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Dynamic and tangible representations in mathematics education.

Rezat, Sebastian (ed.) et al., Transformation – a fundamental idea of mathematics education. New York, NY: Springer (ISBN 978-1-4614-3488-7/hbk; 978-1-4614-3489-4/ebook). 187-202 (2014).

Summary: Dynamic geometry environments offer a new kind of representation of mathematical objects that are variable and behave “mathematically” when one of the elements of the construction is dragged. This chapter addresses three dimensions of transformations brought about by this new kind of representation in mathematics and mathematics education: an epistemological dimension, a cognitive dimension, and a didactic dimension.

Classification: U70 G40

Keywords: dynamic geometry software; representations; visualization; manipulations; 3D objects

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