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Working mathematically on teaching mathematics: preparing graduates to teach secondary mathematics.

Zaslavsky, Orit (ed.) et al., Constructing knowledge for teaching secondary mathematics. Tasks to enhance prospective and practicing teacher learning. Berlin: Springer (ISBN 978-0-387-09811-1/hbk; 978-0-387-09812-8/ebook). Mathematics Teacher Education 6, 89-101 (2011).

Summary: We illustrate our approach to using mathematical tasks with prospective teachers to promote complex thought about what it means to do and learn mathematics. Prospective teachers are enculturated into ways of thinking about teaching mathematics which persist, by and large, when they are in school. We offer tasks organised to challenge their instant responses, and support the development of habits of probing mathematical meaning as the starting point for thinking about teaching.

Classification: D59 H29 C39 B50

Keywords: teaching prospective teachers; preparing to teach mathematics; shifts of understanding; multiplicative relations; elementary algebra; preservice teacher education; mental arithmetic; problem posing; learning

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