

# Sacred Geometry Block of the Month

## Block 10

### Mandala and Flower of Life

Design by Reeze Hanson for Morning Glory Designs



#### Introduction to the Mandala:

*“A mandala, which is Sanskrit for “circle” or “discoid object,” is a geometric design that holds a great deal of symbolism in Hindu and Buddhist cultures. Mandalas are believed to represent different aspects of the universe and are used as instruments of meditation and symbols of prayer most notably in China, Japan, and Tibet.” (invaluable.com)*

In their most basic form, mandalas are circles contained within a square and arranged into sections that are all organized around a single, central point. They are beautiful works of art in themselves but beyond the aesthetic they are tools for ritual and meditation. Sand paintings done by Navajo artists also incorporate the symbolic mandala shapes in their incredible ephemeral sculptures.

In sacred geometry the mandala represents a variety of geometrical, mathematical, spiritual and cultural ideas and themes which have informed our understanding of all forms of life on earth and the world beyond.

It has both practical and spiritual properties and demonstrates some of the fundamental relationships and proportions of art, architecture, geometry, astronomy, cosmology, spirituality and religion, and yes, even quilting.

As you examine the mandala you will easily see the circles and triangles which form its skeletal properties. Additional lines and curves produce squares, diamonds, hexagons, octagons, and even pentagons within the hexagonal outline of the mandala.

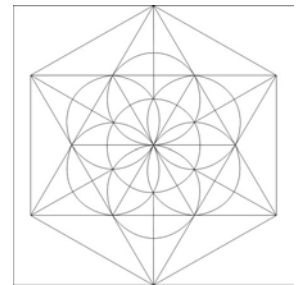
In our mandala, some of the shapes are subdivided to get interesting combinations, and other shapes are left open to allow the black background to show through.

The last element of this mandala is its location atop the final segment of the Fibonacci curve which makes up the entire background of the Sacred Geometry quilt.

To make this large 30” mandala we will assemble the background first and then fuse the mandala on top of it, using positioning templates and a full size layout guide.

#### Fabric Requirements & Supplies:

- Black fabric 32” x WOF
- 5/8 yard black and white print
- 1/4 yard each of teal, magenta, bright green, purple, yellow and red batik fabric.
- 3/8 yard each royal blue and navy blue
- 1/8 yard each pink, lime green, light orange, light purple, coral, and turquoise batik fabric.
- 3/8 yard bright peacock (Hoffman 1895-136) for first border
- Scotch tape
- Steam A Seam 2 Lite fusible web
- Washable fabric glue (like Roxanne)
- Template plastic
- Black Sharpie™
- Adhesive Basting Spray, Adhesive Powder (Bo Nash), or 1 yard of Misty Fuse™
- Pressing cloth
- Paper and fabric scissors
- Applique Pressing Sheet



**Instructions:**

**Prepare the Background:**

1. Cut one length of black fabric 32" long x width of fabric. Remove the selvages from one side of this length. (Fig. 1)
2. Fold the black fabric on the diagonal so the trimmed selvage edge is aligned with the width (top edge) of the fabric. (Fig 2)
3. Cut off the excess width of the fabric along the other trimmed edge. (Fig. 2)
4. Open out and press. This results in a 32" square. (Fig. 3)

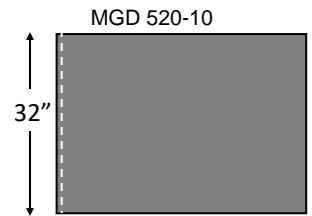


Fig. 1

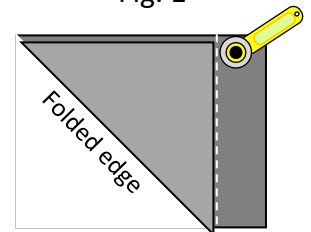


Fig. 2

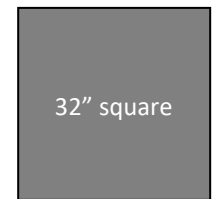


Fig. 3

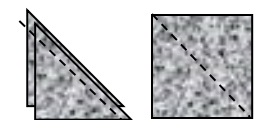


Fig. 4

**Add the curve:**

1. Prepare the Curve templates as shown on the template page. You will trim the seam allowance from the curved edges but leave the seam allowance intact on all the straight edges. (Fig. 5)
2. Cut out templates A-E from the black and white print fabric. See instructions on the template pages.
3. Sew the 2 A triangles together along their long side. (Fig. 4) Open out the square and press the seam open.
4. Sew templates B and C together. Sew templates D and E together. Sew E to one side of A and sew B to the adjacent side of A. (Fig. 5)
5. To adhere the curve to the black fabric background you will use spray or powder adhesive on the back of the pieced curve; or cut out a piece of Misty Fuse the same size and shape as the pieced curve to apply to the back. Carefully read the instruction for the product you choose. If you use Misty Fuse you must use an applique pressing sheet on top of the web product to avoid getting it on your iron.
6. On the 32" square, use a white fabric marker to carefully draw a straight line 3/4" in from the edge on all 4 sides. (Fig. 6) These lines mark the size you will trim the square after the applique is complete.
7. Next use a white fabric marker to mark a horizontal and vertical center line on the black square. Measure to be sure the lines are centered exactly and meet at a 90 degree angle. (Fig. 7a)
8. Place the fabric curve face up on the right side of one corner of the black 32" square. Align the straight edges of the pieced curve exactly on the white lines you marked in step 6. Fuse in place using a slightly damp pressing cloth. (Fig. 7b)
9. After the pieced curve is securely fused to the black square and completely cooled, edge stitch the curved edge using a blanket stitch and black thread.
10. Baste the two straight edges to the black square, using a straight stitch, just inside the edge of the long straight edges.
11. Preserve the white marked center lines or redraw them if they faded. You will need them to position the applique in the next step.

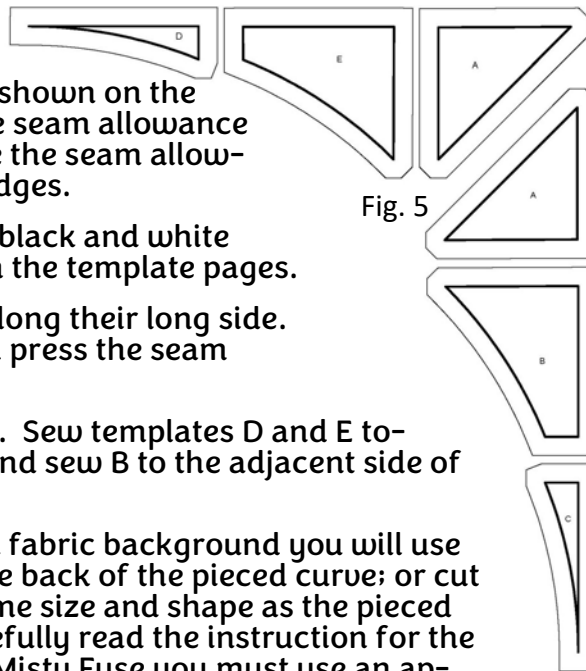


Fig. 5



Fig. 6

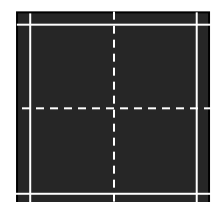


Fig. 7a

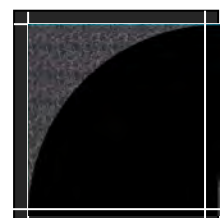


Fig. 7b

**Add the Mandala Applique:**

1. Trace the mandala templates on template plastic and cut out on the traced lines. Refer to the directions on the template pages. Label each template with the letter from the template page.
2. Use the plastic templates to trace 6 copies of each template onto the paper (back) side of the fusible web. Be sure to orient templates C and D exactly as printed on the template page.
3. Trace 6 of template B then flip it over and trace 6 more of template B. Label the flipped template "BR" (B reversed).
4. Cut out all of the fusible web templates around, not on, the traced lines.
5. Remove the paper backing on the fusible web making sure the adhesive stays on the traced paper and not on the backing paper you are removing!
6. Place the A and E fusible templates on the wrong side of the teal, magenta, bright green, purple and red fabric. Fuse in place and carefully cut out on the traced lines. Use a rotary cutter on the straight edges.
7. Place the C and D templates on the pink, lime green, yellow, light purple, coral, and turquoise fabric. Fuse in place and cut out on the traced lines.
8. Place the 6 B templates on the Royal blue fabric, and the 6 BR templates on the Navy blue fabric. Fuse in place and cut out on the traced lines.
9. Tape the 12-page layout guide\*\* together on the registration lines. Cut paper off one edge and lay it on top of the matching edge. Line up carefully and tape the page in place. Continue in this way assembling the top 4 pages, then the middle 4 pages, then the bottom 4 pages. Tape the three parts together.
10. Place all the fabric templates on the layout guide using the Mandala Key Map for color placement.
11. With the layout guide next to you lay the black square on a large pressing surface. If you do not have a large enough pressing surface use a piece of plywood or foam core with several towels on top.
12. Fold a piece of scotch tape into a loop and stick it to the back of the F plastic template. Place the plastic F template on the black square with one pointed end on the exact center where the white lines cross and the other end on the vertical center line. (Fig. 8)
13. Transfer the appliques templates from the layout guide to the black background fabric square starting with the center.
14. Remove the paper web backing from the teal and magenta E templates and position them on either side of the plastic F template. (Fig. 8) The thin points of both E templates should nearly touch the center point. Press the templates down but do not fuse yet. The sticky property of the fusible web will hold them in place until you are ready to fuse.
15. Lift and move the plastic F template and place it next to the magenta E template and secure with tape. Position the green E template with the long point nearly touching the center cross lines and the outside point touching the horizontal center line. (Fig. 8)



NOTE: Because these templates have some very narrow points, cut carefully to preserve those points as much as possible.

NOTE: Do not fuse the applique to the background until ALL of the applique is in place. You may need to adjust pieces as you add more pieces to the background.

\*\*If you received a print copy of this pattern you may have received the 6-page layout guide printed on 14" x 17" paper.

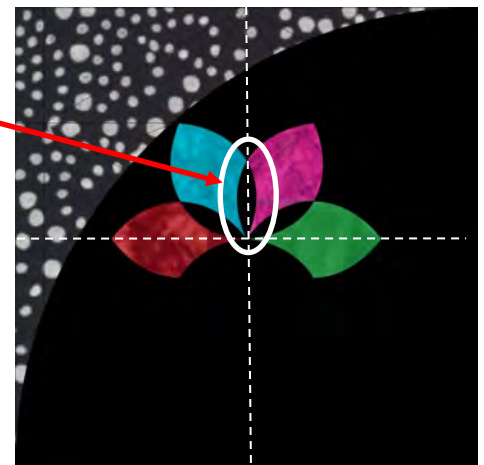


Fig. 8

16. Next position the plastic E template next to the teal E template and place the red E template so the long point nearly touches the center point and the outer point touches the horizontal center line.
17. Continue positioning the six E template around the center point adjusting as needed so their "elbows" (side points) just touch. (Fig. 9) You no longer need the plastic F template.
18. The large triangle A templates are then added to the mandala, using the Mandala Block Key Map and the applique layout guide for color positioning. The top point of the triangle should just touch the outer point of the same color template E and the two outer points of each triangle should touch each other forming a hexagon. (Fig. 10)
19. Adjust the A applique triangles as necessary. If the triangle points are too far apart, move the E templates closer to the center point. If the triangle points overlap, move the E templates slightly away from the center point of the mandala.
20. Next, transfer the C and D applique templates from the layout guide to the background fabric as shown in Fig. 11.



Fig. 9

- The curved edge of template D should touch the curved edge of template E. (Fig. 11 inset) (a)
- The two templates should form a pair of crossed lines, touching at the corner. (b)
- The opposite position of each template should be black. (c)
- The point where the curved edge and the long straight edge of C meet should touch the point where A and E meet. (d)

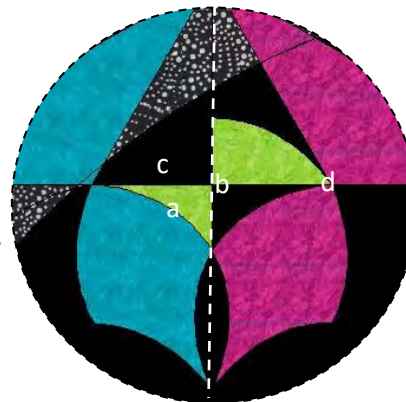


Fig. 11, inset



Fig. 10

21. Finally, place the B and BR templates above the C template, fitting closely between the two A triangles. (Fig. 12)
22. Adjust any of the applique to get a good fit. Do not fret if things do not touch exactly. Just get it as close as you can.
23. When ALL the applique is in place carefully fuse it down to the background with a hot iron and a pressing cloth. Do not slide the iron, but press up and down to get a good bond.
24. Turn the mandala over and press again from the back side to make the bond permanent.
25. Select matching threads to edge stitch the applique. See the Edge Stitching Tutorial to select the stitch you would like to use.
26. Edge stitch all of the applique pieces using matching thread and one of the recommended edge finishes from the tutorial.
27. When all of the edge stitching is complete give the block a careful pressing with starch or sizing.
28. Trim the completed mandala to 30-1/2" square taking equal amounts from each side.

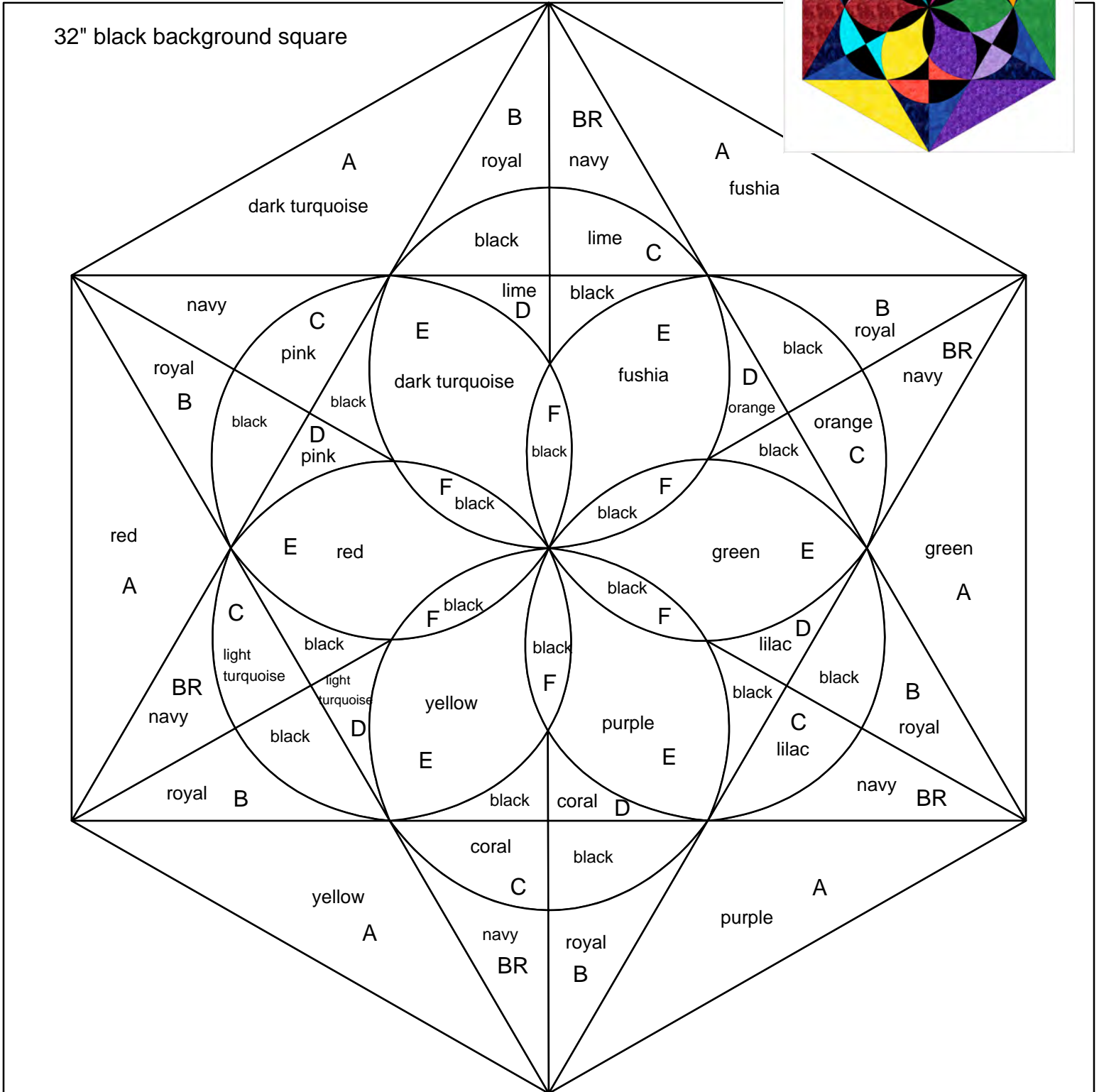
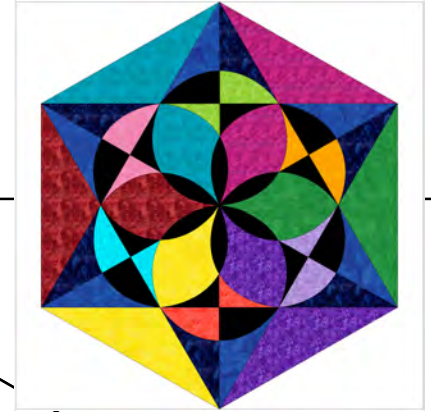


Fig. 11



Fig. 12

### Black 10 Mandala 30" (finished size) Color Key Map



**Block 10 Part 2:****Add the Flower of Life Block to Section 3.**

This Flower of Life mandala is added to the large spiral section before the three sections are joined together.

Fabric requirements:

- One 10" square of each of the 12 color wheel colors: red, red-orange, orange, yellow-orange, yellow, yellow-green, green, green-blue, blue, blue-violet, violet, red-violet.
- Template plastic and black fine point sharpie

Instructions:

1. Trace the Flower of Life Template A onto template plastic. Cut out on the traced lines.
2. Trace 90 of Template A on the backing paper of the fusible web. Cut around (not on) the traced lines.
3. Remove the paper backing from the templates and place on the wrong side of the applique fabrics.
4. Place 9 fusible web A templates on each of the Primary colors (red, blue, yellow) and on each of the Secondary colors (orange, purple, green). Fuse in place and cut out on the traced lines.
5. Place 6 fusible web A templates on each of the six Tertiary colors: red-violet, violet-blue, blue-green, yellow-green, yellow-orange, and red-orange. Fuse in place cut out on the traced lines.
6. Locate the position on the black background fabric where you would like to place the flower of life. Place a dot there with a white fabric marker. (See Fig. 1, above)
7. Draw a vertical and horizontal center line through dot 16" long.
8. Starting at the center dot, arrange 12 A applique templates as shown in Fig. 2. Remove the paper backing but do not fuse down.
  - Begin with the yellow petal and purple petal placed on the horizontal lines, touching at the center point.
  - Position the orange and red petals above the yellow and purple, with ends touching the center dot. The petals should just touch each other but not overlap.
  - Position the green and blue petal below the yellow and purple.
  - Position each of the six tertiary colors between the two parent colors. For example, the yellow-green petal should touch the outside ends of the yellow and the green petals. (Fig. 2)
9. Using Fig. 3 and the Flower of Life Color Map as a guide, arrange the second round of petals on the mandala. Begin again with the yellow and purple petals on each side and fill in the other colors.
10. Add the final round of petals as shown in Fig. 4. Note that the petals form triangles that all intersect. Adjust any petals so the ends of each petal just touch.
11. When all the petals are positioned accurately, fuse down the complete mandala using a damp pressing cloth and a hot iron. Turn over and press from the back to make the bond permanent.
12. Edge stitch around each petal using monopoly (clear) or a neutral (light gray) 100 wt thread.

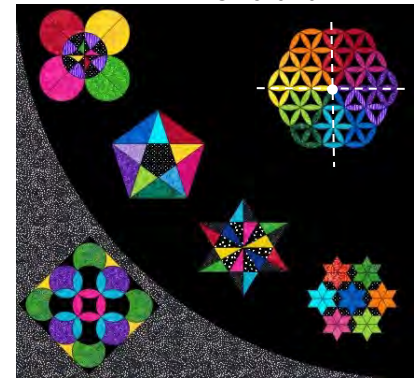


Fig. 1



Fig. 2

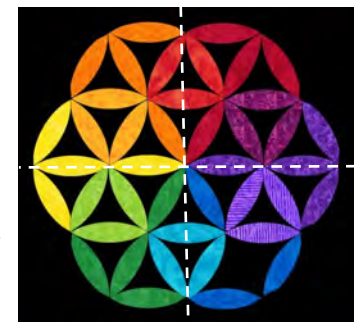


Fig. 3

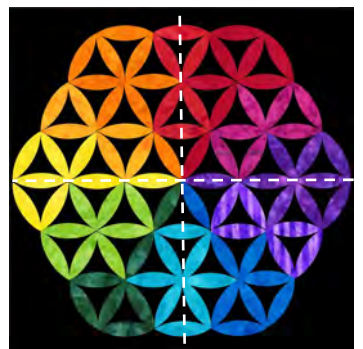
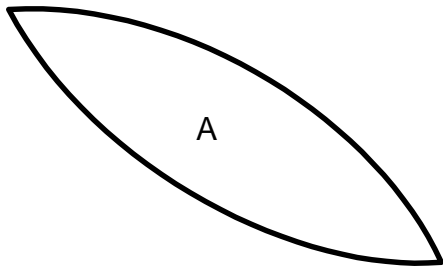
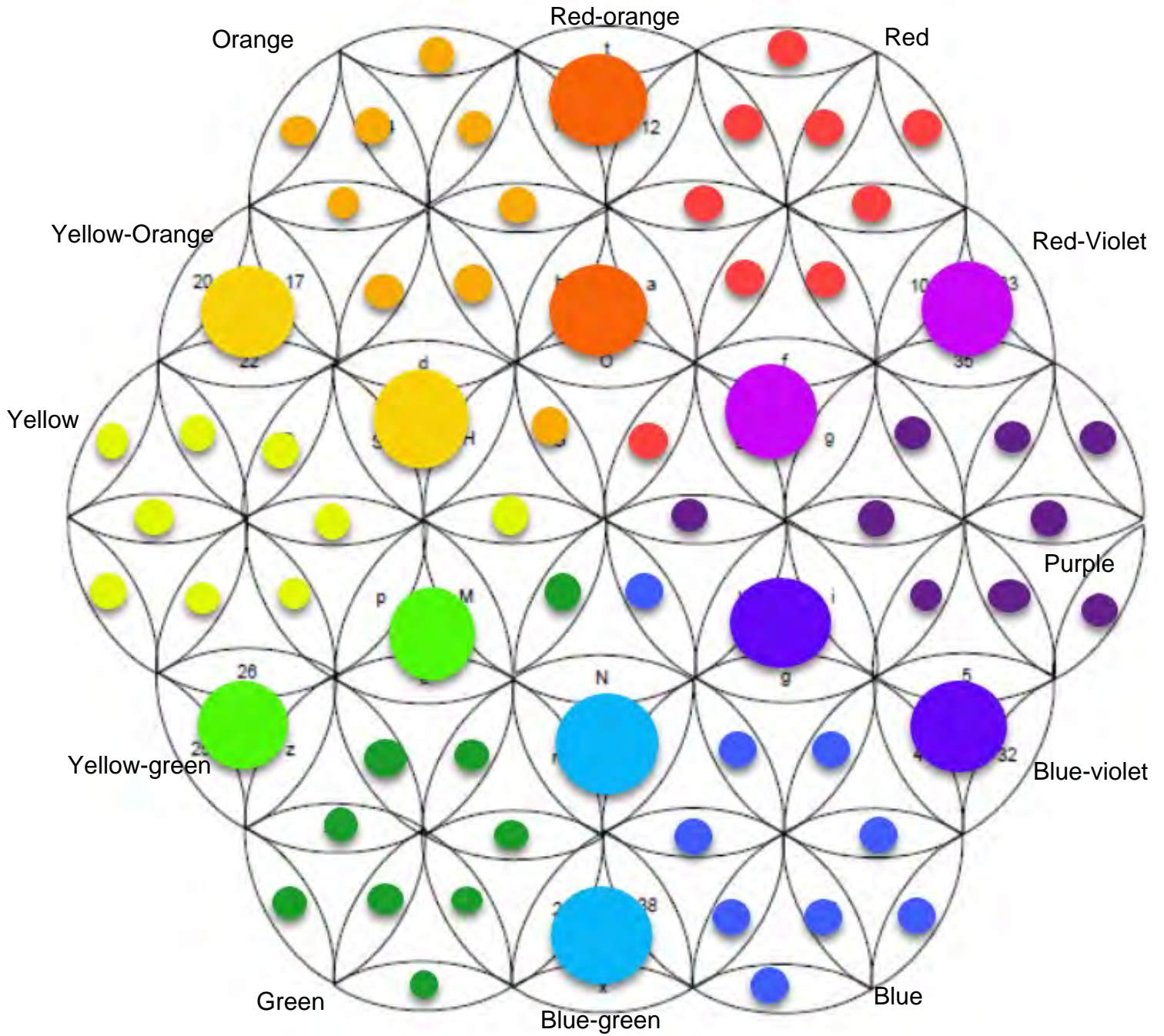
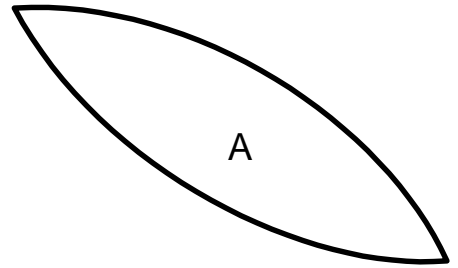


Fig. 4



### Flower of Life

Key Block (21/50 actual size)



Trace 90 of template A onto fusible web.  
 Gather 12 rainbow colors in batiks.

### Part 3: Assemble the Quilt Sections

1. Assemble the three completed sections of the quilt top. Section 1 contains block 2 and 3. Section 2 is the completed 30" mandala block. Section 3 is the bottom spiral with blocks 4, 5, 6, 7, 8 and the Flower of Life Mandala. (Fig. 5)
2. Sew Sections 1 and 2 together. Press the seam to one side
3. Sew section 3 to sections 1 & 2. Press the seams to one side.
4. Place Block 1 overlapping sections 1 and 3 as shown in Fig. 5. Fuse in place. Edge stitch around the outside of the yellow block 1 circle with matching thread.

### Border and Binding

#### Border Fabric Requirements:

- 1/3 yard turquoise (first border)
- 1-3/4 yard black (second border & pieced border)
- 1/4 yard each light blue and medium blue (pieced border)
- 5/8 yard medium blue (binding)
- 8" x 10" rectangle of yellow (moon applique)

#### First Border:

1. Cut 7 strips 1-1/2" x WOF from turquoise fabric.
2. Join all strips end-to-end with diagonal seams and trim seams to 1/4". Press to one side.
3. Trim 2 side borders 1-1/2" x 79". Sew to the two sides of the quilt center.
4. Trim 2 top/bottom borders 1-1/2" x 51". Sew to the top and bottom of the quilt center. Press toward border 1.

#### Second Border:

1. Cut 8 strips from black fabric 2-1/2" x WOF.
2. Join all strips end-to-end with diagonal seams and trim seams to 1/4". Press to one side.
3. Trim 2 side borders 2-1/2" x 81". Sew to the two sides of the quilt center.
4. Trim 2 top/bottom borders 2-1/2" x 55". Sew to the top and bottom of the quilt center. Press toward border 2.

#### Pieced Border:

1. Make 10 copies of each border foundation pattern.

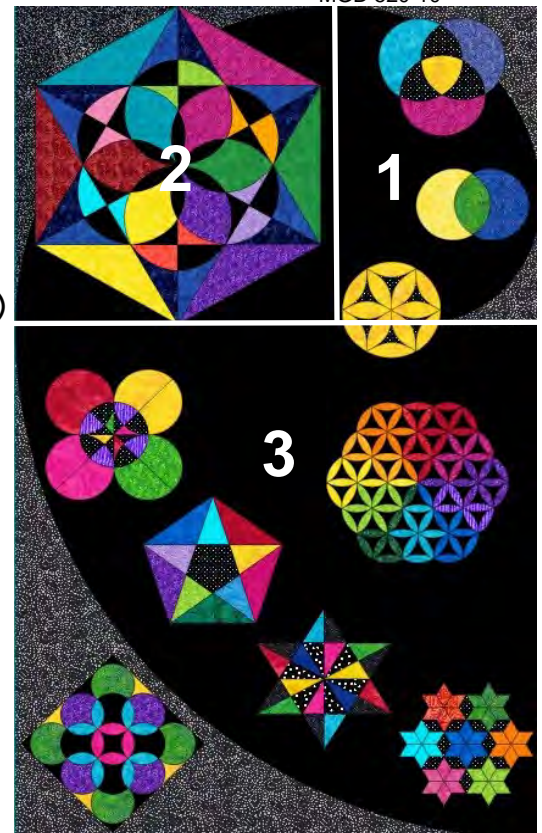


Fig. 5





2. Paper piece 5 A foundations in light blue and 5 A foundation in medium blue.
3. Paper piece 5 B foundations in light blue and 5 B foundations in medium blue.
4. After trimming all of the foundation patterns, sew a light blue B on top of a medium blue A pattern. (Fig. 6) Make 5 B over A units.
5. Sew a light blue A pattern on top of a medium blue B pattern. (Fig. 7) Make 5 A over B units.
6. Sew the 5 B over A units together. Press the seams to one side.
7. Sew the 5 A over B units together. Press the seams to one side.
8. Cut 2 black rectangles 4-3/4" x 8-1/2". Sew one to the top of the left border (B over A). Sew the other to the bottom of the right border (A over B).
9. Cut 2 black rectangles 8-1/2" x 38-1/2". Sew one to the bottom of the left border. Sew the other to the top of the right border.

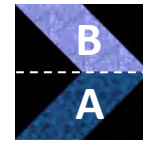


Fig. 6

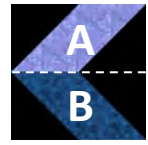
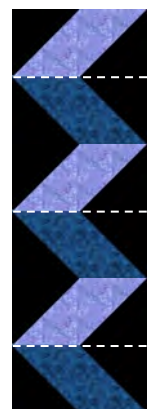
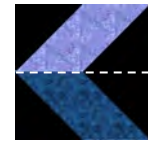
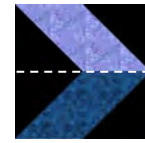


Fig. 7



10. Trace 2 copies of the half moon template onto the back side of the fusible web. Cut out around the traced lines.

11. Fuse the half moon templates to the back of the yellow fabric. Cut out on the traced lines. Fuse onto the borders as shown in the illustration of the left border and right border, below.

12. Edge stitch in place with matching thread.

13. Sew the side borders to the sides of the quilt top. Refer to the illustration of the completed quilt on the previous page.

14. Press the seam toward the 2nd border.

15. Give the completed quilt top a press with starch or sizing and square up if necessary.

### Complete the quilt

Layer the top batting and back and baste the layers together. Quilt as desired.

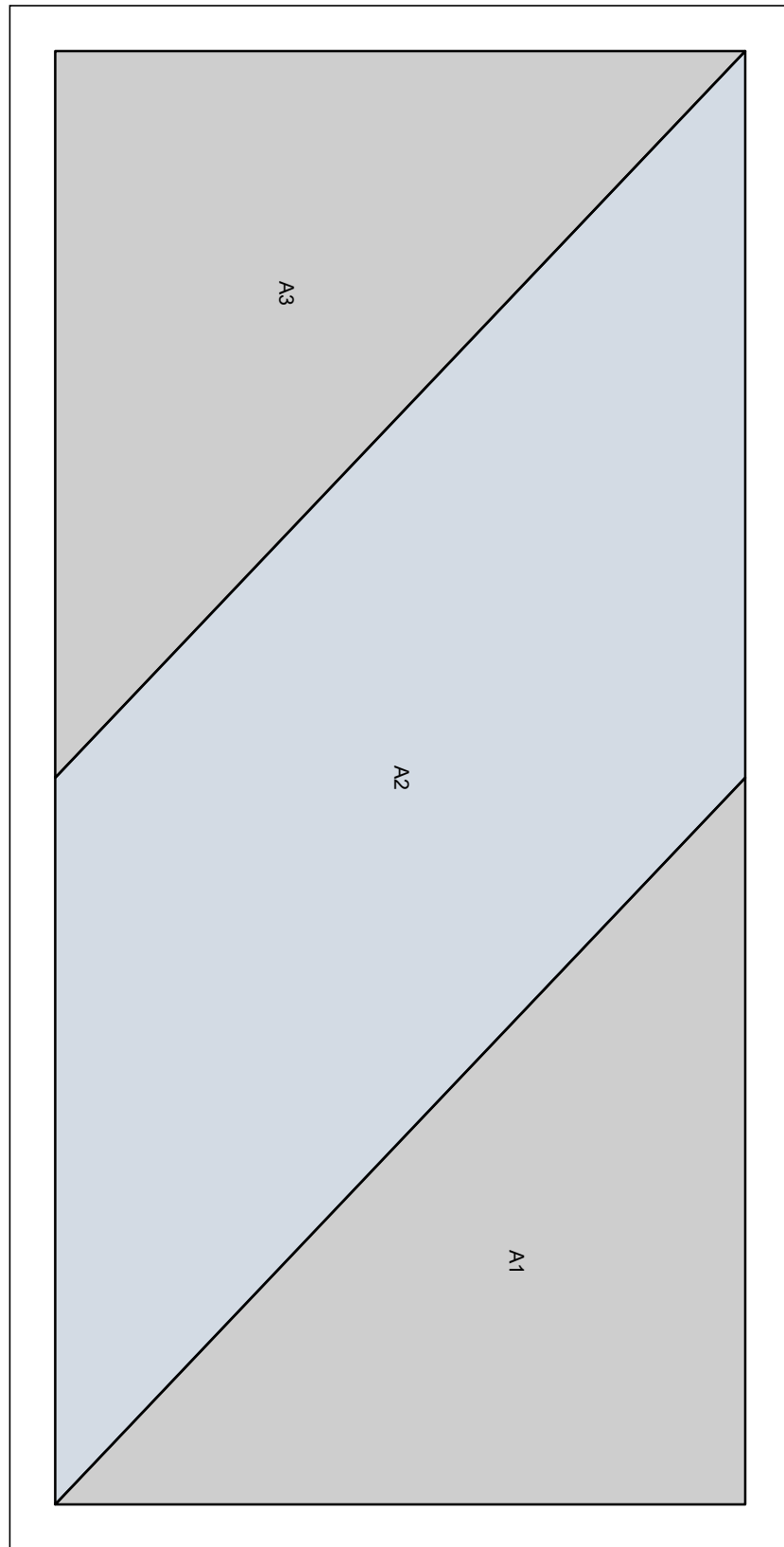
Prepare the binding by cutting 9 strips, 2-1/4" x WOF of medium blue. Join the ends of the strips together with diagonal seams and trim to 1/4".

Fold in half lengthwise, wrong sides together and raw edges aligned. Sew to the quilt using your favorite method.

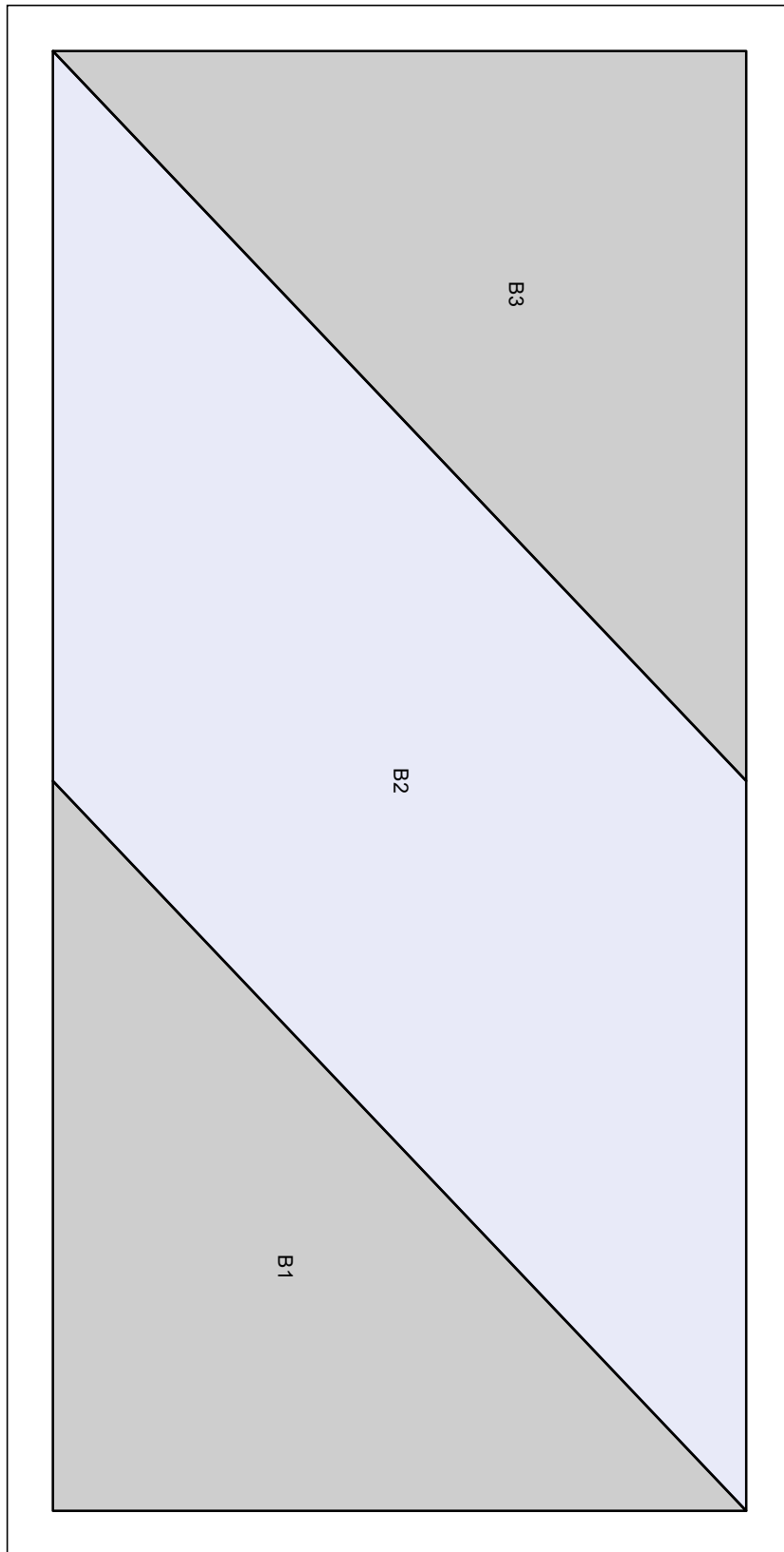


Left Border    Right Border

# Border Foundation A - make 10 copies



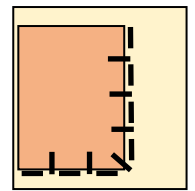
### Border Foundation B - make 10 copies



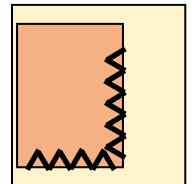
## Edge Stitching Tutorial

1. Pin tear-away stabilizer to the back of the block. I prefer deli sheets or wax paper. It is just the right weight to protect your stitches from pulling, and it tears away easily.
2. Select the threads you wish to use with your applique. Here are some suggestions along with some considerations.
3. If you are matching the thread to the fabric, use an exact match or one slightly darker than the fabric.
4. You may prefer to use monofilament so your thread does not show. You may need to adjust (loosen) the upper tension of your machine if using monofilament so it does not break. Use a 60 or 80 weight bobbin thread in a neutral color with monofilament as your top thread. Do not put monofilament in your bobbin!
5. If you prefer to use one thread color, like black, to make a statement with the thread try out different weights of black thread to see which one you like the best.
6. Match your needle size to your thread weight. Always use a new needle to do your edge stitching. A top stitch needle has a larger eye (easier to thread) and a sharper point to pierce the fabric cleanly.
  - If you are using a 50 weight thread (like Masterpiece, Konfetti, or Aurifil) use an 80/12 top stitch needle.
  - If you are using a heavier weight thread, like a 40 weight machine embroidery thread, you may want to go up to a 90/14 top stitch needle.
  - If you are using a lighter weight thread, like a 60 or 80 weight thread, go down to a 70/10 topstitch needle.
  - You may prefer to use any of the new 100 weight threads on the market. They are nearly invisible but create a very thin but secure edge for your applique. Use a 60/8 needle with 100 weight thread.
7. Some quilters like to use cotton thread and others prefer polyester. Both are fine. The gourmet thread for machine applique is silk thread, if you want a sheen. It does not come in the wide array of colors that cotton and poly thread do, however, but it gives a beautiful finish. You can get silk thread in both 50 weight and 100 weight.
8. **TEST SEW** on a piece of similar fabric & stabilizer before stitching on your applique block.
9. Next, select the type of edge stitch you wish to use. Here are some suggestions for four types of edge finishing that will work on your applique. Of course, the thread you select may also influence the type of edge stitch you choose.

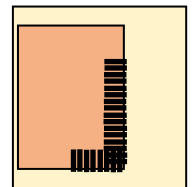
- **Blanket stitch** (button hole stitch) runs along the outside of the applique piece, touching the edge. With every forward stitch, the machine takes a horizontal stitch (or bite) to secure the applique. Keep the forward stitches evenly spaced. The bite stitch should be as narrow as possible to keep the stitching unobtrusive. Use an open toe foot so you can see the stitching as you work your way around the applique. If the machine does not space the stitches evenly, change to a walking foot. If your machine does not have a “single blanket stitch” it may have a “triple stitch”. This stitch does three forward stitches on top of each other and then three bites on top of each other. If you don’t like the look of this stitch, choose a different stitch BEFORE you start doing your block.
- **Narrow zig zag** is another option. The forward stitches should be evenly spaced and the bite as small as possible. Keep the needle touching the outer edge of the applique piece. Because this stitch is very visible I recommend a 60 weight matching thread or monofilament and a size 70/10 needle. Take your time while doing this stitch and keep corners and curves smooth.
- **Satin stitch** is a beautiful option for edge stitching, but it takes practice to keep stitches evenly spaced, and corners tidy. Use a 60-80 (or even 100) weight thread with a size 70/10 needle to avoid thread buildup. Keep the needle next to the outside edge of the applique and the bite fairly narrow. Use a slightly wider bite than you would with the narrow zig zag. Corners and curves can be tricky so practice first. Don’t overlap stitches when you get back to your starting point. It will look bumpy and thick. Stop and pull threads to the back just at the point where you started. Tie the threads and cut close to the knot.
- **Straight stitch** is the last option for edge stitching. Use matching thread or monofilament stitching just 1/16th inch inside each applique shape. You do not want the thread to show so match color carefully, Use a light weight thread, 80 or 100 weight with a size 70/10 or 60/8 needle. Use a neutral 80 weight thread in your bobbin. Do not use this stitch if your fabric edges are fraying. It will only get worse. It is a good stitch to use with batiks or other high thread count fabrics.
- If your machine has a variety of **decorative stitches** you may wish to use one of them either with a “stand out” thread, such as metallic or variegated thread, or matching thread. A faggoting or bridging stitch secures two pieces next to each other that don’t overlap. This is a good choice for the mandala that does not have overlapping pieces.



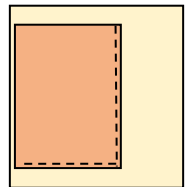
Blanket Stitch



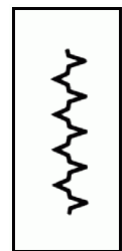
Narrow Zig Zag



Satin Stitch



Straight Stitch



Bridging Stitch

When edge stitching is completed, remove all of the stabilizer from the back of the block. Use a bent nose tweezer to remove any small bits that remain.

Be happy.



### Block 10 Background Curve Templates

MGD 520-10

Tape pages together on the registration lines. →

Sew B and C here.

1 Inch  
Square

Cut one of each template from  
black and white print fabric.  
Cut two of Template A.

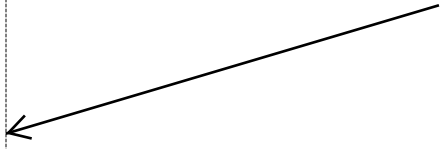


B

A

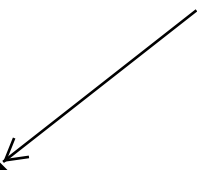
Sew this edge to square AA

Tape pages together on the registration lines.

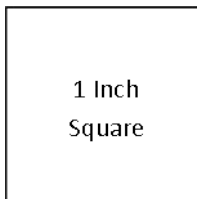


A

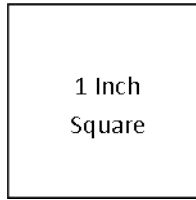
Cut 2 from black and white print. Sew the 2 triangles together along the LONG side of Template A to form square AA.



1 Inch  
Square



B

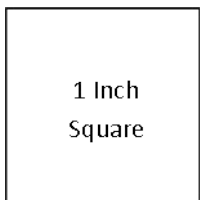
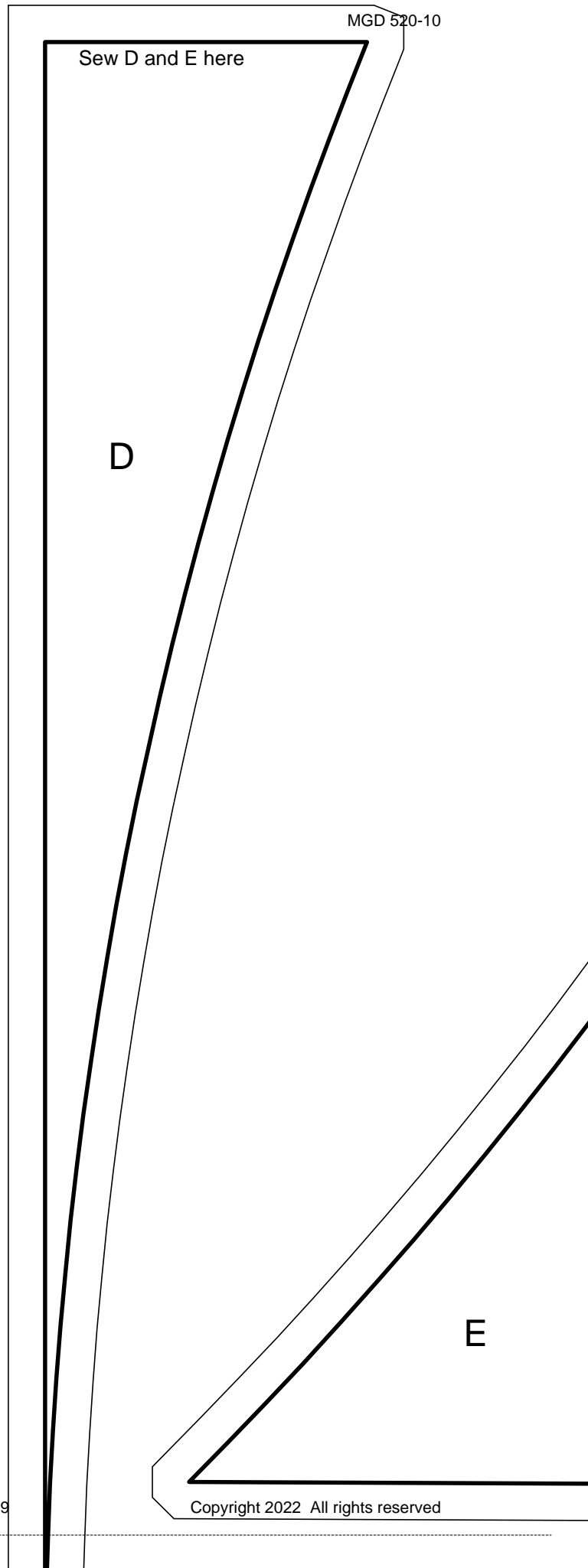
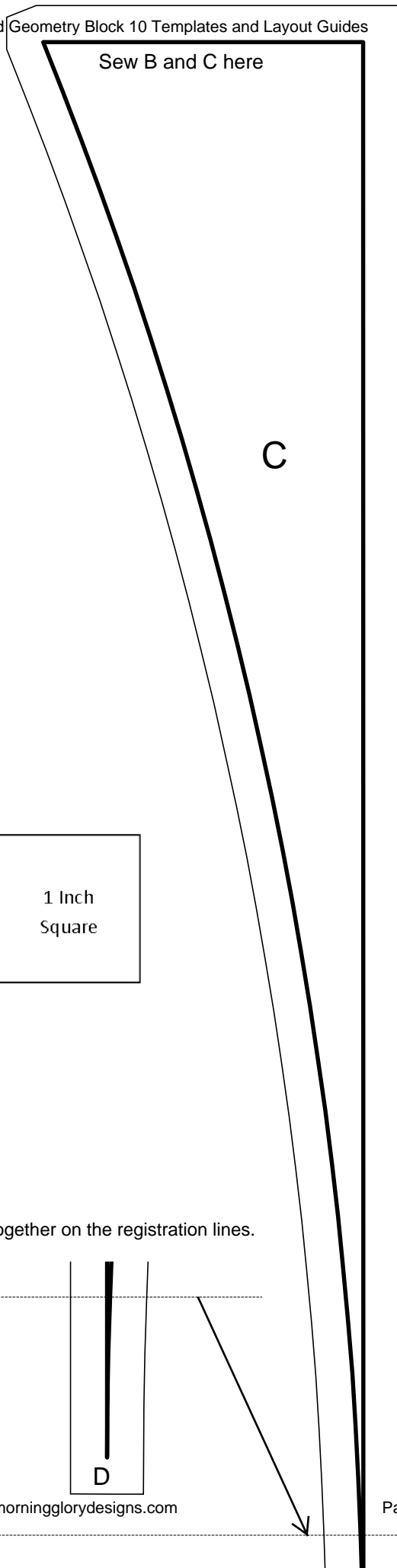


Sew E and D here

E

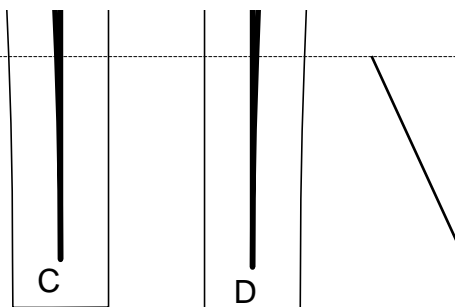
Sew this edge to square AA



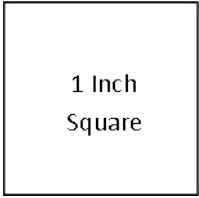


1 Inch  
Square

Tape C and D together on the registration lines.



# Block 10 Mandala Templates



E

trace 6

F

C

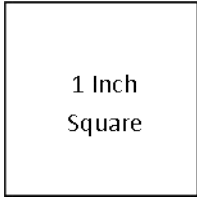
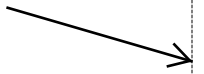
trace 6

D

trace 6

Templates are reversed for use with fusible web and machine applique.  
There is no seam allowance on these applique templates.

tape pages together on the registration lines.

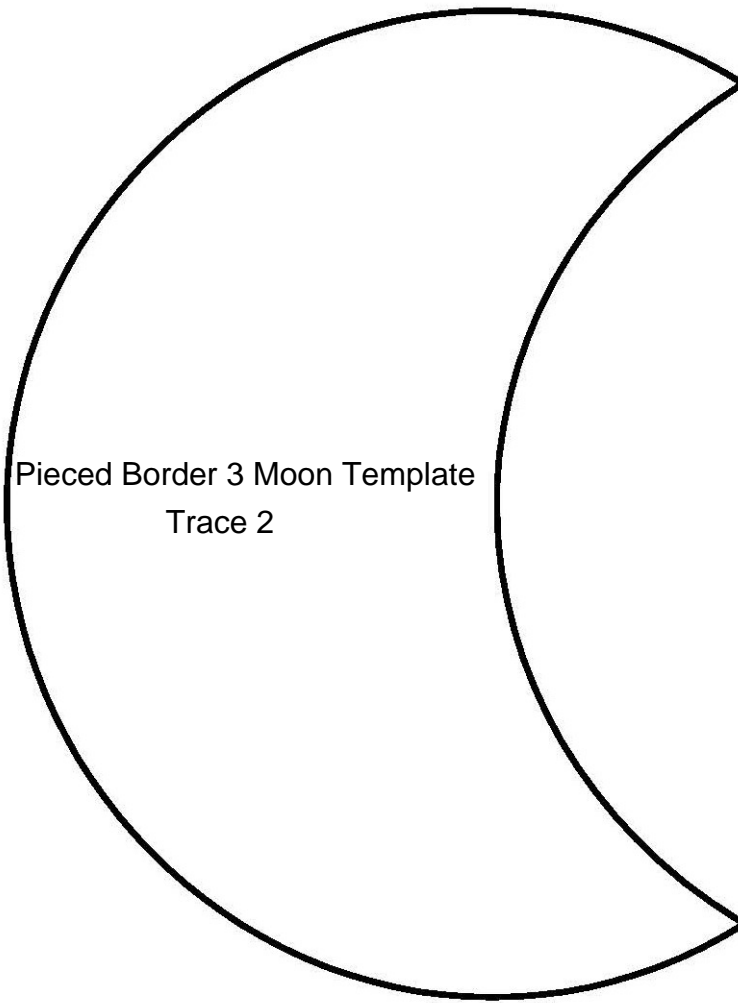
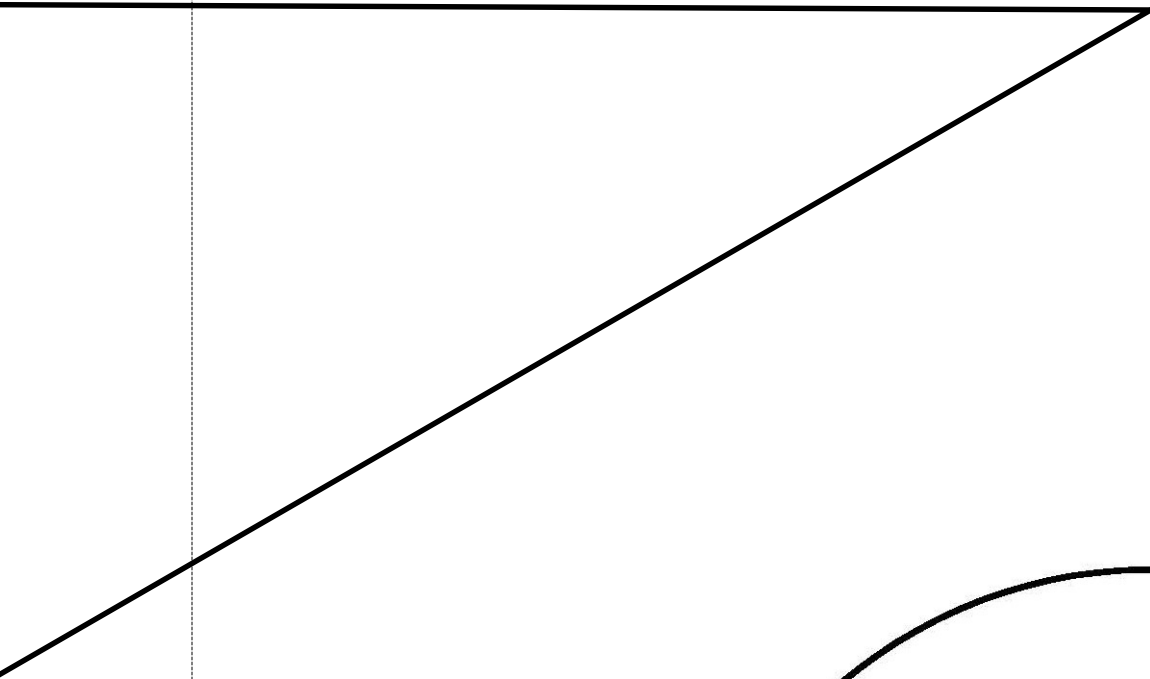
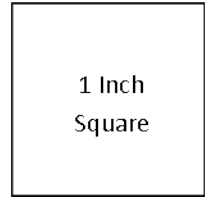


Trace 6

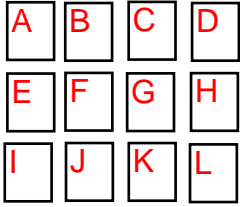
A

B

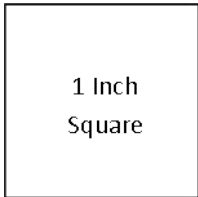
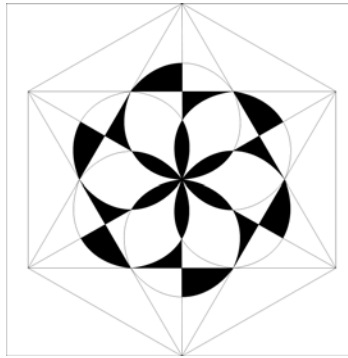
trace 6 (B)  
reverse and trace 6 more (BR)



Page Layout



Tape 12 page Applique Layout Guide together on the registration lines. →



Curve

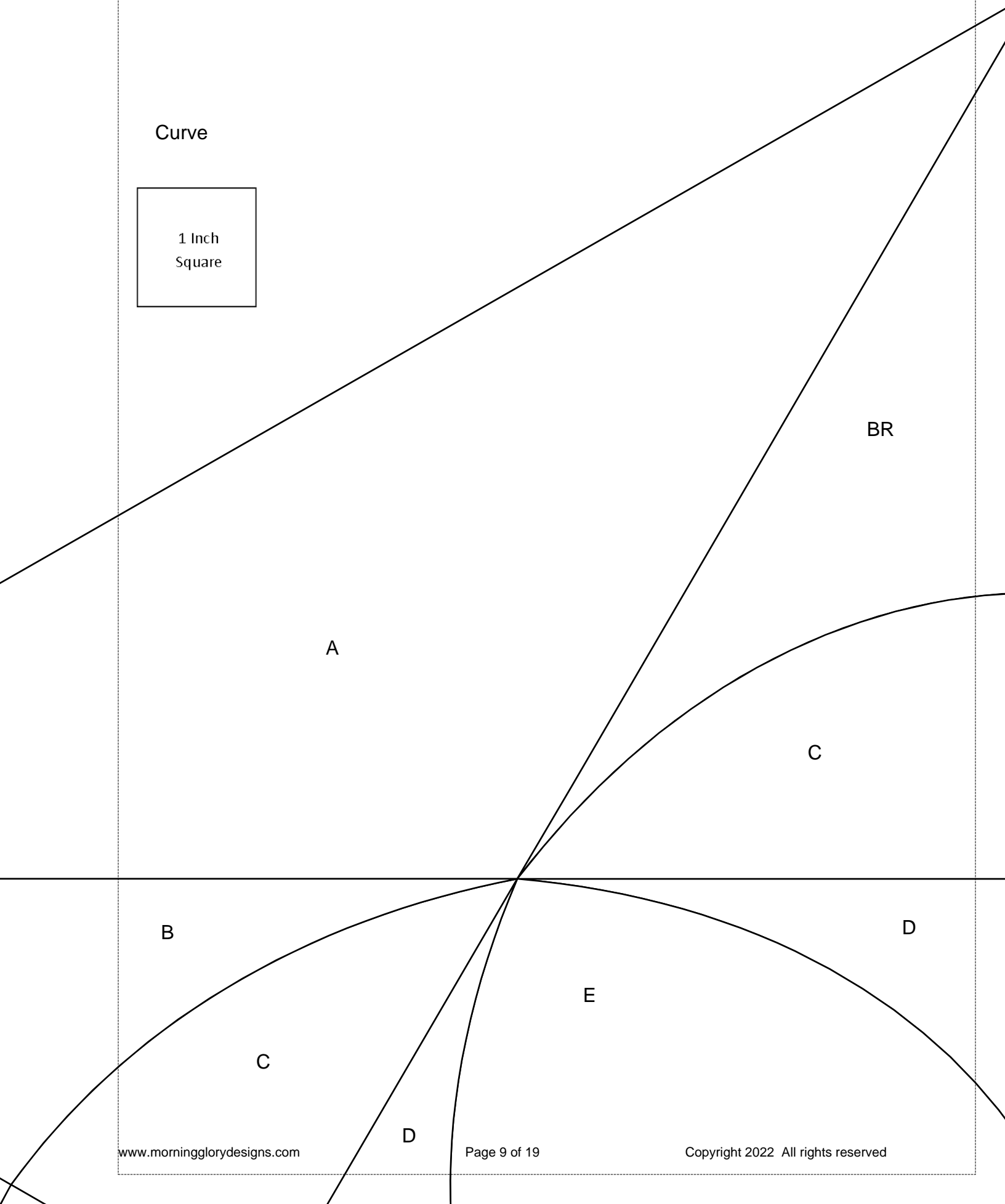
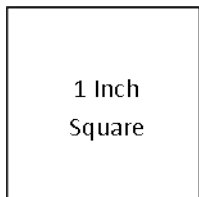
A

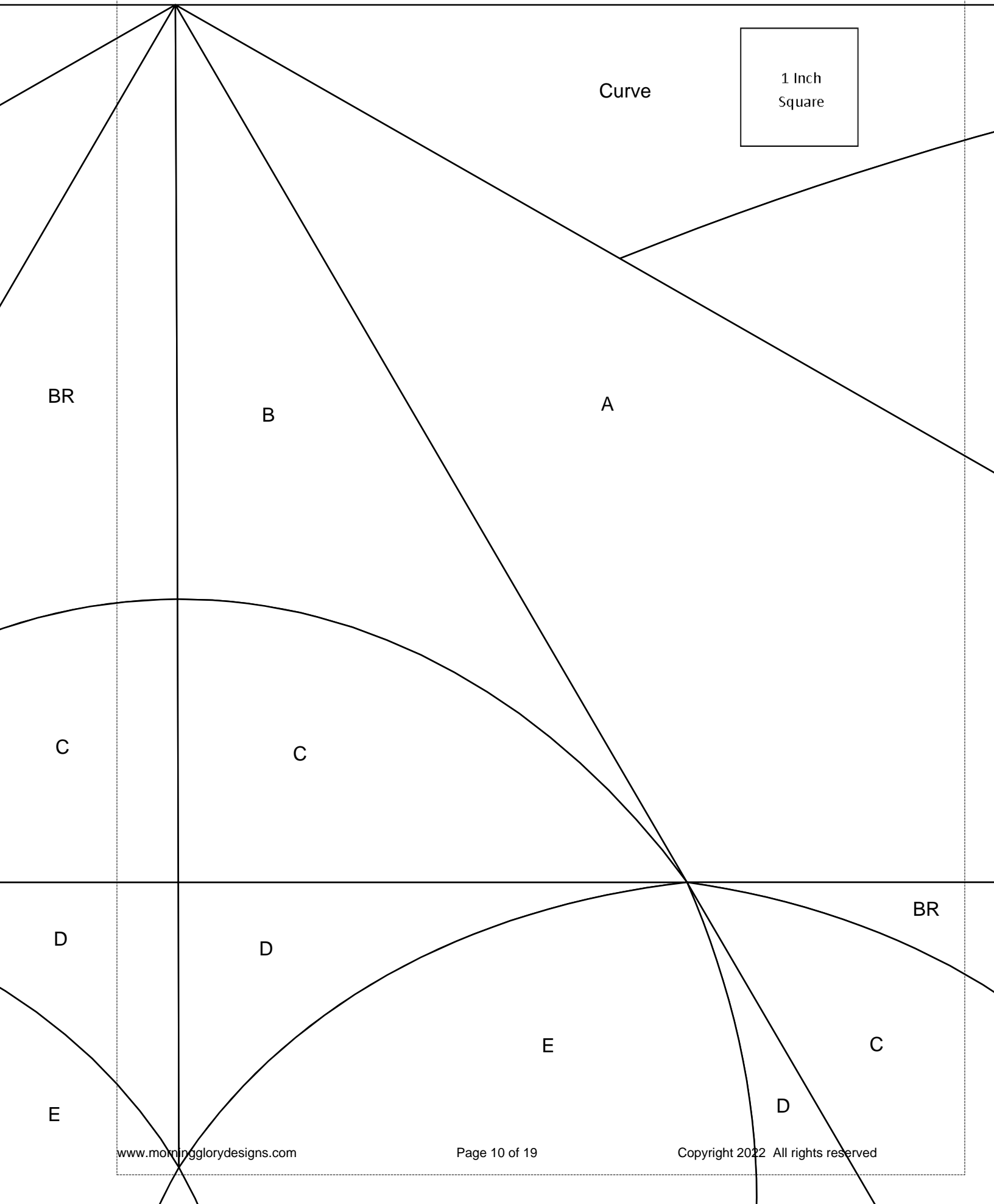
B

BR

A

Curve





Curve

1 Inch  
Square

BR

B

A

C

C

D

D

BR

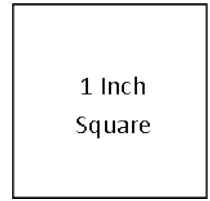
E

C

E

D

Curve



A

BR

C

B

A



A

BR

C

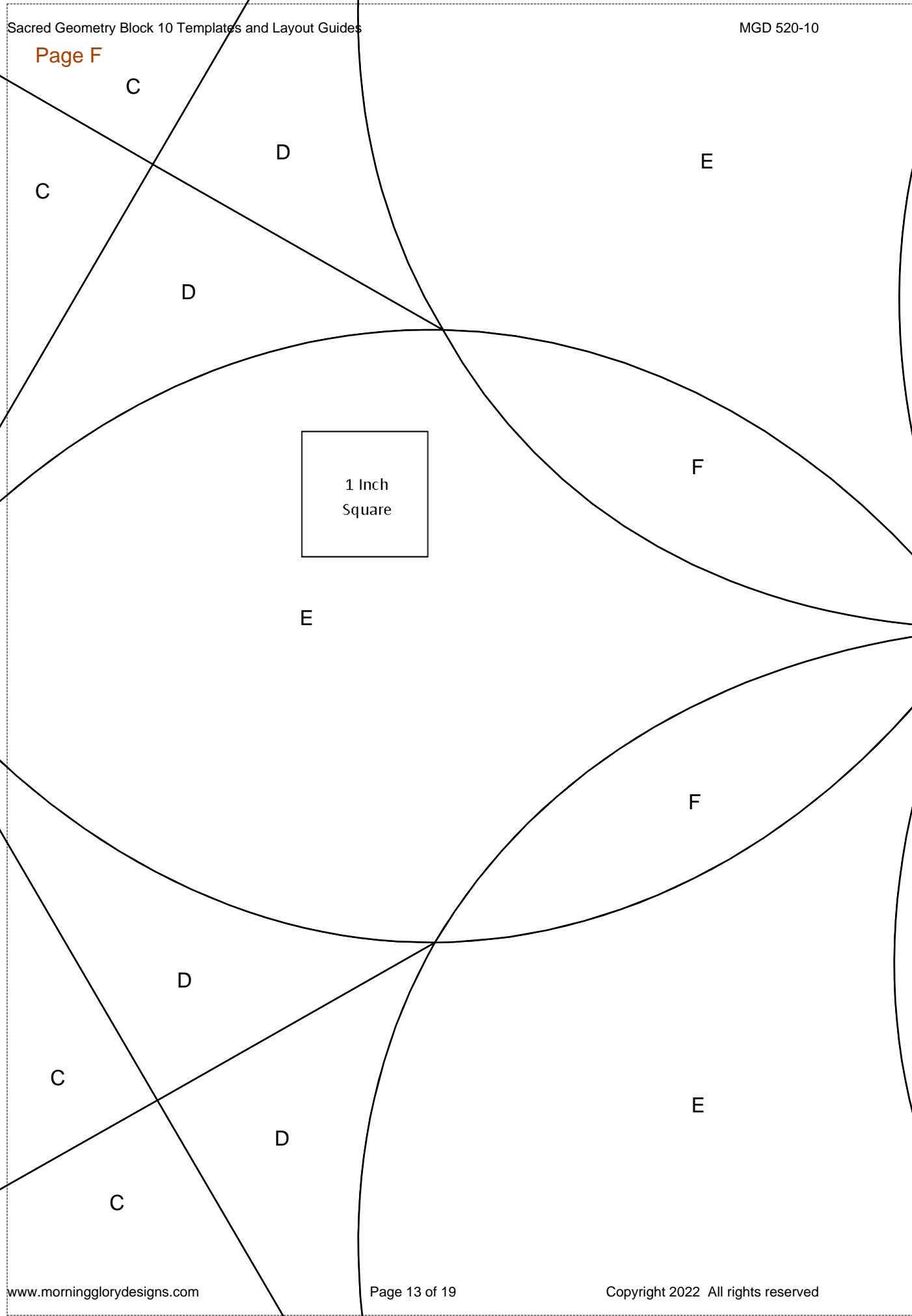
D

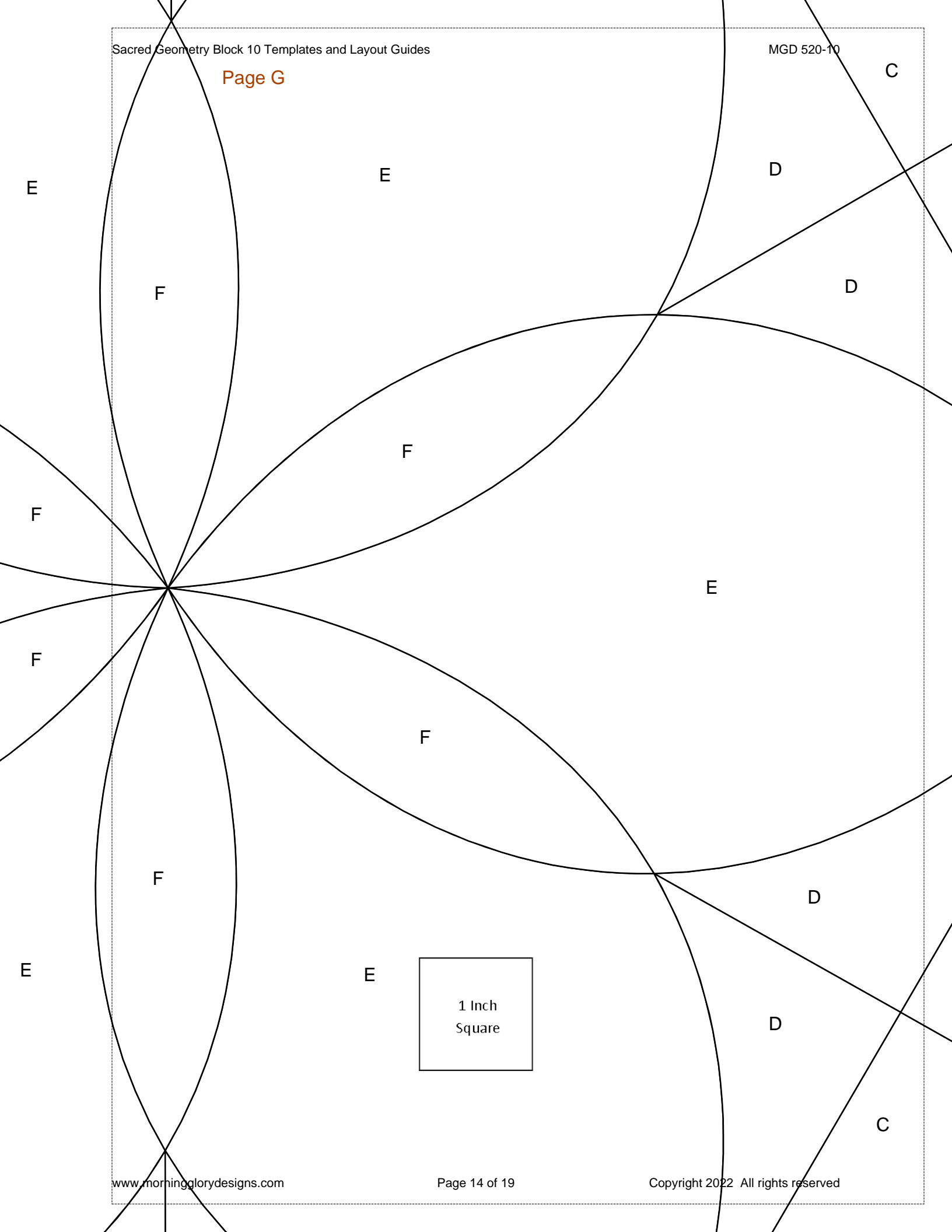
E

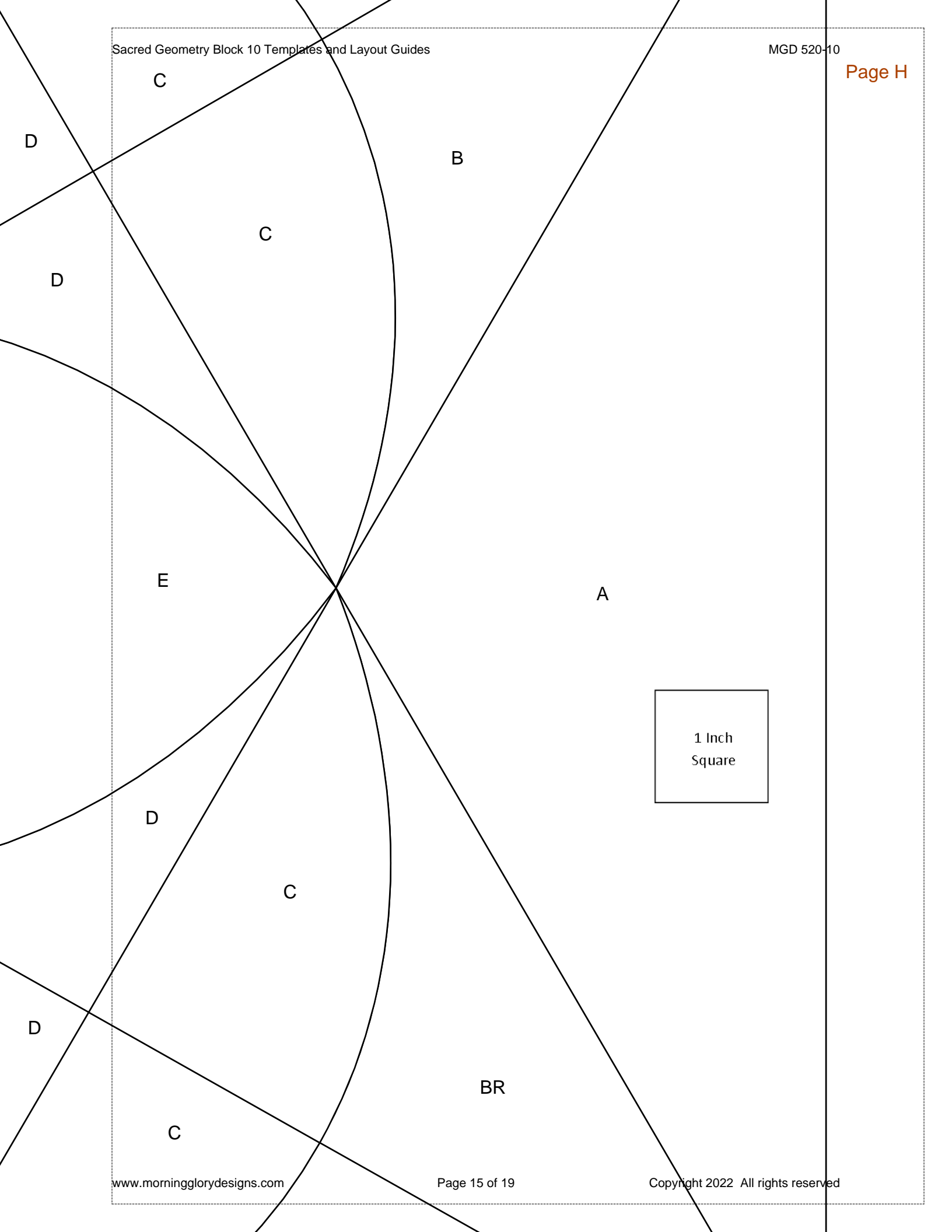
D

C

B







Page I

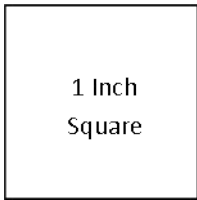
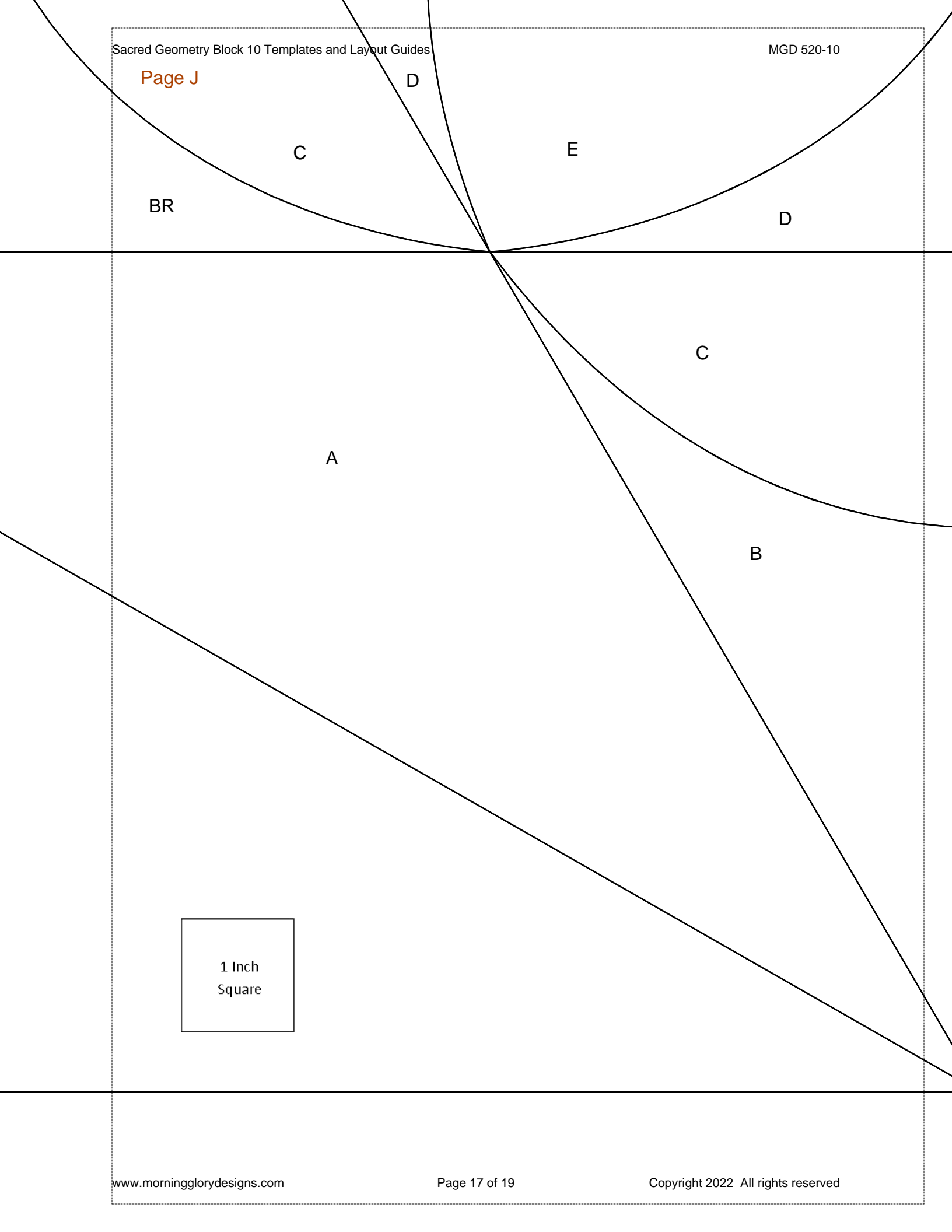
Curve

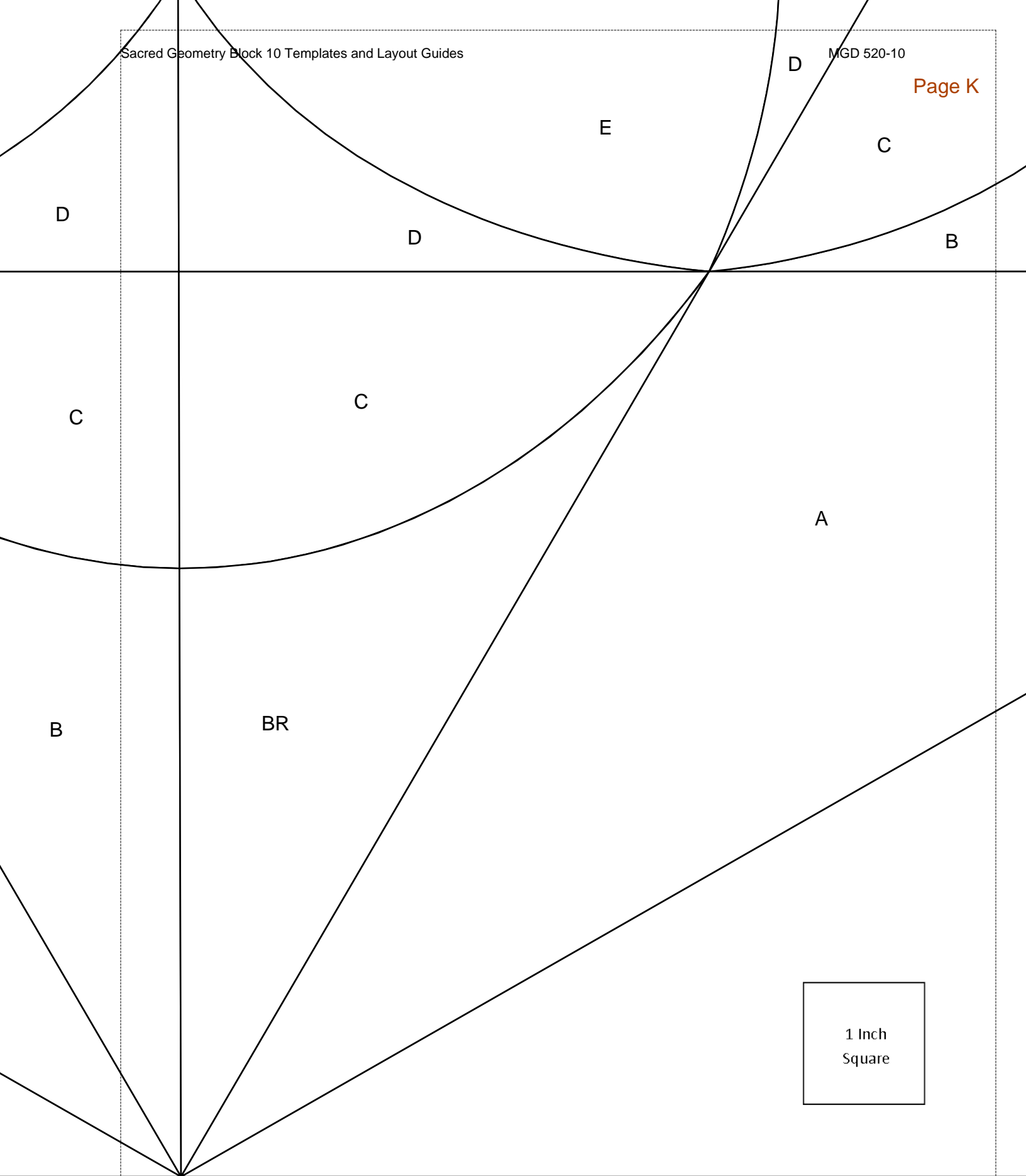
A

B

BR

A





BR

A

Page L

C

B

A

