An Illustrated Theory of Numbers
Martin H. Weissman, University of California, Santa Cruz

This comprehensive introduction to number theory, with complete proofs, worked examples, and exercises, reflects the most recent scholarship in mathematics and its history and includes historical notes that curate primary sources and secondary scholarship to trace the development of number theory within and outside the Western tradition.

A Mathematical Gallery
Lisl Gaal

This playful mathematical tour, aided by Lisl Gaal’s illustrations of familiar scenes and whimsical triggers for the imagination, is a book to read and revisit, gaining new insights each time.
2017; 64 pages; Softcover; ISBN: 978-1-4704-4159-3; List US$25; AMS members US$20; Order code MBK/111

A Conversational Introduction to Algebraic Number Theory
Arithmetic Beyond \( \mathbb{Z} \)
Paul Pollack, University of Georgia, Athens

Written in a conversational style, this introduction to algebraic number theory lays out the three classical "fundamental theorems": unique factorization of ideals, finiteness of the class number, and Dirichlet’s unit theorem, while also frequently alluding to recent developments within the field.
Student Mathematical Library, Volume 84; 2017; 312 pages; Softcover; ISBN: 978-1-4704-3653-7; List US$52; AMS members US$41.60; Order code STML/84

From Groups to Geometry and Back
Vaughn Climenhaga, University of Houston and Anatole Katok, Pennsylvania State University, University Park

While exploring the connections between group theory and geometry, this book introduces some of the main ideas of transformation groups, algebraic topology, and geometric group theory.
Student Mathematical Library, Volume 81; 2017; 420 pages; Softcover; ISBN: 978-1-4704-3479-3; List US$58; All individuals US$46.40; Order code STML/81

A First Course in Sobolev Spaces
Second Edition
Giovanni Leoni, Carnegie Mellon University, Pittsburgh, PA

The second edition of this book about differentiation of functions focuses more on higher order derivatives and has the potential to be used as two separate textbooks, one for an advanced undergraduate course in functions of one variable and one for a graduate course on Sobolev functions.
Graduate Studies in Mathematics, Volume 181; 2017; 734 pages; Softcover; ISBN: 978-1-4704-2956-0; List US$74; AMS members US$57.20; Order code GSM/181

Chaos on the Interval
Sylvie Ruette, Université Paris-Sud, Orsay, France

The aim of this book is to survey the relations between the various kinds of chaos and related notions for continuous interval maps from a topological point of view.
University Lecture Series, Volume 67; 2017; 215 pages; Softcover; ISBN: 978-1-4704-2956-0; List US$54; AMS members US$43.20; Order code ULECT/67

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