

## Quilt Design: The Right Triangle

Welcome to the Quilt Design Curriculum! This curriculum is designed to teach students about quilts and how fun they are to design. It is also a way to study right triangles and all of the shapes one can make with them, and exploring colors and how they complement one another.

This curriculum was created as a teaching kit in 1983. The physical kit has been retired and turned into this online resource so that you can make your own version of the kit. The kit contents include the guide, pattern cards, books and fabric triangles. To create your own version, print this document and gather the following low cost supplies. Fabric shops have a wide variety of quilting materials, in many cases already prepared in small squares that are easily cut into triangles. You will need:

- Right triangles of fabric in at least six different colors. The number of triangles in each color depends on the number of students you have, but we recommend at least ten. Each triangle should be two inches long on the short sides and almost three inches long on the long side. Use the quilting patterns as your guide.
- One piece of felt, roughly 3 feet by 4 feet. This will be your large fabric quilt design form.

Books are also a helpful resource for exposing children to quilts and different patterns and approaches to the art form. Both *The Quilts of Gee's Bend* and *Gee's Bend: The Women and Their Quilts* are informative books published by the Museum of Fine Arts in Boston and available through the Boston Public Library.

This curriculum provides a variety of quilt patterns that one can make using right triangles. You will find quilt patterns at the end of this kit guide.

The user can

- Replicate many quilt designs using the fabric triangles and quilt pattern sheets
- Experiment with color placement as it relates to the design of the quilt patterns
- Develop original quilt designs based on the right triangle.

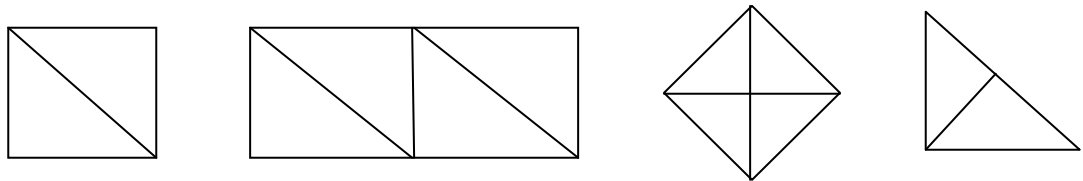
The emphasis of this kit is design; it is not a kit on how to quilt or how to make a quilt.

The following pages explain how to use the guide. A brief history and some information on quilts are provided in the section titled “Resources for Further Study.”

### Related Uses

When we watched children using the kit, we noticed several related, unintentional functions the kit could serve. The kit might be useful when learning the following special skills. Children who need help improving their eye-hand can practice as they place fabric triangles on the pattern sheet. The placement of the right triangle in the exact position relies on the participant’s sense of spatial relations. Another skill to be learned is matching; students can practice matching by placing triangles of the same fabric on the places with the same graphic code.

Some early understanding of geometry and geometric shapes can also be enhanced by using the kit activities. The right triangle is a very versatile shape in that it can be used to form many other geometric shapes such as a square, rectangle, diamond, and isosceles triangle.



The quilt patterns in this kit show many examples of this, and the fabric triangles can be used to make the lesson more concrete.

### How to Use This Kit

Designing and making a beautiful quilt is an artistic process. When we admire an antique one in a museum or a contemporary one in a handcraft shop, we are impressed not only by the needlecraft but also by the in which the maker has combined the shapes and the colors. The relationship of one hue to another, of printed to solid fabric, of large prints to small ones, and how various combinations of these affect the basic quilt design pattern are all integrated into the quilt that we see. With this kit we can discover some of these relationships for ourselves.

Using the quilt pattern sheets:

Choose a quilt pattern sheet. Then take a handful of each of the different fabric triangles that you want to use. The quilt pattern sheets are graphically coded to show you where to place each of the fabrics you have chosen: the same fabric should be placed on all the dotted spaces, and a different fabric would be placed on the lined ones).

Experiment with using all solids, solids and prints, all prints. See what happens to the quilt pattern when you use dark or strong colors in certain parts of the pattern. Then try the pattern using lighter colors in those same places. Try various combinations of fabrics and other fabrics in the kit. Try some other pattern sheets in the same way. After you have done this you might want to design your own pattern on the blank quilt form.

Things to look for or think about:

- What combinations are most pleasing to you?
- What happens to certain colors when they are next to other colors?
- How do different combinations of color change the focus of the quilt pattern?
- How do the triangles in the pattern form other geometric shapes such as squares, rectangles, etc.?
- What relationships do you notice among the various quilt patterns--how is one similar to yet different from another?

Using the Large Fabric Quilt Design Form

Once you have made the large fabric design form, it will hold nine squares of the pattern size. With the pattern sheet as a guide, you can lay out any fabric triangle patterns on this large form. They should adhere to the felt surface.

Working on the larger piece allows students to see how a unit of the quilt pattern will connect with the next one on all sides. You can also alternate the pattern units with solid color units between them. Additional suggestions for using the form are on its corner. This larger piece can be spread out on a table or floor and used by a small group working together to build upon a pattern or design something new.

## Resources for Further Study

### About Kinds of Quilts

A quilt is a fabric sandwich of three layers: a top (usually the decorative part), a back (often plain fabric or muslin), and a layer of filler material for warmth and bulk. “Quilting” itself is the act of stitching through the three layers to hold them together. This is usually done in a predesigned pattern to complement the fabric pattern of the top of the quilt. Sometimes, instead of being stitched, the layers of a quilt are tied together with short pieces of thread or yarn at patterned intervals over the surface of the quilt.

There are three main types of quilts: the plain, the appliqué, and the pieced.

The plain quilt is usually a single piece of cloth of one color, or possibly a printed fabric. Its pattern is derived from the elaborately quilted design that joins the three layers. This type of quilt came from Europe, especially from 17<sup>th</sup> and 18<sup>th</sup> century England, and could have been silk or chintz or linsey-woolsey (a combination of linen and wool) as well as other fabrics. The most effective type of plain quilt for showing off intricate stitchery is quilting done on white linen or other white fabric. This was in great favor in the United States around 1800. Outstanding examples have survived today, some in museums and others with private collectors.

The other two types of quilts, the appliqué and the pieced quilt, are two different kinds of patchwork quilt.

An appliqué quilt is one in which design forms of contrasting color are applied or stitched down on top of whole cloth. “Appliqué” is a decorative method for various textile items such as banners, clothing, etc. In America the appliqué quilt was most popular in the first half of the 1800s, reaching its peak in the decades just before the civil war. It was especially favored in the South and, because it required more new cloth than a pieced quilt, it was probably a style made more for well-to-do women. The appliqué quilt was more likely a quilt for “best” or for show rather than for regular, everyday use.

The pieced quilt is the one with which we are probably most familiar. Here the top is composed of pieces of material joined together edge to edge like a mosaic to form a pattern or design. This style, which also came from Europe, has had the most vigorous development and variation in this country, probably because it made use of odd bits of fabric and of material from worn-out clothing and other items, so more people had the supplies to make

pieced quilts. The patterns on these quilts are usually based on geometric shapes such as the triangle, rectangle, square, diamond, hexagon, and variations of them as well as other shapes. The variety of configurations from these shapes has given us all manner of pieced patterns and has been a testament to the creativity of quilt makers in every generation.

### **The Development of Quilts in America**

Quilting and the creation of fabric pieces are both very old crafts. They date back to the Ancient Egyptians, who pieced together fabric; and the Chinese, who quilted material for extra warmth. During the Crusades, European soldiers in North Africa used quilted clothing as a protective layer under armor and chain mail, and they brought this concept back to Europe and the British Isles. The need for warm clothing and warm bedcovers, especially in northern Europe, helped turn this import into a craft which became part of European domestic life. With the settlement of the New World the tradition of “quilts” travelled across the Atlantic Ocean and acquired new vigor and a new life.

Both European tradition and economic necessity aided in the development of quilting in the United States. Imported fabrics were expensive and in the years leading up to the Revolution it was illegal to manufacture fabric in the colonies. Even when colonists began making their own cloth, it was a long and tedious process. It involved raising sheep for wool or growing cotton or flax for linen, sheering or harvesting, carding or cleaning raw materials, then the spinning, dyeing, and weaving of cloth. The women who settled this country reused fabric to avoid this process, salvaging scraps from worn articles to be incorporated into new ones. Clothing had to be made from whole cloth so it could be durable, so scraps and patches of fabric were used to make bedding.

The 19th century was perhaps the heyday of the American pieced quilt. Technological innovations made cloth available in more colors and patterns. Patchwork patterns moved west with settlers and became more complicated and experimental.

Each quilt pattern has a name. Many were named after objects they resembled, like Windmill, Sugar Loaf, and Flower Basket. Other names and designs came from nature, like Wild Goose Chase and Bear Tracks. Quilts could also be named for historical figures and historical or biblical events, like Jacob’s Ladder, Martha Washington’s Star, and Sherman’s March. Often the name of the same pattern varies from one place to another. This happens for several reasons. Sometimes names are deliberately changed to avoid confusion with another pattern, or accidentally forgotten. Sometimes names have changed because change reflects different associations according to region. An example of this is a pattern that

began as Wood's Lily in New England, was known as Mountain Lily and North Carolina Lily in the South, as Prairie Lily in the plains, and as the Mariposa Lily in California.

Quilting also functioned as a social institution in 19<sup>th</sup> century America. Like other work party tasks, like barn raising and cooperative harvesting, the process of "quilting" was one that could be done best by many hands at once, and so offered an excuse for a neighborly get-together. After a woman had finished piecing together the top layer of a quilt, she might organize a "quilting bee." For this activity, the three layers of the quilt were laid top of each other and stretched on the large quilting frame. Neighbor women would come with their children and bring food to share. The quilting pattern was chosen and outlined on the top layer, and women would sit all around the frame, sewing tiny stitches and visiting with each other. The children would play together during the day, and in the evening the men would come home from work and everyone would have the evening meal together followed by dancing and socializing.

By the end of the 19<sup>th</sup> century, new store-bought goods became more readily available because of the industrial revolution and the popularity of trains for shipping. The craft of quilting began to fade away from everyday domestic life in the more urban areas of the United States. But in the rural or mountainous areas quilting developed and thrived.

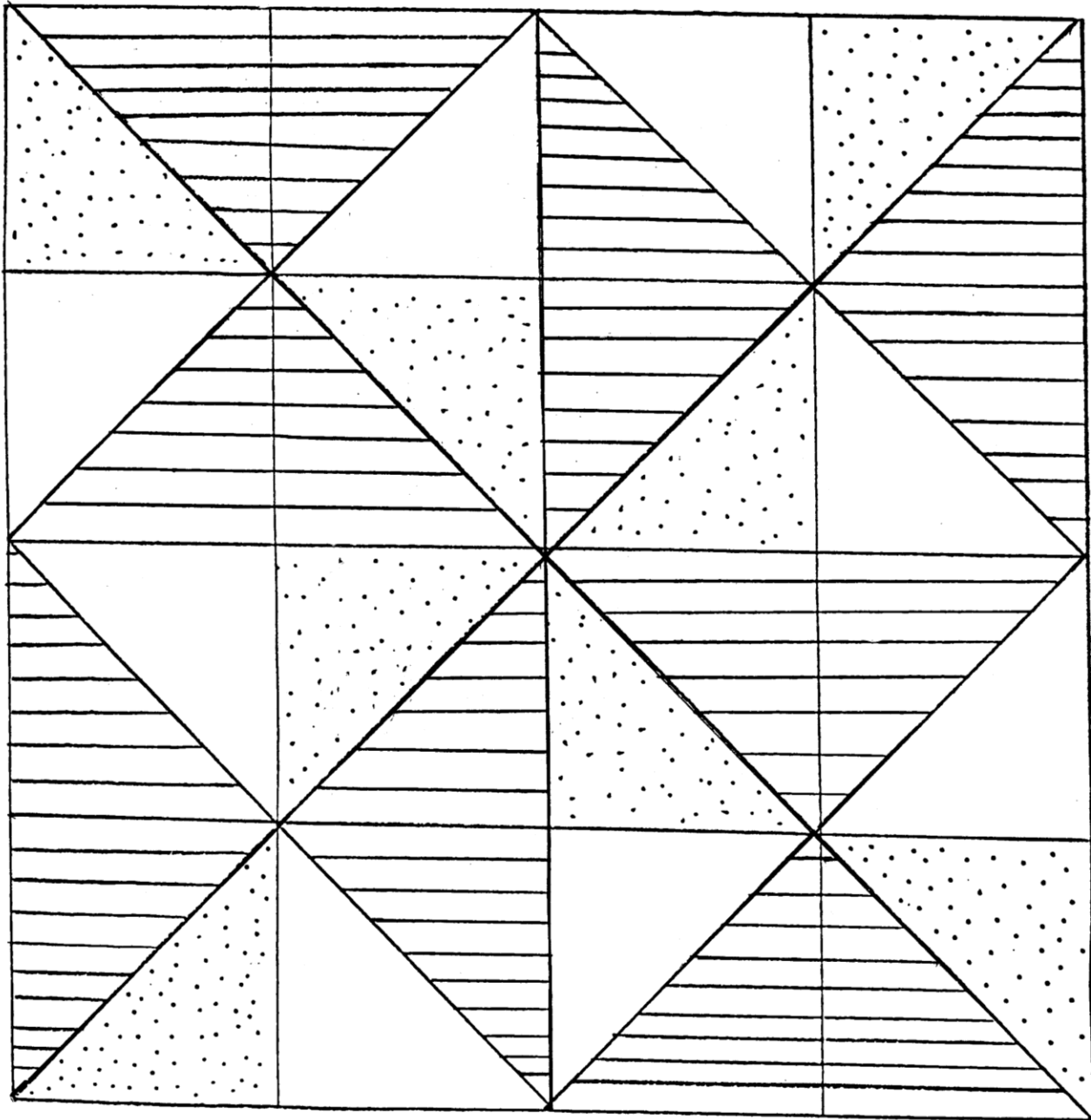
In the mid 20<sup>th</sup> century a renewed interest in traditional handicrafts led to a renewed interest in quilting and quilt patterns. People also developed a more contemporary version of many of the old designs and forms. Quilts began being viewed as examples of American folk art and fine old quilts were eagerly sought by museums and private collectors. Traditional quilts are still in demand today. This recognition has saved many beautiful quilt patterns from extinction.

#### Some Books about Quilt Patterns and Quilts

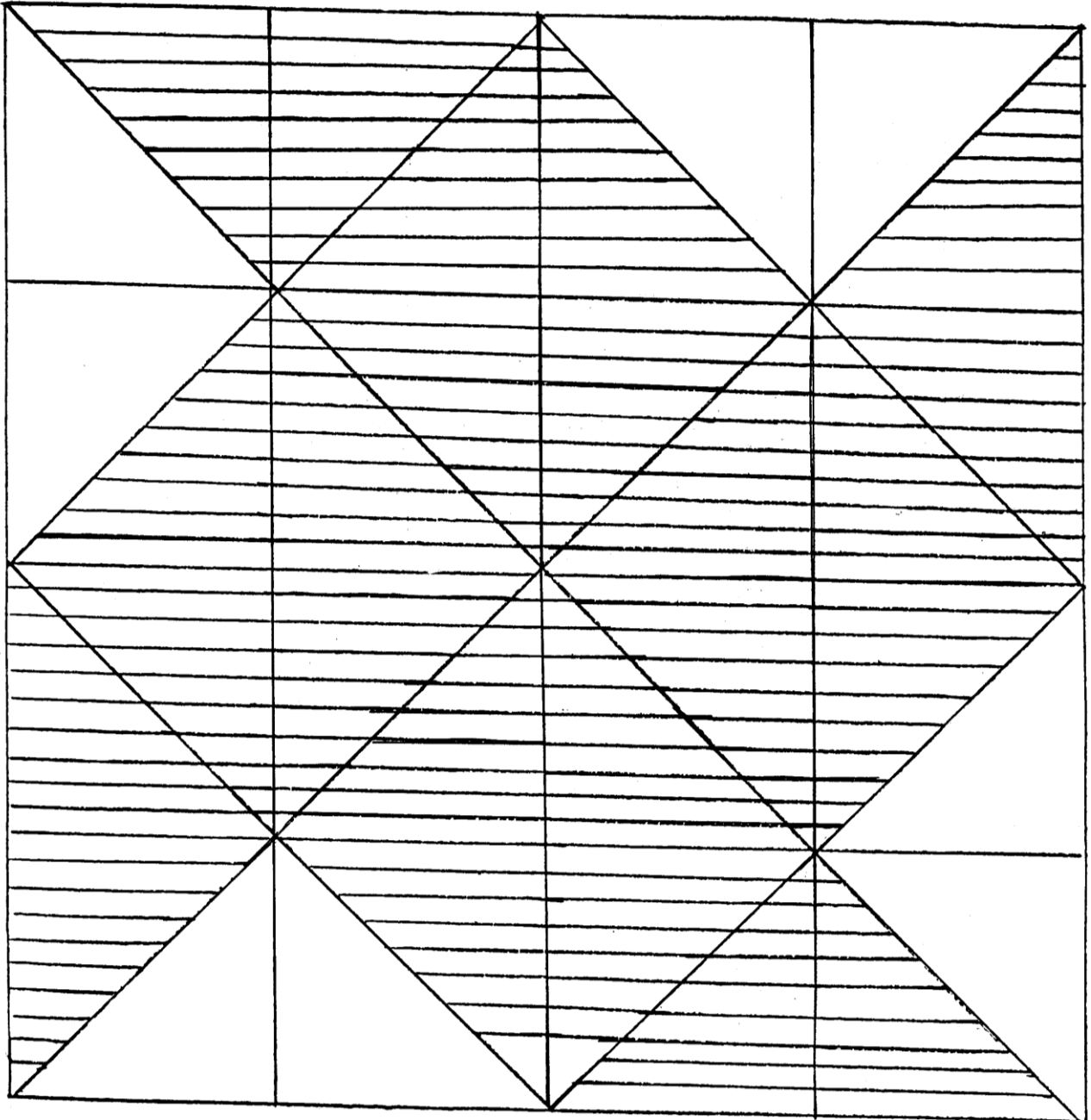
- Holstein, Jonathan. *The Pieced Quilt: An American Design Tradition*. Boston, MA: New York Graphic Society, 1973.
- Bacon, Lenice Ingram. *American Patchwork Quilts*. New York: William Morrow and Company, 1973.
- Hechtlinger, Adelaide. *American Quilts: Quilting and Patchwork*. New York: Galahad Books, 1974
- Hinson, Dolores A. *Quilting Manual*. New York: Dover Publications, 1980.
- Ickis, Marguerite. *The Standard Book of Quilt Making and Collecting*. New York: Dover Publications, 1949
- McCall's Needlework and Craft Editors, *The McCall's Book of Quilts*. New York: Simon and Schuster, 1975
- McKim, Ruby. *101 Patchwork Patterns*. New York: Dover Publications

These are only a few of the many books available in bookstores and libraries on this subject. There are also a number of books with oral histories and stories about quilts and the quilt makers themselves. In addition there are periodicals and magazines focused on quilts and quilting.

# WINDMILL



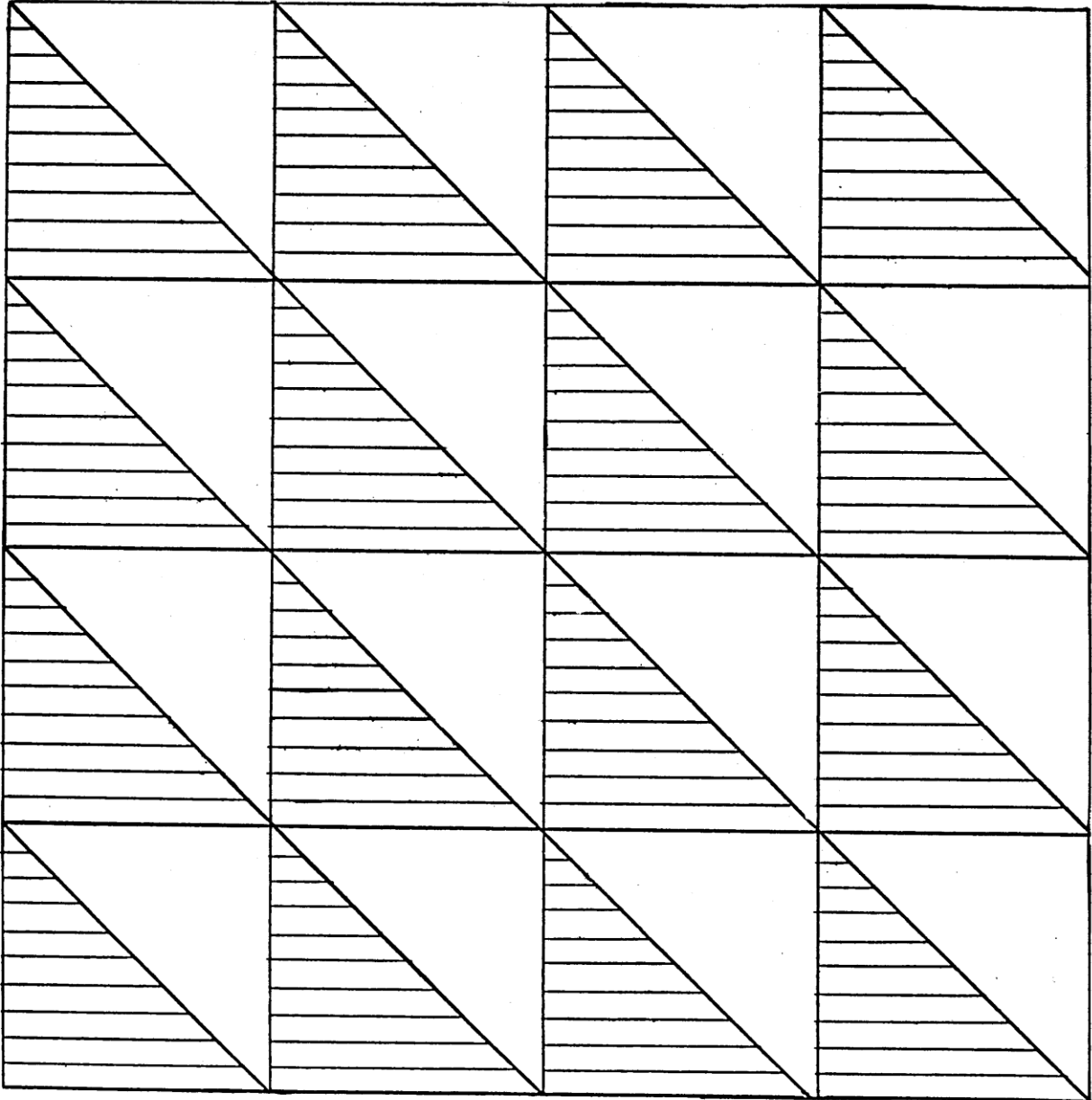
# WHIRLWIND



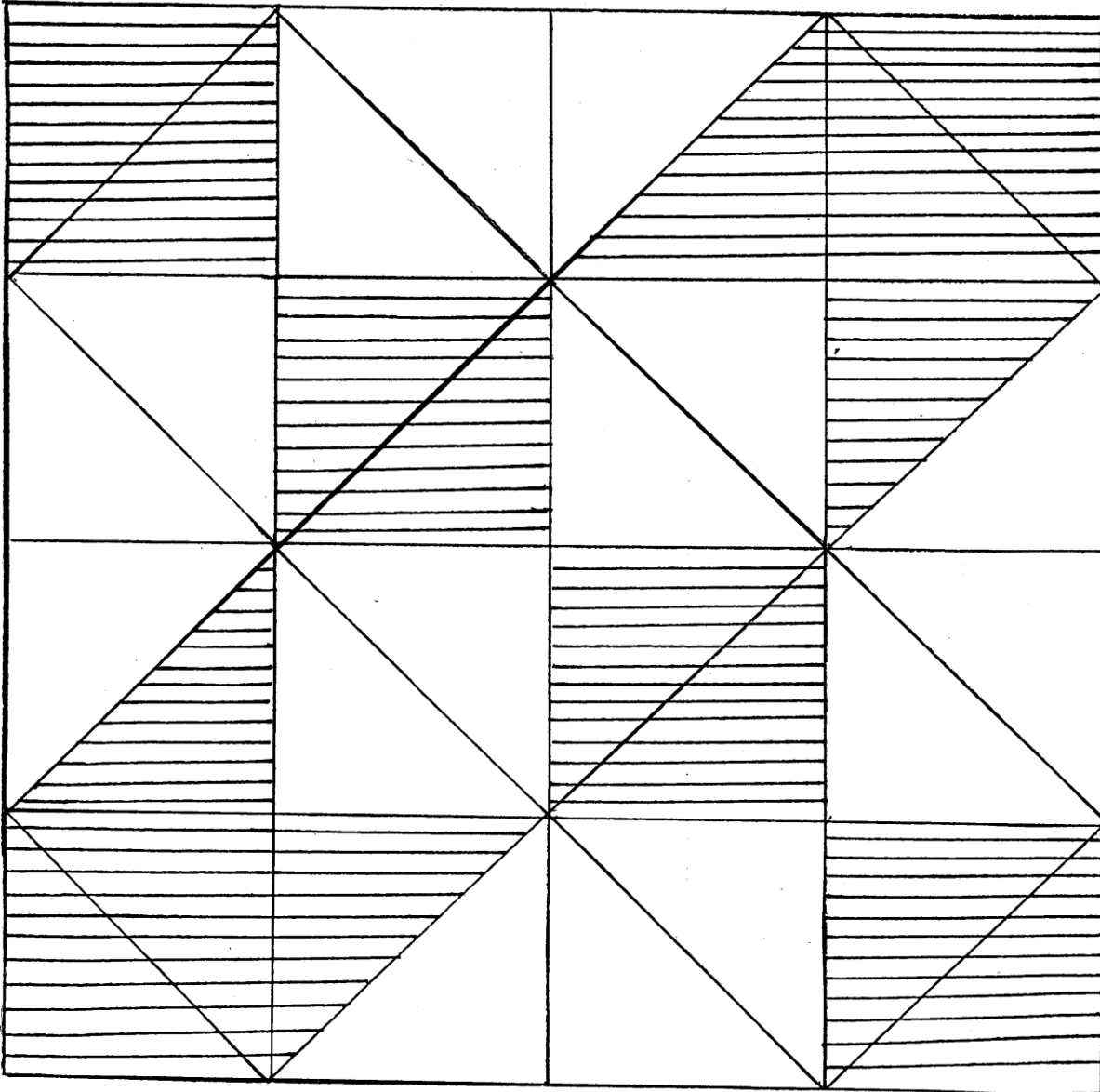
# STORM AT SEA

If you make this quilt square from fabric, remember to cut an extra 3/8" margin on each triangle for seam allowance.

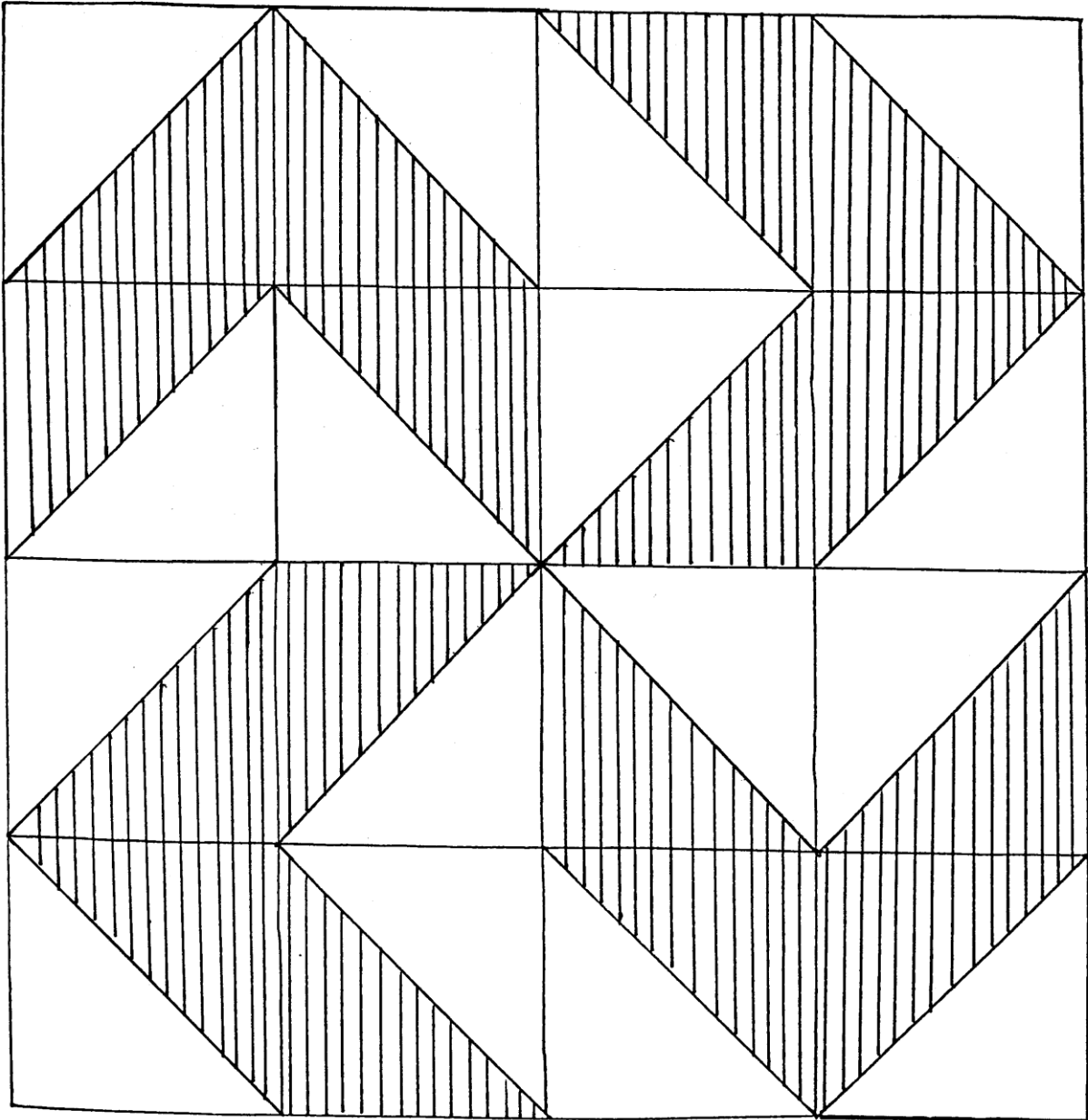
32 triangles  
16 light  
16 dark



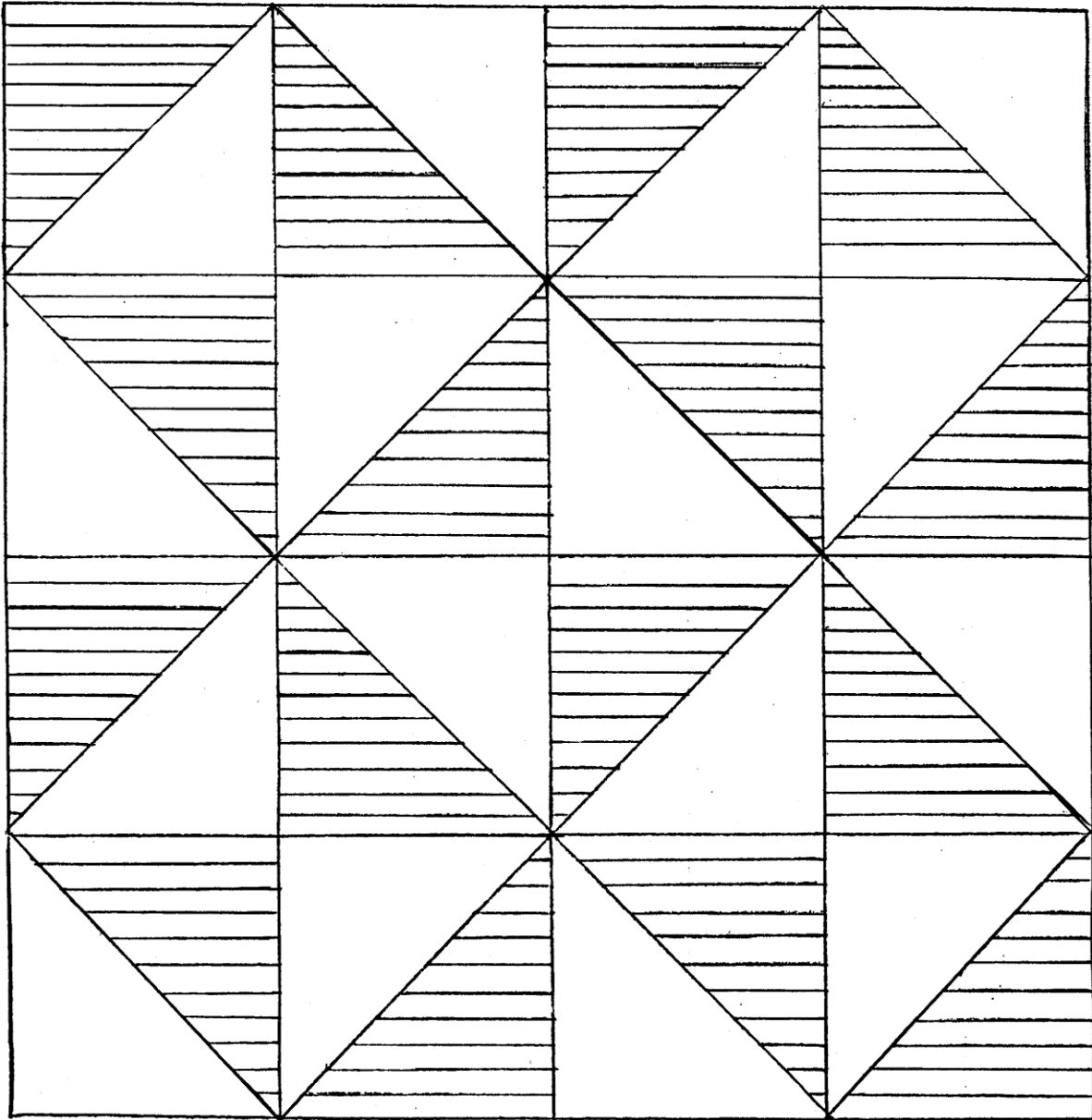
# ROAD TO OKLAHOMA



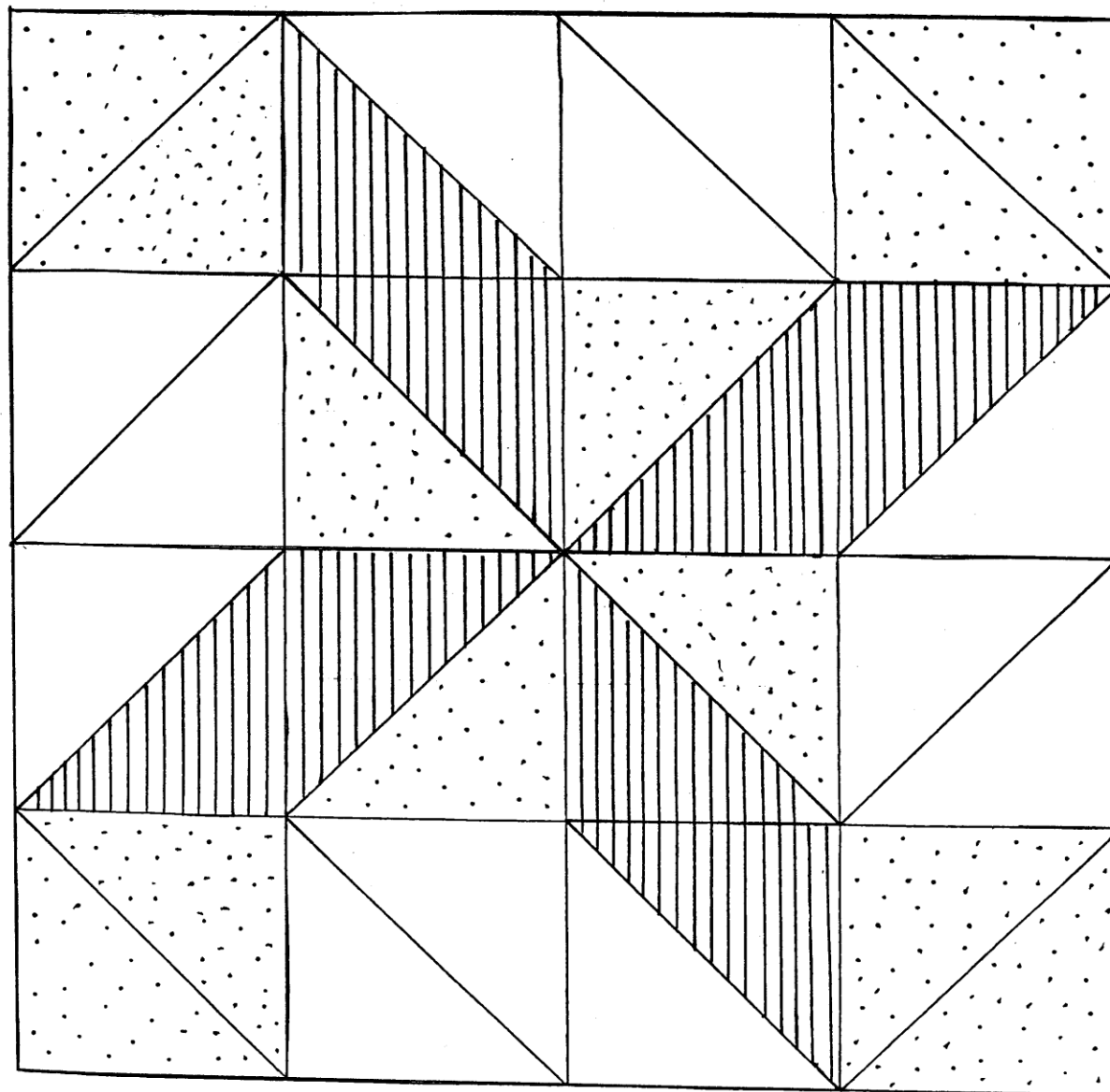
# FLYFOOT



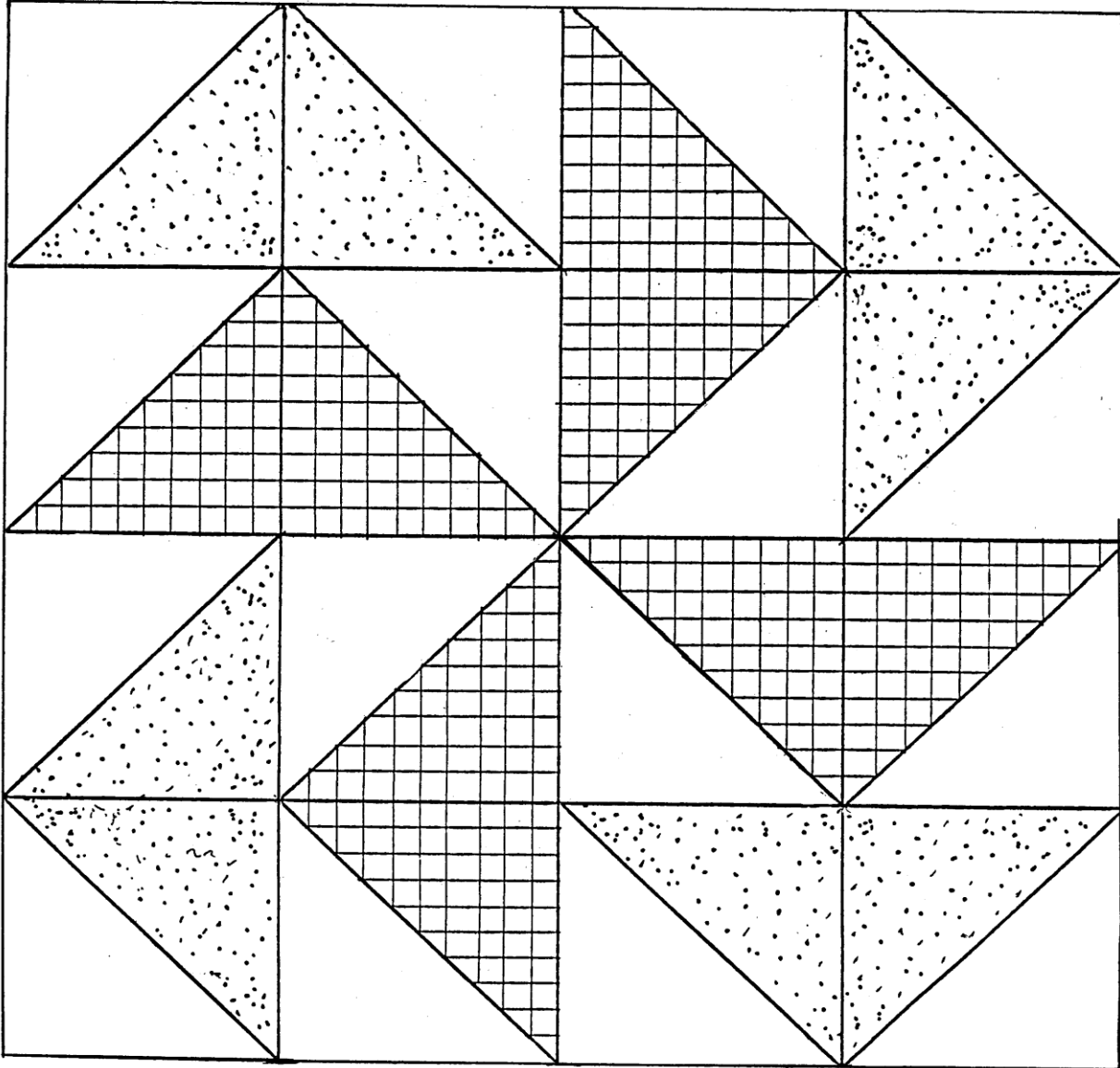
# BROKEN DISHES



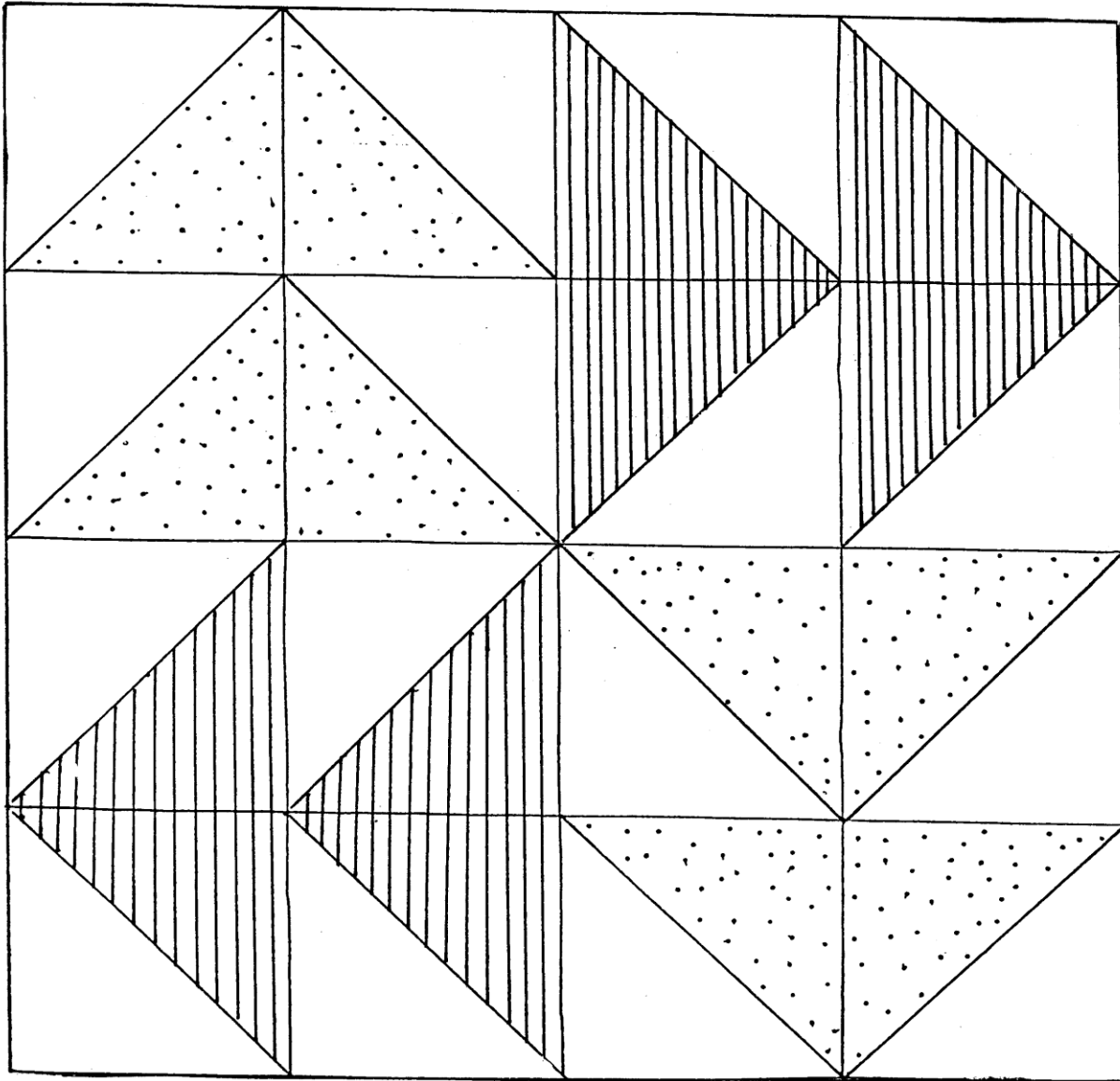
# CLAY'S CHOICE



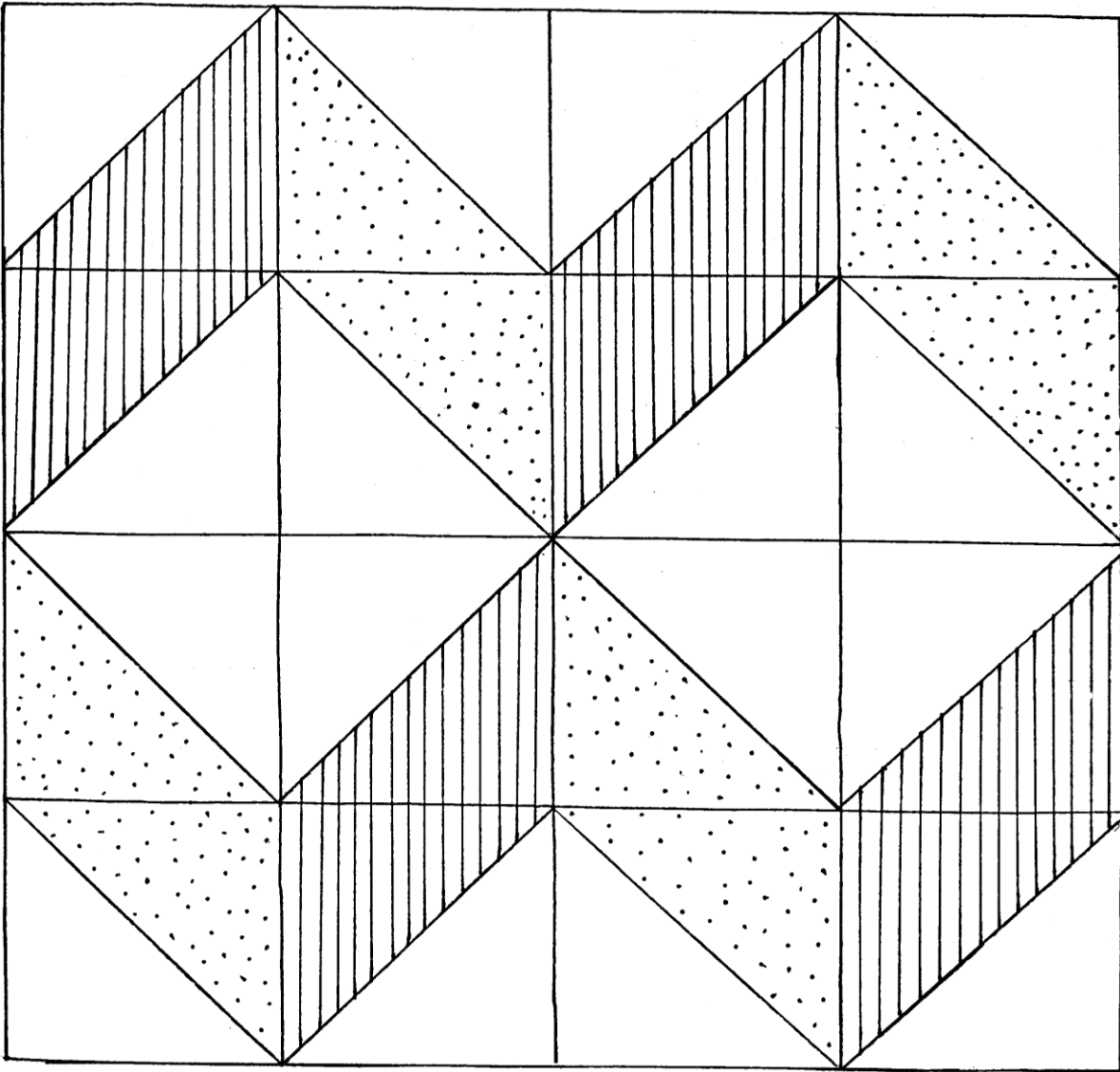
# DUTCHMAN'S PUZZLE I



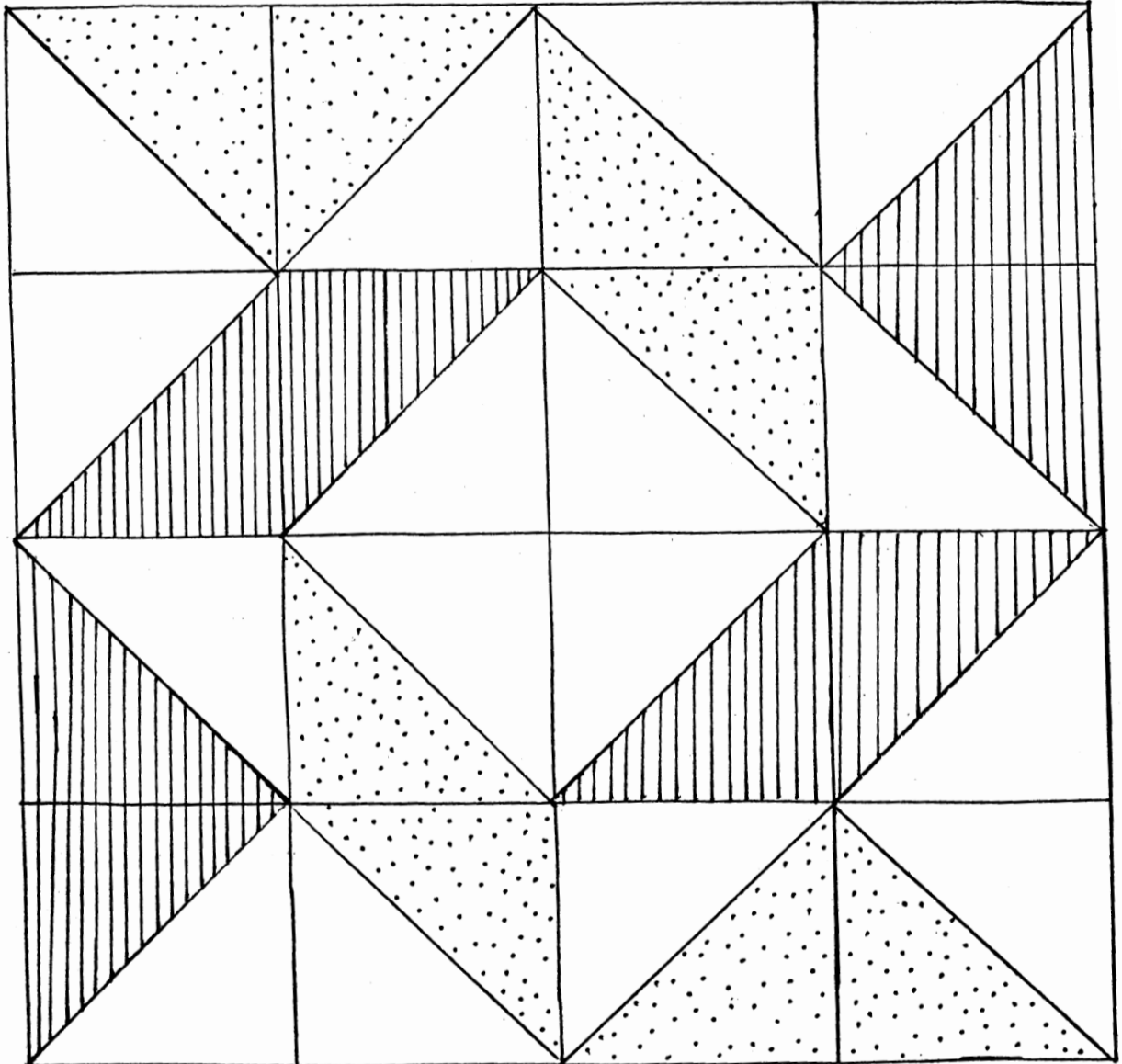
# DUTCHMAN'S PUZZLE III



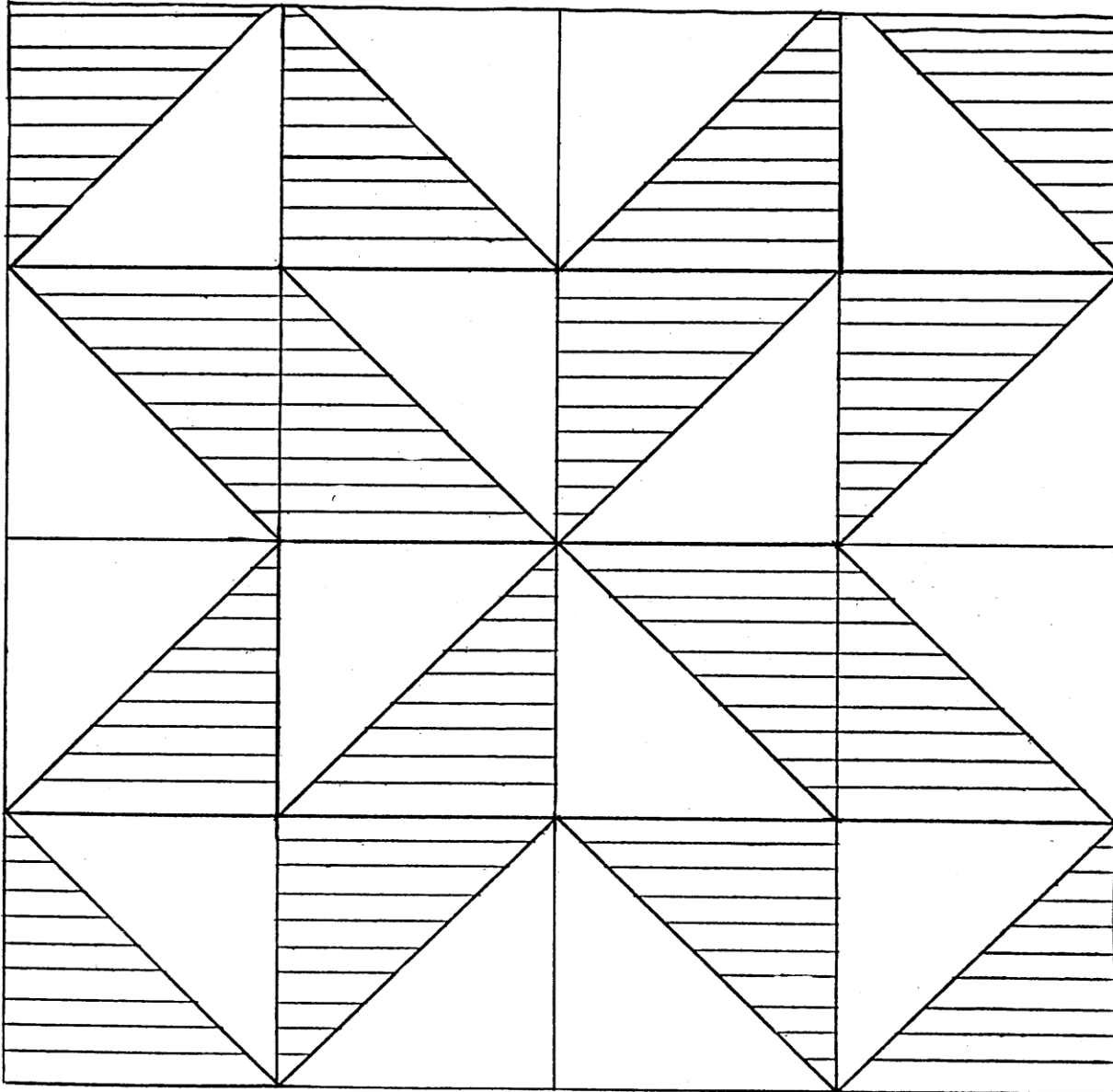
# RIBBONS



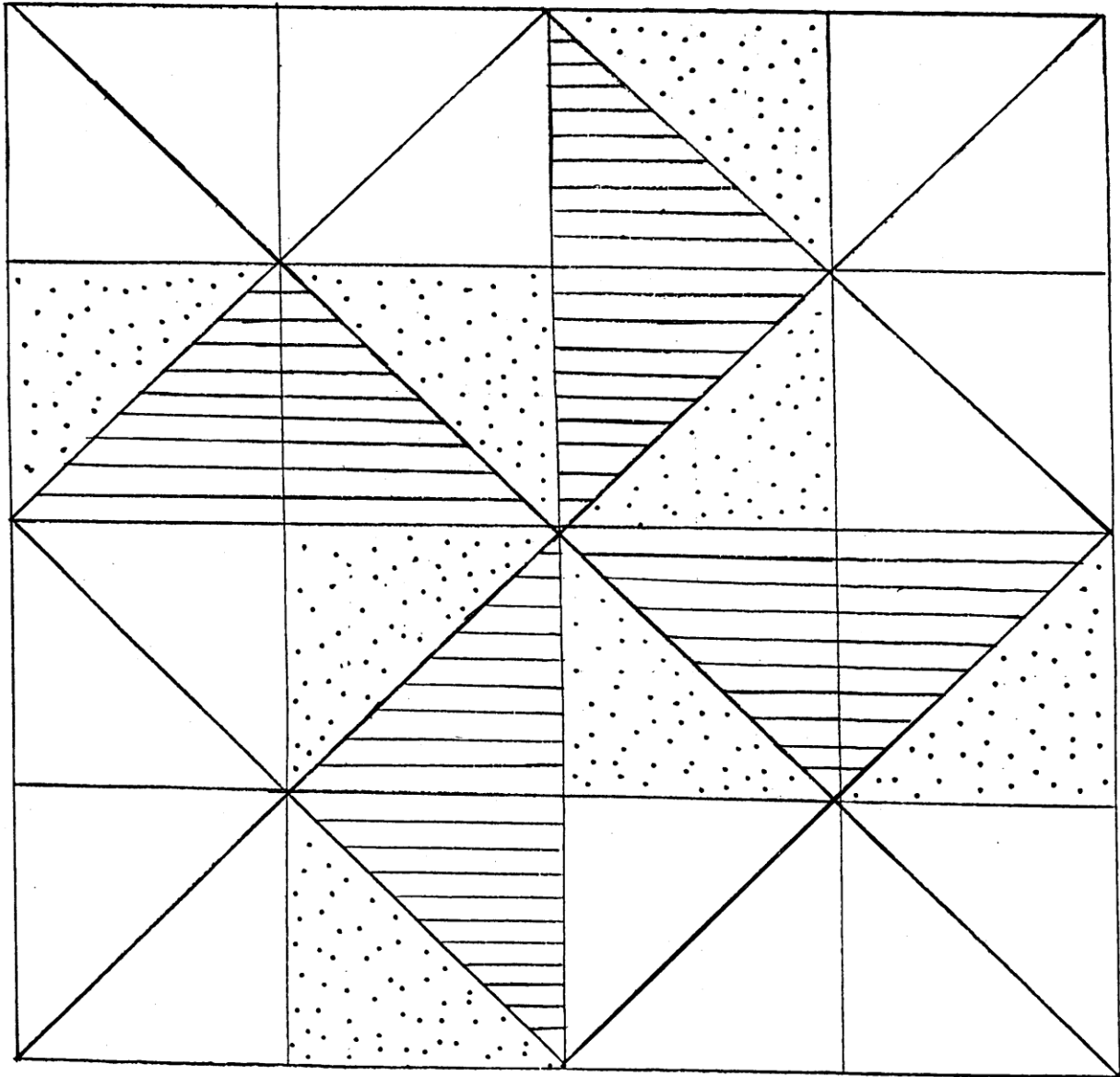
# WIND BLOWN SQUARE



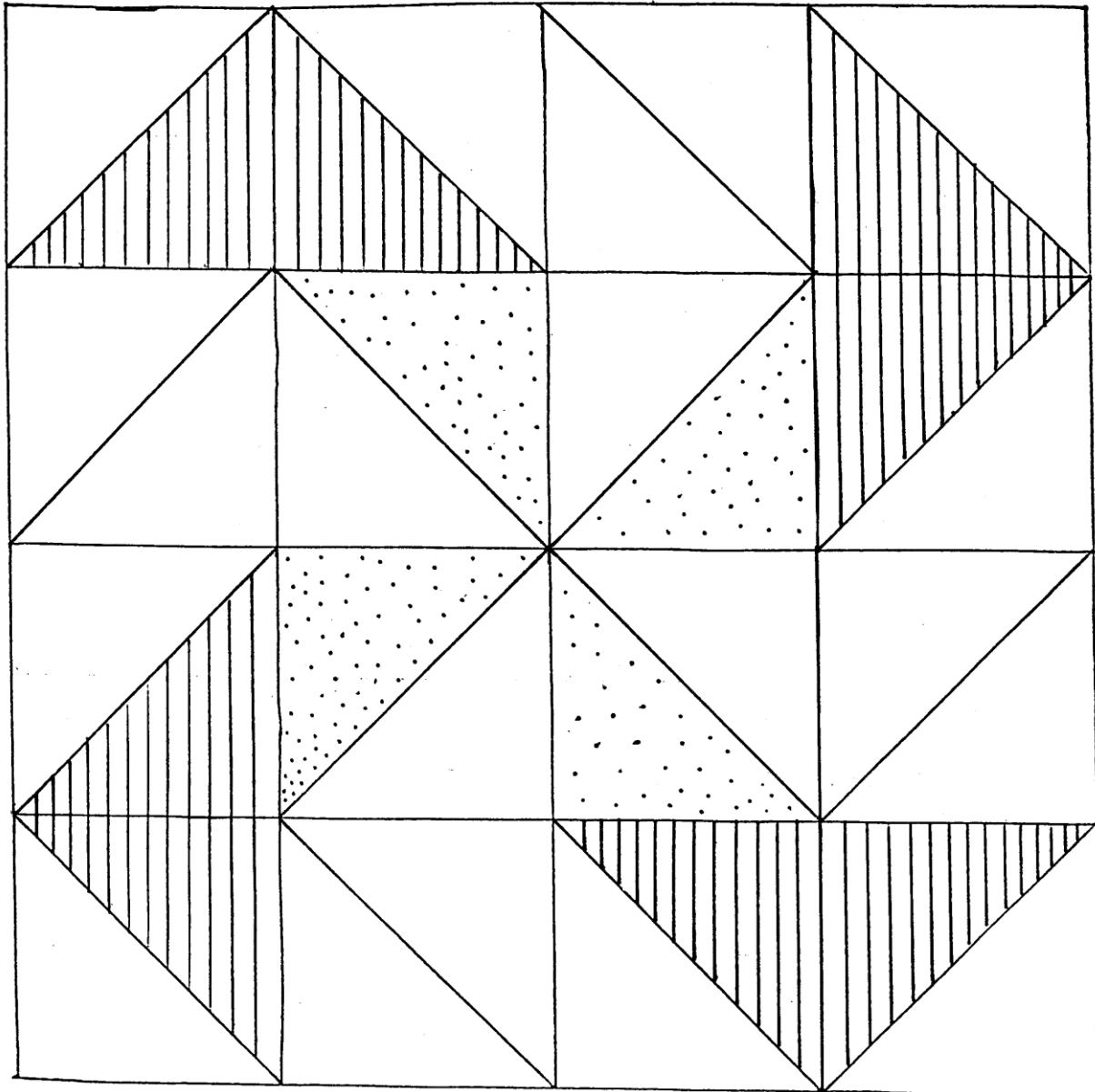
# PIECED STAR



# PINWHEEL



# SEE SAW



# DESIGN YOUR OWN

After you have tried some of the various quilt patterns, you can use this sheet to make your own quilt pattern design.
