The striking theorems showcased in this book are among the most profound results of twentieth-century analysis. The authors' original approach combines rigorous mathematical proofs with commentary on the underlying ideas to provide a rich insight into these landmarks in mathematics. Results ranging from the proof of Littlewood's conjecture to the Banach–Tarski paradox have been selected for their mathematical beauty as well as their educative value and historical role. Placing each theorem in historical perspective, the authors paint a coherent picture of modern analysis and its development, whilst maintaining mathematical rigour with the provision of complete proofs, alternative proofs, worked examples, and more than 150 exercises and solution hints.

This edition extends the original French edition of 2009 with a new chapter on partitions, including the Hardy–Ramanujan theorem, and a significant expansion of the existing chapter on the corona problem.

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D. Choimet has spent all of his academic career in the French "Classes préparatoires", an intensive two-year undergraduate programme leading to a nationwide competitive examination for enrolment in one of the "Grandes Écoles". He currently teaches at the Lycée du Parc in Lyon, preparing students for the Écoles Normales Supérieures, the École Polytechnique and many Graduate Engineering Schools. Choimet is also a member of the jury of the "Agrégation", a competitive examination leading to professorship positions.

H. Queffélec shared his academic career between the universities of Paris-Sud and, later, Lille, where he is now an emeritus professor. He has written around 40 research papers in harmonic analysis and related probabilistic or topological methods, as well as in number theory (Dirichlet series) and operator theory – more specifically, composition operators and their approximation numbers. He has also written five textbooks and a research book on Banach spaces and probabilistic methods (in collaboration with D. Li). Queffélec has served on the committees for selecting secondary school professors ("Agrégation"), and for hiring university researchers. He was also a member of the CNU (National Council of Universities in France) which deals with the promotion of university members.

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Contents