20-9 MERJ v.19 n.2 final 2/11/07 9:46 AM Page 1

Mathematics Education Research Journal

Volume 19, Number 2, September, 2007

Special Issue
Abstraction in Mathematics Education

Guest Editors: Michael Mitchelmore and Paul White

Editorial

Abstraction in Mathematics Education
Michael Mitchelmore and Paul White 1

Articles

Schematising Activities as a Means for Encouraging Young Children to Think Abstractly
Bert van Oers and Mariëlle Poland 10

Abstraction as a Natural Process of Mental Compression
Eddie Gray and David Tall.. 23

Abstracting Processes, from Individuals' Constructing of Knowledge to a Group's "Shared Knowledge"
Rina Hershkowitz, Nurit Hadas, Tommy Dreyfus and Baruch Schwarz 41

Abstracting in the Context of Spontaneous Learning
Gaye Williams 69

A Dialectical Approach to the Formation of Mathematical Abstractions
Mehmet Fatih Ozmantar and John Monaghan 89