

TABLE OF CONTENTS

Plenary lectures	9
<i>M.G. Bartolini Bussi, R. Canalini & F. Ferri: Towards cultural analysis of content: Problems with variation in primary school.....</i>	9
<i>D.A. Spangler: Facilitating knowledge development and refinement in elementary school teachers.....</i>	24
<i>S. Vinner: What should we expect from somebody who teaches mathematics in elementary schools?.....</i>	31
<i>E.Ch. Wittmann: Early mathematical education: A plea for mathematically founded conceptions.....</i>	42
Research reports.....	55
<i>S.D. Anastasiadou: Greek pre-service teachers' cognitive abilities in understanding central tendency measures: a multilevel statistical analysis.....</i>	55
<i>M. Bardelli: The pedagogical content knowledge of primary mathematics teachers facing a student error.....</i>	63
<i>J. Bureš, R. Havlíčková & J. Novotná: An analysis of a young teacher's communication with pupils in a mathematical environment fostering the combinatorial reasoning (a case study).....</i>	72
<i>R. Cabassut: The teaching of modelling in France: relation between mathematical and extra-mathematical topics.....</i>	79
<i>M.M. Capraro, R.M. Capraro, R. Rosli, S.Y. Han, A. Harbaugh & P.L.Moch: Teacher educator strategies for improving preservice teachers' knowledge of fractions.....</i>	88
<i>A. Chestnut: Using pedagogical content scaffolds evidenced in transcripts to measure teacher knowledge.....</i>	95
<i>M.-P. Chopin: Didactic time and heterogeneities in mathematics teaching: How teachers deal with clock, knowledge and pupils in their practice.....</i>	103
<i>V.V. Cifarelli, S.P. Morge, T. Goodson-Espy & D.K. Pugalee: Examining the math content and pedagogical knowledge of pre-service teachers: How Katelyn and Matthew made sense of students' problems.....</i>	111
<i>J. Cooper: Mathematicians teaching elementary school teachers – A case study.....</i>	118
<i>B. Divišová & N. Stehlíková: Geometric problems effectively solvable without algebraic calculations.....</i>	126
<i>Ch. Fung: A practitioner's encounter with the mathematical knowledge needed for teaching in elementary school.....</i>	134
<i>P. Guidoni, M. Mellone, C. Minichini & M. Serpico: Towards a "resonance" comprehension of the polynomial representation of numbers.....</i>	142
<i>M. Hejný: The process of discovery in teaching focusing on building schemes.....</i>	150
<i>A. Hošpesová: Mosaics as substantial learning environment in geometry.....</i>	158
<i>E. Jagoda: Symmetry in a static and dynamic environment.....</i>	166
<i>D. Jirotková: Generic models in geometry.....</i>	174
<i>M. Kaslová & C. Marchini: The mathematical knowledge needed for teaching to five year old pupils</i>	182
<i>L. Kasmer & E. Billings: Prediction questions in the elementary classroom.....</i>	189

<i>W. Klassen</i> : The impact of an innovative field based component within the mathematics methods course for preservice teachers at UBC Okanagan.....	197
<i>J. Kloboučková</i> : Cube building in primary school.....	206
<i>L. Lang, H. Hawthorne, F. Sakon, A. Reta & R. Schoen</i> : Examining the effects of a K-3 mathematics formative assessment system	214
<i>E. Levenson</i> : Exploring the roles of the teacher in promoting collective mathematical creativity	221
<i>T. Marcinek & E. Partová</i> : Measures of mathematical knowledge for teaching: Issues of adaptation of a U.S. developed instrument for the use in the Slovak Republic	229
<i>C. Mathews, H. Venkat & J. du Plessis</i> : To be or not to be: Examples and non-examples of patterns.....	237
<i>M.L. Niess & D.K. Pugalee</i> : Assessing K-8 teachers' knowledge for teaching with technology: A complex problem needing a comprehensive assessment system...	244
<i>H. Nováková & J. Novotná</i> : A priori analysis in theory and teachers' practice	252
<i>N. Panorkou</i> : A phenomenographic study on students' experiences of dimension....	260
<i>I. Peled & A. Suzan</i> : Prospective teachers experiencing the power of intuitive knowledge involving percentages.....	267
<i>E. Polotskaia, A. Savard & V. Freiman</i> : A "fairy" tale to represent a holistic approach to additive word problem solving.....	275
<i>M. Pytlak</i> : Early algebraic reasoning - discovering regularities on the primary school level.....	283
<i>C.M. Ribeiro & J. Carrillo</i> : Discussing Maria's MKT and beliefs in the task of teaching.....	290
<i>A. Savard</i> : Elementary teachers do not teach through mathematics.....	297
<i>A. Seifert</i> : Improving mathematical knowledge through targeted instruction: Focusing on data utilization to improve teaching and learning.....	305
<i>C. Sheets & V.V. Cifarelli</i> : Developing instructional sequences in pre-service elementary mathematics teacher education.....	313
<i>E. Swoboda</i> : Axis symmetry as an epistemological obstacle.....	320
<i>M. Tabach</i> : Promoting technology integration among prospective mathematics teachers.....	328
<i>J. van Bommel</i> : Preparing student teachers with MKT.....	336
<i>X. Xistouri & D. Pitta-Pantazi</i> : The structure of elementary students' ability in geometric transformations: The case of translation.....	345
<i>J. Young-Loveridge & J. Mills</i> : The challenge for teachers of helping students acquire a range of strategies to solve addition and subtraction problems.....	352
Workshops	361
<i>M.-P. Chopin & J. Novotná</i> : Contribution of the Theory of Didactical Situations to mathematics education: Fundamentals and main concepts.....	361
<i>S. Hershkovitz & M. Tabach</i> : Instruction and technology.....	363
<i>B. Hodgson, C. Lajoie & L. Poirier</i> : The mathematical preparation of elementary school teachers: facing the challenge from three complementary perspectives ...	365
<i>A. Jančařík, K. Jančaříková & A. Nováková</i> : Mathematica Ludus (Mathematics by play)	367
<i>M. Kaslová</i> : Photography in the teaching of mathematics.....	369
<i>E. Levenson & R. Barkai</i> : Explanations, justifications, and proofs in elementary school	371

Posters.....	373
<i>A.B. Aaten & M. van den Heuvel-Panhuizen: Kindergartners' informal mathematical thinking during picture book reading.....</i>	<i>373</i>
<i>Z. Aydin Ünal & F.S. Emet: The extension of non-negative integers to negative integers.....</i>	<i>374</i>
<i>F. S. Emet & Z. Aydin Ünal: 5th and 6th grade students' conception about the usage of numbers.....</i>	<i>375</i>
<i>E. Faggiano: Facing challenging mathematics to organize a self-financed party.....</i>	<i>376</i>
<i>H. Gomes, F. Martins & C.M. Ribeiro: Discussing early years' trainee teachers' MKT in geometry: A first approach concerning quadrilaterals.....</i>	<i>377</i>
<i>A. Hošpesová & S. Semerádová: Child, geometrical precepts, and tessellation...</i>	<i>378</i>
<i>K. Jančaříková & A. Jančařík: SOMA Cube and geometrical imagination.....</i>	<i>379</i>
<i>D. Jirotková, C. Marchini, R. Guastalla, M. Previdi & R. Santelli: Děda Lesoň and Zio Tobia comparison: Evaluation of Czech and Italian experiences in primary school.....</i>	<i>380</i>
<i>K. Larsson: What about subtraction? Can research enhance teaching and learning in elementary school?.....</i>	<i>381</i>
<i>T.R. Mañalac: Assessing pupils' skills in reading and interpreting graphs.....</i>	<i>382</i>
<i>A. Montone & M. Pertichino: A project of mathematics education in primary schools: from game to mathematical thinking</i>	<i>383</i>
<i>I. Procházková: Emergence of Kaprekar's sequence – introspection.....</i>	<i>384</i>
<i>F. Roubíček: Representation of basic isometries through square ornaments.....</i>	<i>385</i>
<i>N. Stehlíková: "Story of a formula" or the possible influence of elementary school teaching on pupils' views of mathematical learning.....</i>	<i>386</i>
<i>M. Tichá: The search for ways of enhancement of knowledge base for teaching.....</i>	<i>387</i>
<i>M. Ulrychová: Construction of mathematical knowledge in small groups.....</i>	<i>388</i>
<i>A.I. Yap: Assessing pupils' ability in estimating linear measure.....</i>	<i>389</i>