 E50 D80

Keywords: geometry; geometric concepts; similarity; activities; geometric reasoning; sense making

<http://www.nctm.org/Publications/Mathematics-Teacher/2015/Vol109/Issue1/Shadow-Puppets.-Exploring-a-Context-for-Similarity-and-Dilations/>