

# islamic geometric design

## Islamic Geometric Design: The Art of Infinite Patterns and Spiritual Harmony

**islamic geometric design** is more than just decorative art; it represents a profound cultural expression that has fascinated art lovers, historians, and mathematicians alike for centuries. Rooted deeply in Islamic culture, these intricate patterns are a hallmark of mosques, palaces, manuscripts, and textiles, showcasing not only aesthetic beauty but also philosophical symbolism and mathematical precision. Whether you're exploring the star-studded tiles of the Alhambra or the complex arabesques in Persian mosques, Islamic geometric design offers a unique window into a world where art meets spirituality and science.

## The Essence of Islamic Geometric Design

At first glance, the complexity of Islamic geometric design might seem overwhelming, but it all stems from a fundamental principle: the repetition of simple shapes to create complex, harmonious patterns. Circles, squares, triangles, and stars interlock seamlessly, forming mesmerizing mosaics that often appear infinite. This style avoids figurative imagery, focusing instead on abstract patterns to reflect the infinite nature of Allah, emphasizing unity and order within the universe.

## Historical Roots and Cultural Significance

Islamic geometric patterns began to flourish around the 8th century, influenced by earlier artistic traditions from Byzantine and Sassanian cultures. However, Islamic artists developed their own distinct style by integrating spiritual beliefs with mathematical rigor. The designs found in the Dome of the Rock in Jerusalem and the Great Mosque of Kairouan in Tunisia illustrate early examples of this art form.

The absence of human and animal figures in Islamic art is due to religious beliefs discouraging idolatry. This led to the blossoming of geometric design and calligraphy as the primary decorative arts within Islamic culture. The geometric patterns symbolize the infinite, reflecting the idea of the divine's boundlessness and the interconnectedness of all creation.

## Mathematics Behind the Magic

One of the most fascinating aspects of Islamic geometric design is its deep connection to mathematics, particularly geometry and symmetry. Artists use basic shapes like circles and polygons as building blocks, arranging them with precision to create complex tessellations that can extend endlessly without gaps or

overlaps.

## Symmetry and Repetition

Symmetry plays an essential role in these designs. Patterns often exhibit rotational symmetry, where a motif rotates around a central point, or reflection symmetry, where one half mirrors the other. This symmetry reflects harmony and balance, key virtues in Islamic philosophy.

## The Role of Tessellation

Tessellation—the tiling of a plane using one or more geometric shapes with no overlaps or gaps—is fundamental in Islamic geometric design. Artists skillfully combine stars, hexagons, and other polygons to cover surfaces completely. The famous eight-pointed star pattern and the intricate “girih” tiles are classic examples. These tessellations not only create visual rhythm but also convey a sense of order and infinity.

## Common Motifs and Their Symbolism

Islamic geometric design is rich with motifs, each carrying symbolic meaning that adds layers of depth to the artwork.

- **Stars:** Often created with 6, 8, or 12 points, stars symbolize light and guidance, reflecting divine illumination.
- **Circles:** Represent unity and wholeness, often serving as the foundation for more complex patterns.
- **Interlacing Patterns:** These endless loops signify eternity and the infinite nature of God.
- **Polygonal Shapes:** Hexagons, octagons, and decagons are used to create complex networks, symbolizing the structure and order in the universe.

Understanding these motifs helps appreciate not just the visual appeal but also the spiritual messages embedded within Islamic geometric designs.

# Techniques and Materials in Islamic Geometric Design

Creating Islamic geometric patterns requires not only artistic skill but also meticulous craftsmanship. The designs can be applied across various mediums, each demanding specific techniques.

## Tilework and Zellij

One of the most renowned applications is tilework, especially in Moroccan art, where “zellij” (mosaic tilework) involves cutting small, colored tiles into precise shapes that fit together to form geometric patterns. This painstaking process results in vibrant, durable surfaces that adorn walls, fountains, and floors.

## Wood and Stone Carving

Carving geometric patterns into wood and stone is another traditional method. In mosques and palaces, intricately carved wooden screens (mashrabiya) and stone panels showcase the delicate precision of Islamic artisans. The use of light and shadow created by these carvings adds a dynamic element to the designs.

## Calligraphy Integration

Often, Islamic geometric design is harmoniously combined with Arabic calligraphy, where verses from the Quran are woven into the pattern. This fusion elevates the spiritual significance of the artwork and demonstrates the versatility of Islamic art forms.

## Islamic Geometric Design in Contemporary Art and Architecture

While deeply rooted in tradition, Islamic geometric design continues to inspire modern artists and architects around the world. Contemporary creators reinterpret these patterns using new materials and technology, blending ancient aesthetics with modern sensibilities.

## Modern Architectural Applications

Architects incorporate Islamic geometric motifs in modern buildings, not only for decorative purposes but also for functional benefits like shading and ventilation. The mashrabiya-inspired facades serve as sun screens, filtering light and reducing heat gain while producing captivating shadow play.

# Digital Art and Design

With advances in digital tools, artists now explore Islamic geometric patterns in graphic design, animation, and interactive media. Software enables precise pattern generation and experimentation with color and form, expanding the reach and influence of this traditional art form.

## Tips for Appreciating and Creating Islamic Geometric Design

If you're fascinated by Islamic geometric design and want to dive deeper or even try creating your own patterns, here are some helpful tips:

- **Start with Basic Shapes:** Begin by mastering circles and polygons, as these are the building blocks of most patterns.
- **Understand Symmetry:** Learn about rotational and reflection symmetry to create balanced designs.
- **Use Graph Paper or Digital Tools:** Grid paper or design software can help maintain precision.
- **Study Historical Examples:** Analyze famous patterns from Islamic architecture for inspiration and technique.
- **Experiment with Color and Scale:** While traditional designs often use specific color palettes, feel free to explore your own combinations and sizes.

Exploring Islamic geometric design not only enhances your artistic skills but also connects you with a rich cultural heritage that celebrates both beauty and spirituality.

The captivating world of Islamic geometric design invites us to appreciate the harmony between art, mathematics, and faith. Whether encountered in ancient monuments or contemporary creations, these patterns continue to inspire awe and reflection, reminding us of the infinite possibilities that arise when creativity meets devotion.

## Frequently Asked Questions

## What is Islamic geometric design?

Islamic geometric design is a form of artistic decoration characterized by intricate, repetitive patterns based on geometric shapes such as circles, squares, and stars, commonly used in Islamic art and architecture.

## Why are geometric patterns important in Islamic art?

Geometric patterns are important in Islamic art because they reflect the Islamic emphasis on unity, order, and the infinite nature of creation, avoiding the depiction of living beings in religious contexts.

## What shapes are commonly used in Islamic geometric design?

Common shapes in Islamic geometric design include circles, squares, triangles, hexagons, and stars, often arranged in complex tessellations and symmetrical patterns.

## Where can Islamic geometric designs typically be found?

Islamic geometric designs can typically be found in mosques, palaces, manuscripts, textiles, ceramics, and architectural elements such as tiles, screens, and domes throughout the Islamic world.

## How are Islamic geometric patterns created?

Islamic geometric patterns are created using compass and straightedge techniques to construct precise shapes and interlocking motifs, often based on mathematical principles and symmetry to achieve aesthetically harmonious designs.

## Additional Resources

Islamic Geometric Design: An Analytical Exploration of Patterns, Symbolism, and Craftsmanship

**islamic geometric design** represents one of the most distinctive and enduring artistic traditions within Islamic culture, renowned for its intricate patterns, mathematical precision, and symbolic depth. Rooted in centuries-old craftsmanship, these designs transcend mere decoration, reflecting broader philosophical, spiritual, and cultural narratives. This article undertakes a comprehensive examination of islamic geometric design, analyzing its origins, characteristic features, cultural significance, and contemporary applications. By investigating the nuanced interplay between art, mathematics, and spirituality, this review offers a professional insight into why these patterns continue to captivate audiences and scholars alike.

## Historical Context and Origins of Islamic Geometric Design

Islamic geometric design emerged during the early centuries of Islam, roughly from the 7th century onward, coinciding with the rapid expansion of the Islamic empire. Unlike many other artistic traditions that rely heavily on figurative representation, Islamic geometric design developed under religious and cultural frameworks that often discouraged the depiction of living beings in religious contexts. This restriction propelled artisans and architects to explore alternative forms of aesthetic expression, leading to the flourishing of abstract, symmetrical, and mathematically sophisticated patterns.

The designs draw inspiration from earlier civilizations, including Byzantine, Persian, and Greco-Roman art, yet they evolved into a uniquely Islamic visual language. Geometric motifs found in mosques, madrasas, palaces, and manuscripts across regions from North Africa and the Middle East to Central Asia and parts of Europe illustrate the widespread adoption and adaptation of this artistic form.

## **Core Features and Characteristics of Islamic Geometric Design**

At its essence, Islamic geometric design is characterized by the repetitive use of basic shapes such as circles, squares, stars, and polygons, arranged in complex, interlocking patterns. These patterns are often constructed using a compass and straightedge, reflecting a deep understanding of geometry and symmetry.

### **Symmetry and Repetition as Structural Foundations**

Symmetry is a defining feature, manifesting through rotational, reflective, and translational forms. The repetition of motifs creates an infinite visual rhythm, symbolizing the concept of infinity and the eternal nature of the divine in Islamic thought. This infinite tessellation offers a meditative effect, inviting contemplation and spiritual reflection.

### **Mathematical Precision and Complexity**

Islamic artisans employed advanced mathematical principles, including tessellation theory and polygonal geometry, to design patterns that are both visually harmonious and structurally stable. Some of the most sophisticated patterns incorporate star polygons with 8, 10, 12, or even 16 points, combined with interlacing lines that weave in and out to form complex grids. This mathematical rigor not only highlights the artisans' technical skill but also reflects the broader Islamic appreciation for knowledge and scientific inquiry.

### **Use of Color and Materials**

Although geometric patterns can be found in monochrome stonework or stucco reliefs, color plays a

significant role in many Islamic geometric designs, especially in tilework and ceramics. Vibrant blues, turquoises, reds, and golds are commonly used to accentuate the patterns and enhance their visual impact. Materials range from glazed tiles and carved wood to metalwork and textiles, each medium contributing unique tactile and visual qualities to the design.

## **Cultural and Symbolic Significance**

Beyond aesthetics, Islamic geometric design functions as a visual language imbued with symbolic meaning. The use of geometry is often interpreted as a reflection of the divine order and unity underlying the universe. By emphasizing abstraction and pattern over figurative detail, these designs encourage viewers to contemplate the infinite nature of God, transcending the physical world.

## **Spiritual Interpretations**

Many scholars argue that the infinite repetition in these designs symbolizes the endlessness of God's creation, while the harmonious balance of shapes illustrates the unity and orderliness of the cosmos. This spiritual dimension transforms architectural spaces into environments conducive to prayer and reflection, reinforcing the sacred atmosphere of mosques and religious institutions.

## **Cross-Cultural Influences and Adaptations**

Islamic geometric design has not only influenced Islamic art but has also left a significant mark on global artistic traditions. For instance, the Moorish architecture in Spain, exemplified by the Alhambra Palace, showcases exquisite geometric tilework that merges Islamic motifs with local styles. In modern times, these patterns have inspired contemporary artists and designers worldwide, demonstrating their timeless appeal and versatility.

## **Applications and Contemporary Relevance**

Today, Islamic geometric design continues to thrive both in traditional crafts and modern design disciplines. Architects, graphic designers, and fashion creators incorporate these motifs to evoke cultural heritage, aesthetic sophistication, and symbolic depth.

# Architectural and Interior Design

Modern architecture often integrates islamic geometric patterns to blend tradition with innovation. From decorative facades to intricate screens (mashrabiya), these designs provide functional benefits such as shading and ventilation while offering a distinctive visual identity. Interior designers use patterned tiles and wallpapers to create spaces that resonate with cultural authenticity and artistic elegance.

## Digital and Graphic Design

With the rise of digital tools, the recreation and adaptation of islamic geometric design have become more accessible and versatile. Designers use vector graphics and CAD programs to generate precise patterns for branding, packaging, and digital media, expanding the reach of these motifs beyond physical objects.

## Challenges and Opportunities

While the proliferation of islamic geometric design in commercial contexts has increased visibility, it also raises questions about cultural appropriation and authenticity. Balancing respect for traditional craftsmanship with innovation remains a critical challenge for artists and designers operating in this space.

- **Pros:** Timeless aesthetic appeal, symbolic richness, versatility across media, cultural significance.
- **Cons:** Potential for cultural misrepresentation, complexity requiring specialized knowledge, risk of commodification.

## Comparative Overview: Islamic Geometric Design vs. Other Decorative Traditions

Unlike Western ornamental traditions that frequently emphasize figurative forms or floral motifs (arabesques), islamic geometric design prioritizes abstract, mathematical precision. While arabesque patterns coexist with geometric designs in Islamic art, the geometric forms stand out for their structural complexity and conceptual symbolism.

In comparison to East Asian geometric patterns, which often emphasize natural forms and asymmetry, islamic designs favor strict symmetry and tessellation, underscoring different cultural philosophies toward



order and beauty.

## Preservation and Education Efforts

Institutions and scholars worldwide are actively engaged in preserving the knowledge and techniques behind Islamic geometric design. Workshops, museum exhibits, and academic programs aim to transmit traditional skills while fostering innovation. Digital archives and interactive platforms allow broader audiences to explore the mathematical and artistic facets of these patterns, ensuring their survival and relevance for future generations.

The meticulous documentation and revival initiatives underscore the importance of recognizing Islamic geometric design not merely as decorative art but as a profound cultural and intellectual heritage.

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Islamic geometric design remains a powerful testament to the fusion of art, science, and spirituality within Islamic culture. Its enduring appeal lies in the harmonious balance between complexity and clarity, tradition and innovation. As contemporary artists and designers continue to engage with these patterns, they reaffirm the timeless resonance of Islamic geometric design as both a historical legacy and a dynamic source of creative inspiration.

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**islamic geometric design: Islamic Geometric Patterns** Jay Bonner, 2017-08-17 The main focus of this unique book is an in-depth examination of the polygonal technique; the primary method used by master artists of the past in creating Islamic geometric patterns. The author details the design methodology responsible for this all-but-lost art form and presents evidence for its use from the historical record, both of which are vital contributions to the understanding of this ornamental tradition. Additionally, the author examines the historical development of Islamic geometric

patterns, the significance of geometric design within the broader context of Islamic ornament as a whole, the formative role that geometry plays throughout the Islamic ornamental arts (including calligraphy, the floral idiom, dome decoration, geometric patterns, and more), and the underexamined question of pattern classification. Featuring over 600 beautiful color images, *Islamic Geometric Patterns: Their Historical Development and Traditional Methods of Construction* is a valuable addition to the literature of Islamic art, architecture and geometric patterns. This book is ideal for students and scholars of geometry, the history of mathematics, and the history of Islamic art, architecture, and culture. In addition, artists, designers, craftspeople, and architects will all find this book an exceptionally informative and useful asset in their fields. Jay Bonner is an architectural ornamentalist and unaffiliated scholar of Islamic geometric design. He received his MDes from the Royal College of Art in London (1983). He has contributed ornamental designs for many international architectural projects, including the expansion of both the al-Masjid al-Haram (Grand Mosque) in Mecca, and the al-Masjid an Nawabi (Prophet's Mosque) in Medina, as well the Tomb of Sheikh Hujwiri in Lahore, and the Ismaili Centre in London – to name but a few. He is committed to the revitalization of Islamic geometric design through the teaching of traditional methodological practices. To this end, in addition to publishing, Jay Bonner has lectured and taught design seminars at many universities and conferences in North America, Europe, North Africa and Asia.

**islamic geometric design: Islamic Geometric Design** Eric Broug, 2013 Combines wide-ranging research with the author's artistic skills to reveal the techniques used to create the patterns adorning buildings in the Islamic world

**islamic geometric design: Best Practice in Islamic Geometric Design** Eric Broug, 2019-01-30 What can we learn from 1,400 years of design excellence? What rules and conventions have guaranteed consistent quality for centuries across the Islamic world? Eric Broug looks at a wide range of visual evidence and codifies these rules: he reveals the design practices of traditional builders: how to scale a composition, how to create an engaging composition, how to innovate etc. This book shows how it was done, it shows how to apply best practice now, and it shows the most common problems in contemporary Islamic geometric design, and how to avoid them.

**islamic geometric design: *Islamic Design: A Mathematical Approach*** Brian Wichmann, David Wade, 2018-05-02 This book deals with the genre of geometric design in the Islamic sphere. Part I presents an overview of Islamic history, its extraordinary spread from the Atlantic to the borders of China in its first century, its adoption of the cultural outlook of the older civilisations that it conquered (in the Middle East, Persia and Central Asia), including their philosophical and scientific achievements - from which it came to express its own unique and highly distinctive artistic and architectural forms. Part II represents the mathematical analysis of Islamic geometric designs. The presentation offers unlimited precision that allows software to reconstruct the design vision of the original artist. This book will be of interest to Islamic academics, mathematicians as well as to artists & art students.

**islamic geometric design: Islamic Art and Geometric Design** Metropolitan Museum of Art (New York, N.Y.), Metropolitan Museum of Art (New York, N.Y.). Education Department, 2004 Examine the principles of geometric design that are the basis for the beautiful and intricate patterns in the art of the Islamic world. Includes a brief overview of Islamic art, an introduction to related works in the Museum, and a series of pattern-making activities (including reproducible grids) for use in the classroom. Teachers can readily adapt these materials to create exciting lessons in art, culture, math, and geometry--Metropolitan Museum of Art website.

**islamic geometric design: Symmetries Of Islamic Geometrical Patterns** Syed Jan Abas, Amer Shaker Salman, 1994-12-30 This book on symmetric geometric patterns of Islamic art has educational, aesthetic, cultural and practical purposes. Its central purpose is to bring to the attention of the world in general, and the people of Islamic culture in particular, the potential of the art for providing a unified experience of science and art in the context of mathematical education. Unlike other books on Islamic patterns, this book emphasizes the educational potential in the context of modern physics, chemistry, crystallography and computer graphics. The symmetric

structure of about 250 Islamic patterns is presented. Simple, but detailed original, unpublished algorithms suitable for modern computer graphics are given for the construction of two-dimensional periodic patterns. Endorsed by prominent experts from the fields of Physics to Systems and Cybernetics, this book promises to be a must-read, not only for specialised mathematicians, but also for students, graphic artists, illustrators, computer hobbyists, as well as the lay reader keen to explore Islamic art.

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**islamic geometric design: *Islamic Design Workbook*** Eric Broug, 2016-11-29 A fresh take on adult coloring books, featuring the intricate patterns of Islamic design Building on the concept of a traditional coloring book, the Islamic Design Workbook opens up the world of intricate Islamic patterns, allowing designers and doodlers alike to learn about these works of art as they produce their own. With forty-eight Islamic geometric compositions from around the world to choose from, artists at all skill levels will relish the myriad opportunities to replicate these intricate patterns, or create their own. The workbook's clever design invites the pattern-maker to consider a composition in the book, take a corresponding loose leaf from the back of the book, and figure out which sections of lines to trace to make the composition. Readers will have the unique satisfaction of making patterns appear where previously none were visible. Compositions—including a mix of more familiar geometric compositions and those that have scarcely been documented—are categorized by region and have various levels of complexity, making it possible for beginners to get started and artists or designers to develop their skills. Compositions are sourced from Samarkand, Delhi, Fes, Isfahan, and Cairo, among many others.

**islamic geometric design: *Islamic Design*** Daud Sutton, 2018-04-01 Across the Islamic world, illuminating Korans from Morocco to Malaysia, and adorning mosques, mausoleums and palaces, are hidden some of the most exquisite geometrical devices ever conceived by man. In this excellent little book, geometer Daud Sutton unravels the mystery of Islamic patterns, explaining where they come from, how to draw them, and hinting at the Divine messages they encode. WOODEN BOOKS are small but packed with information. e;Fascinatinge; FINANCIAL TIMES. e;Beautifule; LONDON REVIEW OF BOOKS. e;Rich and Artfule; THE LANCET. e;Genuinely mind-expandinge; FORTEAN TIMES. e;Excellente; NEW SCIENTIST. e;Stunninge; NEW YORK TIMES. Small books, big ideas.

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measurements. They can be made by hand or on a computer. All you need to be able to do is draw circles and lines. The tools you need if you are drawing by hand are a pair of compasses, a ruler and pencils. Each pattern is constructed in a step-by-step process.

**islamic geometric design: Islamic Art and Geometric Design**, 2004-02 This resource offers an introduction to the principles of Islamic art and the geometric designs upon which it is based. Presenting beautiful Islamic works from the collection of The Metropolitan Museum of Art along with a series of pattern-making activities involving straightedge and compass, these materials are designed for use in the classroom and may be readily adapted by teachers to create exciting lessons in art, culture, mathematics, and geometry. The boxed set includes a booklet with background information on Islamic art, eleven pattern-making activities (including reproducible geometric grids), twenty slides of Islamic works in the Metropolitan's collection, bibliographies, resources, and a glossary.

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**islamic geometric design: Secrets of Islamic Patterns** Aline Marion, Joachim Tantau, William Charles Riding, 2014-10 ABOUT THE BOOK A one of a kind book, *Secrets of Islamic Patterns* unlocks the mysteries of Islamic geometric patterns that adorn some of the most famous architecture and decorative arts in the Islamic world. Designed to engage both a younger audience and the adult beginner, the book provides a step-by-step process for creating stunning Islamic geometric patterns. Contains drawing exercises with easy to follow instructions, making pattern construction extremely accessible, and turning what at first appears difficult into a fun and educational activity. The accompanying puzzle is a key element to this accessibility and unique in the genre, introducing a playful and inter-active tool for all readers. *Mathematics of Ornament* makes the abstract and complex art form of Islamic geometric patterns both easy to do, but also fun and exciting. The book is extremely educational, teaching readers the basic principles of geometry, and enabling them to learn how mathematics and design are connected. ABOUT THE ACTIVITY PUZZLE The puzzle consists of four separate shapes with a geometric design printed on them, shapes that when placed together construct a larger pattern. Constructing the pattern enables the reader to learn how to build elaborate patterns from simple elements. The puzzle also encourages experimentation! The pattern combination of tiles varies with each use, producing unique and different patterns, and furthering creativity. ABOUT THE BOX SET How-to book and puzzle pieces housed in a sturdy box-set with easy to follow instructions for all ages. Durable and expertly finished puzzle pieces housed in a beautiful box. Readers have the opportunity to turn their patterns into a work of art to display at home. This will be the first in a series of puzzles looking at other geometric designs not only from the Islamic tradition but other World traditions.

**islamic geometric design: Practical Geometric Pattern Design** Mirosław Majewski, 2020-02-10 This book is third in a series of textbooks on geometric pattern design used at the Istanbul Design Center. It is intended as a tutorial book for 30 hours basic course on geometric patterns in Islamic arts. The content of this book covers some major areas of geometric pattern design. In chapter 2 we discuss how one can approach a complex geometric pattern. It is the most important part in understanding the general structure of any pattern. In chapter 3 we discuss and experiment with patterns built on triangular grids and square grids. This is the simplest group of geometric patterns and usually neglected. In chapters 4 and 5 we deal with 6 and 12 fold patterns. These are the patterns with local symmetries  $D_6$  and  $D_{12}$ . Usually, we refer to them as hexagonal and dodecagonal patterns. In chapters 6 and 7 we discuss octagonal patterns. Here we also briefly discuss differences between eastern (Central Asia and India) and western octagonal patterns (Morocco and Spain). Finally, in chapter 8 we discuss briefly decagonal patterns, i.e. patterns with  $D_{10}$  local symmetries. More about decagonal patterns readers can find in two other books published by Istanbul Design Publishing in 2019.

**islamic geometric design: Islamic Art and Architecture** Issam El-Said, Tarek El-Bouri, 1993 Issam El-Said pinpoints the rules of composition that form the basis of the geometric concepts of Islamic art. He then shows how intricate patterns are based on these basic principles. Fully

illustrated in three colors to show the development of the patterns, this book offers an insight into how craftsmen and designers in the Muslim world achieved monumental feats of artistic expression using the simplest of tools. Chapter I presents graphical analyses of numerous complex patterns, to reveal the numerical rationale behind them. In Chapter II, the author analyses the system of measure used in ancient Egypt, before the use of numbers for calculating measurements. He shows how measuring cords and a geometric method based on a grid-pattern originating from the circle were employed by master craftsmen in the design of Islamic art and architecture. The book offers an insight into how craftsmen and designers in the Muslim world have achieved monumental feats of artistic expression with harmony and precision, using the simplest of tools such as a ruler, a string and templates, together with a system of measure that is both simple and sophisticated.

**islamic geometric design:** Arabic Geometrical Pattern and Design J. Bourgoïn, 2012-08-13 Nearly 200 examples exhibit the wide range of Islamic art, including hexagon and octagon designs, combinations of stars and rosettes, and many variations on other geometric patterns. Twenty-eight examples from traditional sources in Cairo and Damascus include sanctuary doors, openwork windows, and inlaid marble pavements and ceilings.

**islamic geometric design:** Islamic Geometric Coloring Book Kharmaz Zwak, 2020-08-27 This Book contains 30 geometric patterns of some of the most famous and beautiful Islamic art and architecture. This relaxing coloring book is appropriate for all ages and levels - Large 8.5x11 inches - pages: 62 .

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