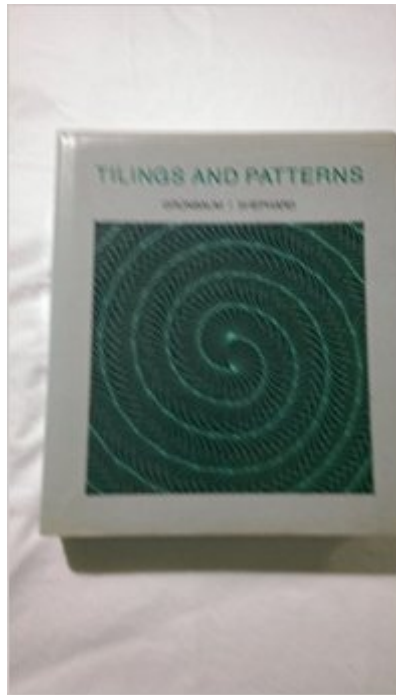


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# Tilings And Patterns



## Synopsis

"Remarkable...It will surely remain the unique reference in this area for many years to come." Roger Penrose , Nature "...an outstanding achievement in mathematical education." Bulletin of The London Mathematical Society "I am enormously impressed...Will be the definitive reference on tiling theory for many decades. Not only does the book bring together older results that have not been brought together before, but it contains a wealth of new material...I know of no comparable book."

Martin Gardner

## Book Information

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## Customer Reviews

In the preface of "Tilings and Patterns: An Introduction," the authors write: "This volume is a brief edition...comprising the first seven chapters of our earlier book Tilings and Patterns... The present paperback version contains all the material from the original text that deals with tilings by regular polygons, the topological and symmetry properties of tilings, the motif-transitive patterns in general, and the special cases where the motif is a circular or elliptical disk or a straight-line segment. It also includes several classifications of very symmetric tilings." There is no indication of what topics were covered in the remaining chapters (8-12) of the original edition.

This book is a magnificent achievement. I just want to gush about this book, but that won't do you any good. It is the very best in its field. Just start there. Grunwald and Shepard have put together the definitive book on ways to tile the two dimensional plane. "Tiling" means covering the 2D universe with interlocking figures, so that no gap remains. Bathroom tiles do that, and patterns of brick on

walls, and all of those wonderful geometries that the Muslim artists raised to their god in place of graven images. That can not be enough for the very strongest of creative minds. The authors show the "Penrose tiles", that cover the world without ever repeating. Penrose used a five-way plan, which barely meets the needs of the world's symmetries. Amman used a four-way plan, like floor tiles, but created tiles that forever create new patterns. The pattern fills the world, but never repeats (except in detail). And then, there are the spiral tiles - perfectly regular, and different at every scale. The artist will savor the richness of the plane. A mathematician will sink deeply into the many symmetries that turn THIS point into all points, or no other, or some, or all of the above. The student will struggle through the problems at the end of each chapter. Thoughtful readers will simply find themselves wandering away from every page, where some seed of thought blossoms in your mind. I can not imagine how this could have gone out of print. I really can't. This book is the only one that covers its topic in every way. Depending on who you are, you must have it. //wiredweird

I have to add another gushing review to this remarkable book. As an artist and designer it's so rare to come across a life changing work rich in text and illustrations. This is one of those books. I came across this gem while reading through PDF's written by teacher Craig Kaplan on his web site. Kaplan's work has been built on the shoulders of these giants, Branko and Grunbaum. I just wish I had the chance to have studied under them during Kaplan and Grunbaum's period on staff at the UW. Look for deals on the used hardcover edition. It's totally worth investigation.

This is deep, dense and thorough; on a topic that was without such a definitive reference book. This is not what I would call a completely accessible book, to persons that are not professional mathematicians, but the crisp and fascinating illustrations are compelling to anyone with an active curiosity. Worthwhile for interested parties; an single-volume encyclopaedia on the subjects of Tesselations, tiling, and intriguing information on conceptual patterns.

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