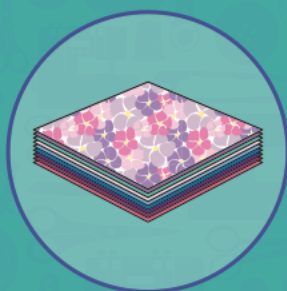


Paper-Foundation Piecing

How to Make Paper-Pieced Quilt Patterns

Robin Strobel



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What is Paper-Foundation Piecing?

Sometimes called simply “foundation piecing,” other times called “paper piecing,” stitching fabric onto a paper foundation allows you to stitch with amazing accuracy. If you love long, slender, pointy points and precise piecing, you’ll find you can create magic with this method.

The basic idea of paper-foundation piecing involves printing or tracing your block pattern onto a piece of [easy-to-tear paper](#). Then you sew fabric pieces to the wrong side of the paper, using the lines on the right side of the paper for guidance. Since you’re sewing on the line and using a firm foundation for stability, the sewing is precise and accurate. When all the sewing is complete, you tear away the paper and your beautiful block remains.

To help you achieve success, I’ve included a couple of tips, and I’ll warn you about the common pitfalls so that you can avoid potential problems. For example, one thing I’ll mention here is that paper piecing takes more fabric than conventional piecing. There’s always a little more fabric wasted. On the other hand, paper-foundation piecing makes great use of scraps and oddly shaped fabric pieces you wouldn’t normally find a use for. So do yourself a favor and try paper piecing. If accurate piecing makes your heart sing, paper-foundation piecing may be your perfect method.

Getting Started with Paper-Foundation Piecing

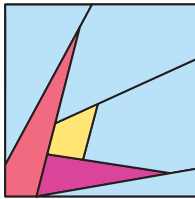
As with all new techniques, it’s best to start with a small, fairly simple paper-piecing pattern. (Thus speaks the woman who quilted a king-size quilt for her parent’s wedding anniversary as her first machine-quilting project!) The flower block that follows is a good beginner project.

You’ll need one paper pattern for each block you want to make. You can copy the pattern onto the foundation paper either by hand, using a ruler and a fine-point permanent marker (pencils and ballpoint pens will smear, so don’t use those), or you can photocopy the pattern onto the foundation paper. I suggest you make an extra copy or two just in case you ruin the first one.

As for the type of foundation to use, paper-piecing paper is available at your local quilt shop and [online](#). Test several types of foundation paper to find the one you prefer. I’ve used cheap copy paper, tracing paper, baking parchment, and doctor’s office exam-table paper, depending on what I had on hand at 7 o’clock on a Sunday night. The best paper will tear easily along the stitching lines, won’t leave a bunch of little fibers behind, and is strong enough that it won’t fall apart and jam the photocopier. The foundation paper also needs to be translucent enough that you can see pieces of fabric through the paper when you hold it up to the light.

Paper-Pieced Flower

The following instructions are for making one foundation-pieced Flower block.



Flower block

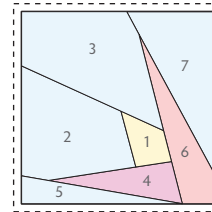
Materials for Paper-Foundation Piecing

For one flower block, you'll need:

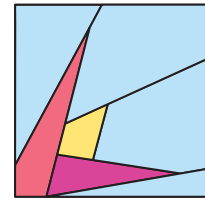
- 1 square, $6\frac{1}{2}$ " x $6\frac{1}{2}$ ", of foundation paper
- 9" x 18" piece of blue fabric
- Scrap of yellow fabric, about 3" square, for piece 1
- Scrap of purple fabric, at least $2\frac{1}{4}$ " x 6", for piece 4
- Scrap of rose fabric, at least $2\frac{1}{4}$ " x 7", for piece 6
- Sewing machine and neutral-colored thread
- Scissors
- Iron
- Pins
- Ruler (if hand tracing pattern)
- Fine-point permanent marker (if hand tracing pattern)
- 8" x 8" piece of old fabric to use as a pressing cloth (if photocopying pattern)
- Seam ripper (optional, but you'll probably sew an incorrect seam or two to start with)
- Transparent tape (the type you wrap presents with—also optional)
- Stapler (optional; see "Punchy Tip" on page 4)
- Sharp tweezers (optional, for pulling off paper)

Step-by-Step Paper-Foundation Piecing

In the flower block, the solid lines are the sewing lines, and the solid line around the perimeter indicates the edge of the finished block. The dashed outer line of the pattern indicates the outer $\frac{1}{4}$ " seam allowance used to sew this block to others in the quilt.



Pattern faces left.



Sewn block faces right.

1 Trace or photocopy the pattern (page 9) onto foundation paper and cut on the outer (dashed) line. The pattern given will make a 6" finished block ($6\frac{1}{2}$ " including the outer seam allowances). Make one foundation pattern for each block you want to make.

2 Cut the blue fabric into the following pieces:

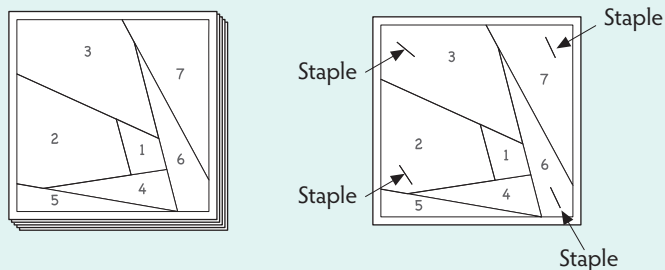
- 1 square, 5" x 5", for piece 2
- 1 rectangle, 4" x 7", for piece 3
- 1 rectangle, 6" x $2\frac{1}{2}$ ", for piece 5
- 1 rectangle, $6\frac{1}{2}$ " x $3\frac{3}{4}$ ", for piece 7

The measurements of these pieces don't need to be exact—you simply need enough fabric to cover each shape plus a $\frac{1}{4}$ " seam allowance all around. When you're starting out, it's easier to have chunks of fabric that are a bit too large rather than risking not having enough. With larger pieces, there's more wasted fabric—but less frustration and seam ripping. As you become accustomed to paper piecing, you'll be able to estimate the size and shapes of fabric you need for each piece and won't use as much fabric.

Punchy Tip

Here's a great timesaving trick if you need more than just one or two copies of your pattern and you don't have a photocopier available. Use craft scissors to cut the foundation paper into however many squares you need in a size slightly larger than your block pattern. For example, if your block finishes at 6" square, it will be 6½" square with the outer seam allowance, so cut squares 7" or so. They don't have to be accurate squares; rough cutting is fine.

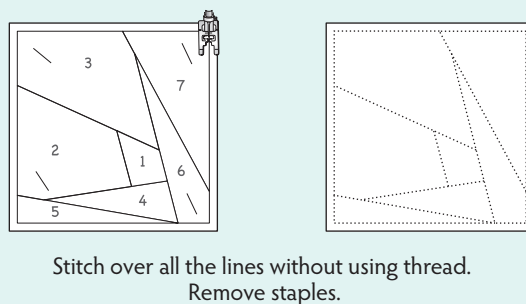
Accurately trace the pattern onto one of the squares, or make one photocopy of the pattern. Stack five to seven foundation-paper squares together, with the traced or copied pattern facing up on top. Staple the stack together in about four places, stapling where there are no stitching lines so you can sew over the lines. You need enough staples so the papers don't shift, but not so many that the staples are difficult to remove.



Remove the thread from both the top and bobbin of your machine and replace your sharp new needle with an old one (preferably a size 12 to 16). Or, if you're like me and haven't replaced your needle in awhile, keep the old needle in the machine but plan on replacing it after you've made all your foundation patterns.

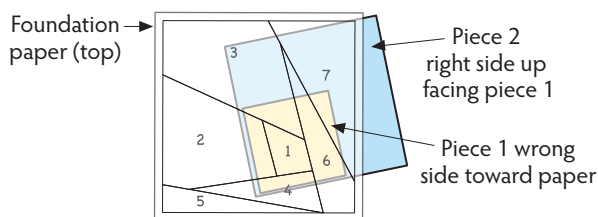
Place the stapled squares under the machine, lower the presser foot, and stitch *exactly* on all of the drawn lines (including the outer dashed line to mark the seam allowance). I usually shorten my stitch length slightly, but it doesn't really matter. The needle punches holes through all the foundation papers. The line of holes acts as your stitching line and also makes it extra easy to tear away the paper when you've finished sewing the block.

When you're done stitching, remove the staples and separate the foundation papers. Because the punched patterns won't have markings on them, you may either want to write the piece numbers on each pattern so they're easy to follow, or you can keep the original master pattern to follow as a guide; save that one for stitching on last. Use the hole lines as a guide when you sew the fabric to the foundation.

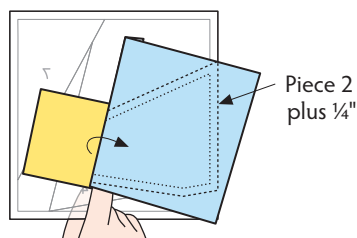


3 Each section of the pattern is numbered to indicate the piecing sequence. Begin by sewing piece 1 to piece 2 along their shared line. Start with the yellow 3" square of fabric for piece 1 and the blue 5" x 5" square for piece 2. Place the yellow square right side up on the wrong side of the foundation paper so that it covers section 1. Hold the foundation-paper square up to a light with the printed side facing you and move the fabric around until one edge of the fabric extends about $\frac{1}{4}$ " beyond the line between piece 1 and piece 2. Not only should the piece 1 shape be completely shaded by the fabric, but the fabric should also extend $\frac{1}{4}$ " beyond the shape on all of the sides. Pin piece 1 to the paper.

With right sides together, layer the piece 2 fabric onto piece 1, matching the edges parallel to the line between pieces 1 and 2. When it's flipped open, piece 2 needs to completely cover the piece 2 shape plus a $\frac{1}{4}$ " seam allowance all around. To check this, turn the foundation over and pinch the fabric right at the seam line. Flip the blue square over to check that it will cover all of piece 2 on the foundation *plus* $\frac{1}{4}$ ". Now you understand why it's better to precut your pieces a little too large instead of too small. I'm constantly surprised where the fabric actually falls after being sewn and flipped. It may take a little fiddling to determine the correct placement of piece 2.



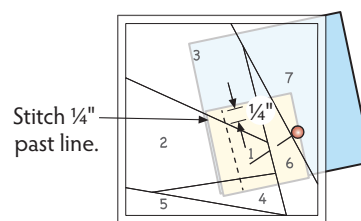
Position fabric right sides together under the foundation paper



4 Place a pin to hold the fabric pieces in place on the foundation paper. Place the paper and fabric under your machine with the paper on the top. Set your stitch length a little shorter than usual—I usually sew with my machine set at about 12 stitches per inch, or about 2 on my machine. For paper-foundation piecing I set it around 1.5, or about 17 stitches per inch. The shorter stitch makes it easier to tear the paper off after the block is pieced. It also makes it harder to take out mistakes, so experiment with the best stitch length for your temperament. You may prefer it a little shorter or longer than what I use.

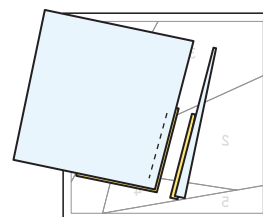
(If you made needle-punch patterns, did you remember to rethread your machine?)

Stitch along the line between pieces 1 and 2 on the foundation paper. I like to start and stop about $\frac{1}{4}$ " beyond the line, but other quilters prefer to take a short backstitch at the beginning and end of stitching instead. You need to do one or the other to keep the seams from pulling apart when you tear the paper off.



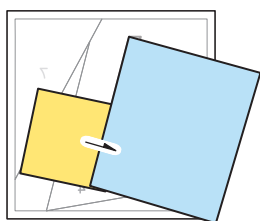
Stitch on the line between piece 1 and piece 2.

5 Double-check that piece 2 covers enough area, and then trim the excess fabric, leaving approximately a $\frac{1}{4}$ " seam allowance. I just whack at it with my scissors, but more meticulous quilters like to fold back the foundation paper along the seam line and use a rotary cutter and small ruler to trim the extra fabric to an accurate $\frac{1}{4}$ " seam allowance. Either way, be sure to trim to reduce the bulk in your block.



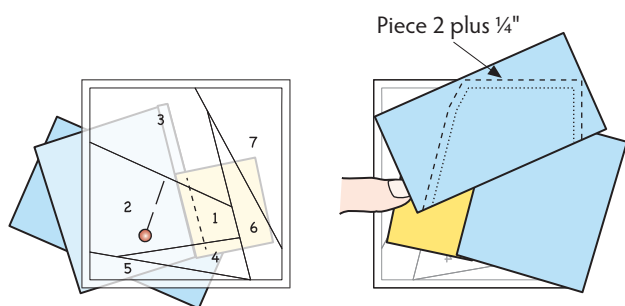
Trim to a $\frac{1}{4}$ " seam allowance.

6 Press piece 2 open. You can use your fingernail to get a pretty good crease, or use your iron. When you iron foundation paper, be aware that sometimes photocopy ink will transfer to your iron, and then onto your fabric, so it's best to use a pressing cloth or waste fabric between the paper and your ironing board. I also avoid using steam, since that can dampen and crinkle the paper, making the process not as accurate as you'd like.



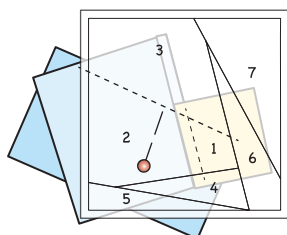
Press toward piece 2.

7 Position the blue 4" x 7" rectangle for piece 3 right sides together with pieces 1 and 2 and hold the pattern up to the light so you can guesstimate that piece 3 extends $\frac{1}{4}$ " beyond the stitch line between pieces 1 and 2 and piece 3. Flip the pattern over and check that piece 3 covers the foundation pattern plus extra for seam allowances. Pin piece 3 in place and stitch along the line as you did in step 5. Stitch past the line all the way to the edge of the paper.



Position piece 3 right sides together with pieces 1/2.

Check that piece 3 is positioned properly.

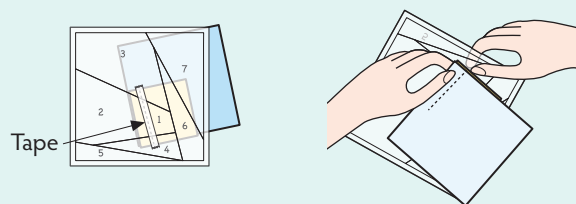


Stitch on the line between pieces 1/2 and piece 3.

Fixing Mistakes

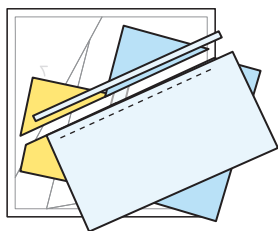
Gaack! You did something wrong (such as skipping one of the stitching lines) and now have to rip out your seam. Welcome to paper piecing. Everyone's done that, but because of the short stitches and the rigidity of the paper, it's difficult to rip out seams. Don't despair. If you catch the problem right away, and not four seams later, here's how to fix it.

Flip the foundation unit so the paper is facing you. Place a strip of transparent tape along the stitched seam and press on it so it has a good hold on the paper. Now with one hand, grab the foundation paper close to the end of the seam and take a good hold of the fabric in your other hand. Give a quick jerk to rip the fabric from the foundation paper. Zap! You should end up with the sewn fabric pulled from the paper. Now it is easy to snip every three stitches or so and pull out the seam. The foundation is still intact and you can reuse it to restitch your pieces.

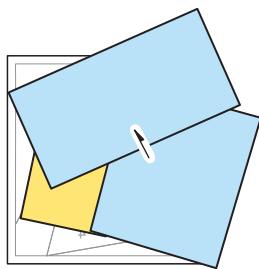


If you don't mind wasting a bit of fabric, here's another way to remove a mistake. Using fabric scissors, cut away the seam allowance of the newly added fabric *only* (the blue piece 2, not the yellow piece 1). Cut the seam allowance as close as possible to the stitching line. Then simply pull the big chunk of remaining fabric away from the stitching. The thread stitching line is still there, but the fabric is gone and the foundation is intact. Add a new piece 2 fabric and sew one thread's width away from the line to conceal the old threads. This method takes just a few seconds to accomplish, the foundation isn't torn, and you're good to go!

8 Check that the piece 3 fabric is covering the piece 3 foundation shape plus $\frac{1}{4}$ " seam allowances; then trim the excess along the seam and press open. If the excess fabric beyond the paper's edge is bothersome, you can trim it off. I wait and trim the excess fabric from the block's edges after all of the pieces are sewn. I have two reasons for doing this. The reason I usually share with folks is that I tend to trim only when I need to in case I've made a mistake and have to rip out seams. If I trim too soon, I'm likely to cut away fabric I'll need. The other reason is I'm too lazy to trim piece by piece and I've learned to ignore the excess fabric.

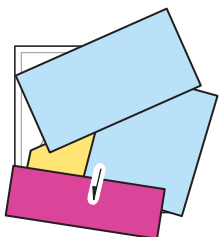


Trim to a $\frac{1}{4}$ " seam allowance.

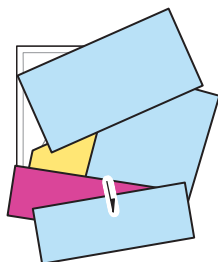


Press toward piece 3.

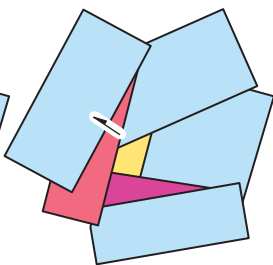
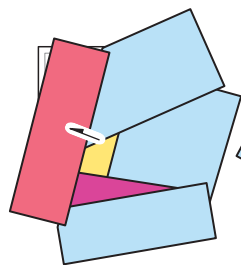
9 Repeat steps 7 and 8 with the remaining pieces, sewing in order and trimming and pressing after adding each piece.



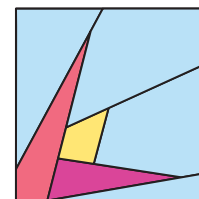
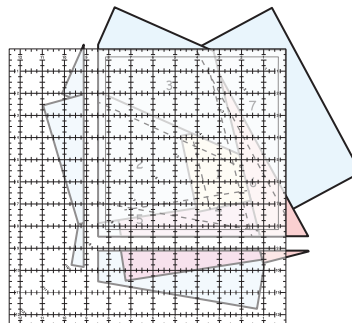
Piece 4 sewn.



Piece 5 sewn.



10 After all the pieces are sewn, press your block with a medium-hot iron. Remember to use a pressing cloth over the photocopied side of the paper in case the ink smears, and don't use steam because it will dampen the paper. Trim your block to the *outer* line ($6\frac{1}{2}$ " square) and admire your work.



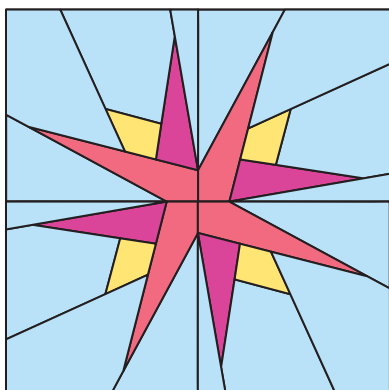
11 Now you get to remove all the paper! The large pieces are easy, but the tiny bits in seams can be a little fussier. I find placing a thumb on the stitching, and then sliding a pair of long, sharp tweezers inside the seam and giving a tug with the tweezers is the easiest method of paper removal. The tweezers are also helpful in removing little bits of paper that can get caught in the stitching.

If you make multiple blocks, you may decide to wait to remove the paper until after all the blocks are stitched together. If you wait to remove the paper, it's a snap to sew the blocks together, but then there are more seams from which to tear the paper. Some people make their paper patterns only the size of the finished block (omit the outer seam allowance), and then trim the fabric $\frac{1}{4}$ " outside the edge of the paper. Try both methods and see which you prefer.

Removing Paper Can Be a Snap

If you've used a lightweight paper, such as Martingale's [Papers for Foundation Piecing](#), tissue paper, or baking parchment, and you've set your stitch length to be pretty short, you can try this technique for releasing the paper. Hold the block firmly with one hand on each side of a stitching line. Give the block a quick tug in opposite directions. The fabric is flexible and will give, while the paper is firm and will snap. This works well on longer seams, but you may still need to resort to using tweezers in areas where multiple seams come together, such as in narrow points.

If you're the type of person who likes to end up with a finished product, make four Flower blocks and set them together to make a pretty star pillow or small wall hanging.

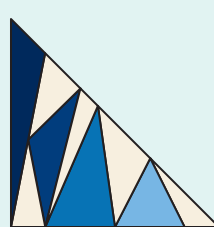


Four blocks combine to make a twisted star.

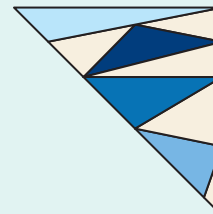
Symmetrical or Asymmetrical?

With paper piecing, the image you end up with will be a mirror image of the paper pattern.

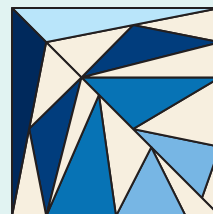
You always want to stitch on the correct side of the paper so that your finished piece faces the right direction.



Unit A



Unit B



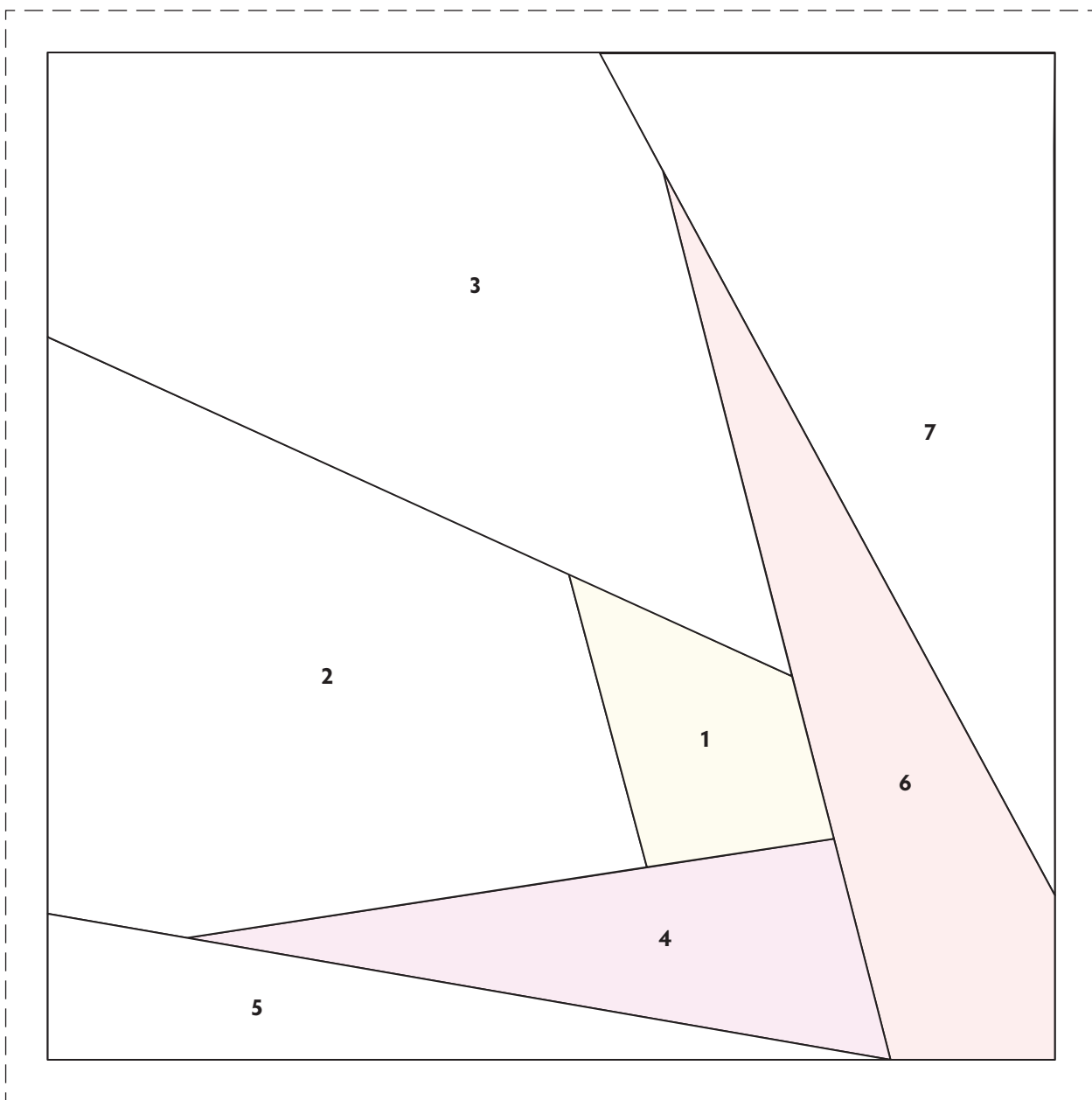
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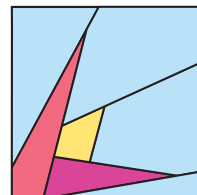
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Foundation-paper-piecing pattern
 Pattern includes an outer $\frac{1}{4}$ " seam allowance
 and creates a 6" finished block.



Pattern is reversed for
 foundation paper piecing.