

Contents

Early Geometrical Thinking in the Environment of Patterns, Mosaics and Isometries	1
1 Introduction	1
2 Theoretical Considerations About Early Geometrical Thinking	3
2.1 Why Early Geometry Is Related to Isometries	3
2.2 Impact of Visualisation on Geometrical Thinking	5
2.3 Theoretical Background of Research in Early Geometrical Thinking	7
3 Early Geometrical Thinking in Research	13
3.1 Research About Identifying and Creating Shapes	13
3.2 Results of Research on the Understanding of Geometric Figures	14
3.3 Didactical Proposals for Teaching the Concept of Geometric Figures	20
3.4 Empirical Research about Creating Arrangements Based on a Variety of Regularities, Symmetries, and Repetitions	22
3.5 Reason for Research Related to Geometrical Patterns	24
3.6 Results of Research in Geometrical Patterning	25
4 Summary and Looking Ahead	44
References	45



<http://www.springer.com/978-3-319-44271-6>

Early Geometrical Thinking in the Environment of
Patterns, Mosaics and Isometries

Swoboda, E.; Vighi, P.

2016, VII, 50 p. 42 illus., Softcover

ISBN: 978-3-319-44271-6