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	Nota di contenuto	Epigraph: To Paint a Bird Foreword for the New Mathematical Coloring Book by Peter D. Johnson, Jr Foreword for the New Mathematical Coloring Book by Geoffrey Exoo Foreword for the New Mathematical Coloring Book by Branko Grunbaum. Foreword for The Mathematical Coloring Book by Peter D. Johnson, Jr., Foreword for The Mathematical Coloring Book by Cecil Rousseau Acknowledgements Greetings to the Reader 2023 Greetings to the Reader 2009 I. Merry-Go-Round1. A Story of Colored Polygons and Arithmetic Progressions II. Colored Plane 2. Chromatic Number of the Plane: The Problem 3. Chromatic Number of the Plane: An Historical Essay 4. Polychromatic Number of the Plane and Results Near the Lower Bound 5. De Bruijn–Erds Reduction to Finite Sets and Results Near the Lower Bound 6. Polychromatic Number of the Plane and Results Near the Upper Bound 7. Continuum of 6-Colorings of the Plane

8. Chromatic Number of the Plane in Special Circumstances -- 9. MeasurableChromatic Number of the Plane -- 10. Coloring in Space --11. Rational Coloring -- III. Coloring Graphs -- 12. Chromatic Number of a Graph -- 13. Dimension of a Graph -- 14. Embedding 4-Chromatic Graphs in the Plane -- 15. Embedding World Series -- 16. Exoo–Ismailescu: The Final Word on Problem 15.4 -- 17. Edge Chromatic Number of a Graph -- 18. The Carsten Thomassen 7-Color Theorem -- IV.Coloring Maps -- 19. How the Four-Color Conjecture Was Born -- 20. Victorian Comedy of Errors and Colorful Progress --21. Kempe-Heawood's Five-Color Theorem and Tait's Equivalence --22. The Four-Color Theorem -- 23. The Great Debate -- 24. How Does One Color Infinite Maps? A Bagatelle -- 25. Chromatic Number of the Plane Meets Map Coloring: The Townsend–Woodall 5-Color Theorem --V. Colored Graphs -- 26. Paul Erds -- 27. The De Bruijn-Erds Theorem and Its History -- 28. Nicolaas Govert de Bruijn -- 29. Edge Colored Graphs: Ramsey and Folkman Numbers -- VI. The Ramsey Principles -- 30. From Pigeonhole Principle to Ramsey Principle -- 31. The Happy End Problem -- 32. The Man behind the Theory: Frank Plumpton Ramsey -- VII. Colored Integers: Ramsey Theory Before Ramsey and Its AfterMath -- 33. Ramsey Theory Before Ramsey: Hilbert's Theorem -- 34. Ramsey Theory Before Ramsey: Schur's Coloring Solution of a Colored Problem and Its Generalizations -- 35. Ramsey Theory Before Ramsey: Van der Waerden Tells the Story of Creation -- 36. Whose Conjecture Did Van der Waerden Prove? Two Lives Between Two Wars: Issai Schur and Pierre Joseph Henry Baudet --38. Monochromatic Arithmetic Progressions or Life After Van der Waerden -- 39. In Search of Van der Waerden: The Early Years -- 40. In Search of Van der Waerden: The Nazi Leipzig, 1933–1945 -- 41. In Search of Van der Waerden: Amsterdam, Year 1945 -- 42. In Search of Van der Waerden: The Unsettling Years, 1946-1951 -- 43. How the Monochromatic AP Theorem Became Classic: Khinchin and Lukomskava -- VIII. Colored Polygons: Euclidean Ramsey Theory -- 44. Monochromatic Polygons in a 2-Colored Plane -- 45. 3-Colored Plane, 2-Colored Space, and Ramsey Sets -- 46. The Gallai Theorem -- IX. Colored Integers in Service of the Chromatic Number of the Plane: How O'Donnell Unified Ramsey Theory and No One Noticed -- 47. O'Donnell Earns His Doctorate -- 48. Application of Baudet-Schur-Van der Waerden -- 48. Application of Bergelson-Leibman's and Mordell-Faltings' Theorems -- 50. Solution of an Erds Problem: The O'Donnell Theorem -- X. Ask What Your Computer Can Do for You -- 51. Aubrey D.N.J. de Grey's Breakthrough -- 52. De Grey's Construction -- 53. Marienus Johannes Hendrikus 'Mariin' Heule -- 54. Can We Reach Chromatic 5 Without Mosers Spindles? -- 55. Triangle-Free 5-Chromatic Unit Distance Graphs -- 56. Jaan Parts' Current World Record -- XI. What About Chromatic 6? -- 57. A Stroke of Brilliance: Matthew Huddleston's Proof -- 58. Geoffrey Exoo and Dan Ismailescu or 2 Men from 2 Forbidden Distances -- 59. Jaan Parts on Two-Distance 6-Coloring -- 60. Forbidden Odds, Binaries, and Factorials -- 61. 7-and 8-Chromatic Two-Distance Graphs -- XII. Predicting the Future -- 62. What If We Had No Choice? -- 63. AfterMath and the Shelah–Soifer Class of Graphs -- 64. A Glimpse into the Future: Chromatic Number of the Plane, Theorems and Conjectures -- XIII. Imagining the Real, Realizing the Imaginary -- 65. What Do the Founding Set Theorists Think About the Foundations? -- 66. So, What Does It All Mean? -- 67. Imagining the Real or Realizing the Imaginary: Platonism versus Imaginism -- XIV. Farewell to the Reader -- 68. Two Celebrated Problems -- Bibliography -- Name Index -- Subject Index -- Index of Notations.

The New Mathematical Coloring Book (TNMCB) includes striking results of the past 15-year renaissance that produced new approaches, advances, and solutions to problems from the first edition. A large part of the new edition "Ask what your computer can do for you," presents the recent breakthrough by Aubrey de Grey and works by Marijn Heule, Jaan Parts, Geoffrey Exoo, and Dan Ismailescu. TNMCB introduces new open problems and conjectures that will pave the way to the future keeping the book in the center of the field. TNMCB presents mathematics of coloring as an evolution of ideas, with biographies of their creators and historical setting of the world around them, and the world around us. A new thing in the world at the time, TMCB I is now joined by a colossal sibling containing more than twice as much of what only Alexander Soifer can deliver: an interweaving of mathematics with history and biography, well-seasoned with controversy and opinion. -Peter D. Johnson, Jr. Auburn University Like TMCB I, TMCB II is a unique combination of Mathematics, History, and Biography written by a skilled journalist who has been intimately involved with the story for the last half-century. ... The nature of the subject makes much of the material accessible to students, but also of interest to working Mathematicians. ... In addition to learning some wonderful Mathematics, students will learn to appreciate the influences of Paul Erds, Ron Graham, and others. -Geoffrey Exoo Indiana State University The beautiful and unique Mathematical coloring book of Alexander Soifer is another case of "good mathematics", containing a lot of similar examples (it is not by chance that Szemerédi's Theorem story is included as well) and presenting mathematics as both a science and an art... – Peter Mihók Mathematical Reviews, MathSciNet A postman came to the door with a copy of the masterpiece of the century. I thank you and the mathematics community should thank you for years to come. You have set a standard for writing about mathematics and mathematicians that will be hard to match. - Harold W. Kuhn Princeton University I have never encountered a book of this kind. The best description of it I can give is that it is a mystery novel... I found it hard to stop reading before I finished (in two days) the whole text. Soifer engages the reader's attention not only mathematically, but emotionally and esthetically. May you enjoy the book as much as I did! - Branko Grünbaum University of Washington I am in absolute awe of your 2008 book. –Aubrey D.N.J. de Grey LEV Foundation.