Simple Math Quilts
by Elizabeth Hartman

Use this pattern to create two different modern cross quilts!

Simple Math
Approximately 47” x 62”
1/4 Yard or Fat Quarter (18” x 21”) each of 6 Print Fabrics for Blocks*
1-1/2 Yards Neutral Solid for Block Grounds
1-3/4 Yards Contrasting Solid for Sashing
51” x 66” Batting
3-1/4 Yards Fabric for Quilt Back
1/2 Yard Fabric for Binding
6-1/2” x 6-1/2” Quilting Ruler (optional)

*Alternately, you may substitute a Roll-Up (package of precut 2-1/2” strips) with at least 24 pieces.

See Page 2 for a list of fabrics used in the quilt at left.

Instructions for this version begin on Page 3.

Wonky Simple Math
Approximately 54” x 72”

You will need:
1/2 Yard each of 5 Print Fabrics for Blocks
2 Yards Neutral Solid for Blocks
1/2 Yard Contrasting Solid for Blocks
1-3/4 Yards Coordinating Solid for Sashing
58” x 76” Batting
3-1/2 Yards Fabric for Quilt Back
1/2 Yard Fabric for Binding
9-1/2” x 9-1/2” Quilting Ruler (optional)

See Page 2 for fabrics used in the quilt at right.

Instructions for this version begin on Page 6.

Note: Fabric requirements contemplate fabric at least 42” wide. Sewing directions assume all seams will be sewn with a 1/4” seam allowance and pressed open.
**Simple Math Quilt**

<table>
<thead>
<tr>
<th>Fabric Recommendations featuring Betty Dear</th>
<th>Aqua Colorstory*</th>
<th>Lavender Colorstory</th>
<th>Lake Colorstory</th>
<th>Yardage</th>
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<tr>
<td><strong>Neutral Solid</strong></td>
<td>Kona® Cotton- Snow</td>
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<td>Kona® Cotton- Petunia</td>
<td>Kona® Cotton- Cornflower</td>
<td>1-3/4 Yards</td>
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<td><strong>Prints for Blocks</strong></td>
<td>ADZ-10403-106 Blossom</td>
<td>ADZ-10405-169 Earth</td>
<td>ADZ-10404-121 Lipstick</td>
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<td></td>
<td>ADZ-10404-70 Aqua</td>
<td>ADZ-10404-23 Lavender</td>
<td>ADZ-10407-73 Lake</td>
<td>1/4 Yard or Fat Quarter</td>
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<td>ADZ-10405-70 Aqua</td>
<td>ADZ-10406-140 Screamin' Yellow</td>
<td>ADZ-10403-247 Cornflower</td>
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<td>ADZ-10406-122 Camellia</td>
<td>ADZ-10403-23 Lavender</td>
<td>ADZ-6851-2 Black</td>
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<td>ADZ-10407-122 Camellia</td>
<td>ADZ-6851-167 Chocolate</td>
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*Shown in photo on Page 1

**These prints, collectively, may be substituted for a Betty Dear Roll-Up

**Wonky Simple Math Quilt**

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<td><strong>Neutral Solid</strong></td>
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<td>Kona® Cotton- Lapis</td>
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<td>Kona® Cotton- Thistle</td>
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SIMPLE MATH QUILT

Cutting Directions

From Block Fabric

If you’re using standard 1/4 yards, cut the following from each:
- 1 strip 2-1/2” x width of fabric, subcut into 4 strips 2-1/2” x 10” (two pair of identical strips)
- 1 strip 2” x width of fabric, subcut into 4 strips 2” x 10” (two pair of identical strips)
- 1 strip 1-3/4”x width of fabric, subcut into 4 strips 1-3/4” x 10” (two pair of identical strips)
- 1 strip 1-1/2” x width of fabric, subcut into 4 strips 1-1/2” x 10” (two pair of identical strips)

If you’re using fat quarters, cut the following from each:
- 2 strips 2-1/2” x 21”, subcut into 4 strips 2-1/2” x 10” (two pair of identical strips)
- 2 strips 2” x 21”, subcut into 4 strips 2” x 10” (two pair of identical strips)
- 2 strips 1-3/4”x 21”, subcut into 4 strips 1-3/4” x 10” (two pair of identical strips)
- 2 strips 1-1/2” x 21”, subcut into 4 strips 1-1/2” x 10” (two pair of identical strips)

If you’re using 24 precut strips, cut 4 pieces 2-1/2” x 10” from each. (two pair of identical strips)

From Neutral Solid (Block Ground) Fabric

Cut 8 strips 6” x width of fabric. Subcut into 48 squares 6” x 6”.

From Contrasting Solid (Sashing) Fabric

Cut 15 strips 2” x length* of fabric. 11 of these are your Long Sashing Strips. Subcut the remaining 4 into 40 Short Sashing Strips 2” x 6-1/2”.

*See below for more information about cutting along the length of the fabric.

Cutting Along the Length of Fabric

To create long enough strips, the sashing fabric for this quilt needs to be cut along the length, rather than the width, of the fabric. Before you can do this, you'll need to unfold your yardage and then refold it in the opposite direction, along one of the selvage edges.

Unfold your yardage. Standing up, hold the unfolded fabric with both hands on one selvage edge (we'll call this the top selvage), allowing the other selvage edge (we'll call this the bottom selvage) to hang to the floor. Bring the cut ends of the top selvage together, folding the entire piece of fabric in half. Hold the fabric up as high as necessary to make sure that the bottom selvage edge of the folded fabric is also matching up. Fold the fabric in half a second time, continuing to hold the fabric by the top selvage edge and making sure the bottom selvage is lining up.

Lay the refolded fabric on your cutting surface. Trim away the selvage and follow pattern directions to cut the required number of pieces.
Making the Quilt Blocks

You should now have 48 identical pairs of Print Fabric Strips 10” long and 48 Block Grounds 6” x 6”. One pair of strips and one Block Ground will be used to make each block.

Begin by cutting one of your block grounds in half vertically. (Your cut should be 3” from each side.)

Sew one half of the block ground to either side of one of your print fabric strips, taking care to keep the halves lined up.

Rotate the block 90 degrees and, again, cut it in half vertically.

Sew one half of the block to either side of the other print fabric strip, once again taking care to keep both halves lined up.

Trim block to 6-1/2” x 6-1/2” to finish. A 6-1/2” x 6-1/2” ruler will speed this process, but isn't strictly necessary.

Repeat these steps to make 48 total blocks.
Making the Quilt Top

Arrange your finished blocks in 8 rows of 6 blocks each. Sew each row of blocks together, piecing a Short Sashing Strip between each. Sew the 8 rows together, piecing a Long Sashing Strip between each, trimming away excess length from the long strips as needed.

Sew a Long Sashing strip to the left and right sides of your quilt top and then the top and bottom of your quilt top, again trimming away excess length from the long strips as needed.

Making the Quilt Back

Cut your backing fabric into 2 equal pieces, each about 58” long. Trim away selvages and sew the two pieces together, matching long sides, sewing a pieced row of scraps between the two larger pieces, if desired.

Finishing Your Quilt

Sandwich, quilt and bind your quilt as desired. The fabric requirements for this quilt assume you will be making double-fold binding from 2-1/2” x width of fabric strips of fabric cut along the straight grain. For more detailed tutorials on making a quilt sandwich, free-motion quilting and making and sewing binding, please visit my blog, www.ohfransson.com.
Cutting Directions

Cut the 2 Yard piece of neutral solid fabric into 4 lengths 18” (1/2 yard) by width of fabric.

Place one of these folded 1/2 yard pieces on your cutting mat and cut a strip of fabric 8-1/2” x width of fabric. From this strip, cut 4 squares 8-1/2” x 8-1/2”. (Fig. 1)

Open up remaining, folded fabric and trim away selvage. From one end, cut a fifth square 8-1/2” x 8-1/2”. From remaining fabric, cut 3 pieces each 11” x width of fabric (about 9-1/2”). (Fig. 2.)

From the first 11” piece, cut 2 strips 3-1/2” x 11” and 1 strip 2” x 11”. From the second piece, cut 2 strips 3” x 11” and 1 strip 2-1/2” x 11”. From the third piece, cut 1 strip 2-1/2” x 11”, 2 strips 2-1/4” x 11” and 1 strip 2” x 11”. (Fig 3.)

You should now have 5 squares 8-1/2” x 8-1/2” and 5 pairs of 11” strips (1 each 2”, 2-1/2”, 2-1/2”, 3” and 3-1/2” wide).

Repeat this process with the other 3 neutral solid 1/2 yards, the contrasting solid 1/2 yard and the 5 print fabric 1/2 yards, keeping the pieces cut from each 1/2 yard together.
Making the Quilt Blocks

You should now have 10 sets of strips and squares, 5 cut from solid fabric and 5 cut from print fabric. Divide these into 5 pairs, each including one set of solid and one set of print pieces.

Starting with one set, pair each solid square with a set of print strips and each print square with a pair of solid strips.

Each set of 1 square and 2 strips will become a block.

Start by cutting the square in half. Use your ruler and rotary cutter, but make your cut a little wonky (i.e. at a slight angle).

Sew one half of the square to either side of one of the strips, doing your best to keep the halves lined up.

Turn the block 90 degrees and make a second wonky cut.

Sew one half of the block to either side of the other strip, again lining up the two sides as best you can.
Finish the block by trimming it to 9-1/2” square. A 9-1/2” x 9-1/2” ruler will speed this process, but isn’t strictly necessary.

Repeat with the other sets to make 7 more blocks in this particular fabric combination. Then, repeat these instructions with the other 4 fabric pairs to make a total of 50 blocks.

Note: This system will produce 2 more blocks than you’ll need for the quilt top so, if you have a block or two that you’re not loving, don’t worry. Those can be set aside!

Making the Quilt Top

Arrange your finished blocks in 8 rows of 6 blocks each, alternating blocks with print and solid backgrounds in a checkerboard pattern. (You will have 2 extra blocks.) Sew each row of 6 blocks together. Then, sew the 8 rows together to finish the quilt top.

Making the Quilt Back

Cut your backing fabric into 2 equal pieces, each about 63” long. Trim away selvages and sew the two pieces together, matching long sides, sewing a pieced row of scraps between the two larger pieces, if desired.

Finishing Your Quilt

Sandwich, quilt and bind your quilt as desired. The fabric requirements for this quilt assume you will be making double-fold binding from 2-1/2” x width of fabric strips of fabric cut along the straight grain. For more detailed tutorials on making a quilt sandwich, free-motion quilting and making and sewing binding, please visit my blog, www.ohfransson.com.