1. Record Nr. UNINA9910464498103321

Titolo	Assessment in the mathematics classroom [[electronic resource]] : yearbook 2011 Association of Mathematics Educators / / editors, Berinderjeet Kaur, Wong Khoon Yoong
Pubbl/distr/stampa	Singapore, : World Scientific, 2011
ISBN	1-283-43400-8 9786613434005 981-4360-99-6
Descrizione fisica	1 online resource (304 p.)
Collana	Yearbook ; ; 2011
Altri autori (Persone)	KaurBerinderjeet <1955-> WongKhoon Yoong
Disciplina	510.71
Soggetti	Mathematics - Study and teaching - Singapore Mathematical ability - Testing Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Contents; Chapter 1 Introduction: Assessment Matters WONG Khoon Yoong Berinderjeet KAUR; 1 Why a Yearbook on Assessment?; 2 Assessment of Mathematics Cognitive Domain; 3 Assessment of Mathematics Affective Domain; 4 No "Final" Words: A list of Questions; References; Chapter 2 Using a Multi-Dimensional Approach to Understanding to Assess Students' Mathematical Knowledge Denisse R. THOMPSON Berinderjeet KAUR; 1 Introduction; 2 Why Consider a Multi-Dimensional Approach to Understanding?; 3 What is the SPUR Approach?; 3.1 Examples of SPUR at the primary level 3.2 Examples of SPUR at the secondary level4 A Look at Achievement in Terms of SPUR; 5 Discussion and Conclusion; References; Chapter 3 Assessing Problem Solving in the Mathematics Curriculum: A New Approach TOH Tin Lam QUEK Khiok Seng LEONG Yew Hoong Jaguthsing DINDYAL TAY Eng Guan; 1 Introduction; 2 Mathematical Problem-Solving Model; 3 Mathematics Practical - A New Paradigm; 4 Mathematics Practical Worksheet; 5 Mathematics Practical Lessons; 6 The Scoring Rubric; 7 Students' Responses and Assessment; 8

Conclusion; References; Appendix A; Appendix B

Chapter 4 Assessing Conceptual Understanding in Mathematics with Concept Mapping JIN Haiyue WONG Khoon Yoong1 Introduction: What and Why of Concept Mapping; 2 Types of Concept Mapping Tasks; 2.1 High-directed concept mapping tasks: Fill-in-the-map; 2.2 Semi-directed concept mapping tasks; 2.3 Low-directed concept mapping tasks: Free-style mapping; 3 Training on Concept Mapping; 4 Classroom Applications of Concept Map; 4.1 Using concept map to detect students' prior knowledge; 4.2 Using concept map to evaluate learning outcomes; 4.3 Using concept map to track students' progress in learning

4.4 Constructing concept maps as a learning strategy5 Evaluation of Student-Constructed Concept Maps; 5.1 Links between concepts; 5.2 Nature of the whole map; 6 Conclusions; References; Chapter 5 Using Journal Writing to Empower Learning Berinderjeet KAUR CHAN Chun Ming Eric; 1 Introduction; 2 Review of Literature; 3 Two Types of Journal Writing in the Mathematics Classroom; 3.1 Free writing; 3.2 Writing from a prompt; 4 Rubrics for Grading Journals; 4.1 Analytic scoring rubric; 4.2 Holistic scoring rubric; 5 Implementing Journal Writing in your Classroom - Potential Pitfalls

5.1 The potential for teacher to hurt student's feelings5.2 Possible loss of instructional time to teach the syllabuses; 5.3 Tremendous increase in the marking load of the teacher; 5.4 What to grade? Language or mathematics content; 6 Concluding Remarks; Acknowledgement; References; Chapter 6 Implementing Alternative Assessment in the Lower Primary Mathematics Classroom YEO Kai Kow Joseph; 1 Introduction; 2 Assessment Practices in Mathematics Classrooms; 3 Suggested Alternative Assessment Practices for the Lower Primary Mathematics Classroom; 3.1 Practical tests; 3.2 Oral presentations

3.3 Journal writing

Sommario/riassunto

The third in the series of yearbooks by the Association of Mathematics Educators in Singapore, Assessment in the Mathematics Classroom is unique as it addresses a focused theme on mathematics education. The objective is to encourage teachers and researchers to include assessment of non-cognitive attributes and to use techniques in addition to paper-and-pencil tests that focus on typical problems. Several renowned international researchers in the field have published their work in the book. The thirteen chapters of the book illustrate evidence-based practices that school teachers and researcher

2. Record Nr. UNINA9910816414903321

Autore	Reilly Norman R.
Titolo	Introduction to applied algebraic systems / / Norman R. Reilly
Pubbl/distr/stampa	New York, New York : , : Oxford University Press, , 2009 ©2009
ISBN	0-19-772720-4 0-19-970992-0
Descrizione fisica	1 online resource (xiii, 509 p.) : ill
Disciplina	512/.482
Soggetti	Algebra
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Formerly CIP.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	CONTENTS ; 1. Modular Arithmetic; 1.1 Sets, functions, numbers; 1.2 Induction; 1.3 Divisibility; 1.4 Prime Numbers; 1.5 Relations and Partitions; 1.6 Modular Arithmetic; 1.7 Equations in Zn; 1.8 Bar codes; 1.9 The Chinese Remainder Theorem; 1.10 Euler's '-function; 1.11 Theorems of Euler and Fermat; 1.12 Public Key Cryptosystems ; 2. Rings and Fields; 2.1 Basic Properties; 2.2 Subrings and Subfields; 2.3 Review of Vector Spaces; 2.4 Polynomials; 2.5 Polynomial Evaluation and Interpolation; 2.6 Irreducible Polynomials; 2.7 Construction of Finite Fields; 2.8 Extension Fields; 2.9 Multiplicative Structure of Finite Fields; 2.10 Primitive Elements; 2.11 Subfield Structure of Finite Fields; 2.12 Minimal Polynomials; 2.13 Isomorphisms Between Fields; 2.14 Error Correcting Codes ; 3. Groups and Permutations; 3.1 Basic Properties; 3.2 Subgroups; 3.3 Permutation Groups; 3.4 Matrix Groups; 3.5 Even and Odd Permutations; 3.6 Cayley's Theorem; 3.7 Lagrange's Theorem; 3.8 Orbits; 3.9 Orbit/Stabilizer Theorem; 3.10 Burnside's Theorem; 3.11 K-Colourings; 3.12; 4. Groups; Homomorphisms and Subgroups; 4.1 Homomorphisms; 4.2 The Isomorphism Theorems; 4.3 Direct Products; 4.4 Finite Abelian Groups; 4.5 Conjugacy and the Class Equation; 4.6 The Sylow Theorems 1 and 2; 4.7 Sylow's Third Theorem; 4.8 Solvable Groups; 4.9 Nilpotent Groups ; 5. Rings and Polynomials; 5.1 Homomorphisms and Ideals; 5.2 Polynomial Rings; 5.3 Division Algorithm in F[x1, x2, ... , xn]; Single Divisor; 5.4 Multiple Divisors;

Groebner Bases; 5.5 Ideals and Affine Varieties; 5.6 Complex Numbers; 5.7 Decomposition of Affine Varieties; 5.8 Cubic Equations in One Variable; 5.9 Parameters; 5.10 Singular and Nonsingular Points ; 6. Elliptic Curves; 6.1 Elliptic Curves; 6.2 Homogeneous Polynomials; 6.3 Projective Space; 6.4 Intersection of Lines and Curves; 6.5 Defining Curves by Points; 6.6 Classification of Conics; 6.7 Reducible Conics and Cubics; 6.8 The Nine Point Theorem; 6.9 Groups on Elliptic Curves; 6.10 The Arithmetic on an Elliptic Curve; 6.11 Results Concerning the Structure of Groups on Elliptic Curves ; 7. Further Topics Relating to Elliptic Curves 418; 7.1 Elliptic Curve Cryptosystems; 7.2 Fermat's Last Theorem; 7.3 Elliptic Curve Factoring Algorithm; 7.4 Singular Curves of Form y2 = x3 + ax + b; 7.5 Birational Equivalence; 7.6 The Genus of a Curve; 7.7 Pell's Equation

Sommario/riassunto

This resource provides a rigorous and extensive undergraduate introduction to algebraic systems covering basic number theory, rings, fields, polynomial theory, groups, algebraic geometry and elliptic curves.