

1. Record Nr.	UNINA9910826528903321
Autore	Olds C. D (Carl Douglas), <1912->
Titolo	The geometry of numbers // C.D. Olds, Anneli Lax, Giuliana P. Davidoff
Pubbl/distr/stampa	Washington, DC, : Mathematical Association of America, c2000
ISBN	0-88385-955-6
Edizione	[1st ed.]
Descrizione fisica	1 online resource (xvi, 174 pages) : digital, PDF file(s)
Collana	The Anneli Lax new mathematical library ; ; v. 41
Altri autori (Persone)	LaxAnneli DavidoffGiuliana P
Disciplina	512/.75
Soggetti	Geometry of numbers Number theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 02 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Lattice Points and Number Theory -- An Introduction to the Geometry of Numbers -- Gaussian Integers, by Peter D. Lax -- The Closest Packing of Convex Bodies -- Brief Biographies -- Solutions and Hints.
Sommario/riassunto	The Geometry of Numbers presents a self-contained introduction to the geometry of numbers, beginning with easily understood questions about lattice-points on lines, circles, and inside simple polygons in the plane. Little mathematical expertise is required beyond an acquaintance with those objects and with some basic results in geometry. The reader moves gradually to theorems of Minkowski and others who succeeded him. On the way, he or she will see how this powerful approach gives improved approximations to irrational numbers by rationals, simplifies arguments on ways of representing integers as sums of squares, and provides a natural tool for attacking problems involving dense packings of spheres. An appendix by Peter Lax gives a lovely geometric proof of the fact that the Gaussian integers form a Euclidean domain, characterizing the Gaussian primes, and proving that unique factorization holds there. In the process, he provides yet another glimpse into the power of a geometric approach to number theoretic problems.