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Dynamic representations of complex numbers. Opportunities to learn in teacher training.

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). 173-186 (2014).

Summary: It seems a reasonable claim that students who will be future mathematics teachers are provided with appropriate opportunities to actively engage in mathematical topics and tasks in the course of their training. This should not only involve more or less difficult routine tasks following the lecture, but should also include open and self-differentiating tasks. In other words, their training at the teacher college or university should deliver and reflect, as far as possible, what is to be expected in their future careers. Complex numbers and conformal transformations offer a rich field for students' active engagement in such tasks. The representation of geometrical ideas with dynamic geometry systems seems particularly suitable in this context. This chapter reports on a design for teacher education courses trying to meet such demands.

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