

ZMATH 1998f.04231

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Geometry from a cognitive point of view.

Mammana, Carmelo et al., Perspectives on the teaching of geometry for the 21st century. Kluwer, Dordrecht (ISBN 0-7923-4990-3). 37-52 (1998).

Geometry involves three kinds of cognitive processes which fulfil specific epistemological functions: visualisation processes with regard to space representation for the illustration of a statement, for the heuristic exploration of a complex situation, for a synoptic glance over it, or for a subjective verification; construction processes by tools: construction of configurations can work like a model in that the actions on the representative and the observed results are related to the mathematical objects which are represented; reasoning in relationship to discursive processes for extension of knowledge, for proof, for explanation.

Classification: G40