

Multi-Patch, Inc.

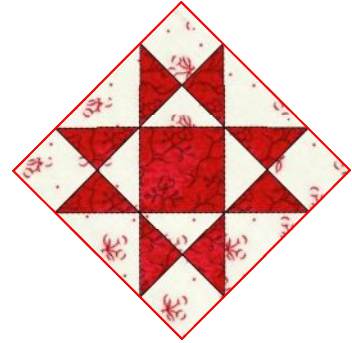
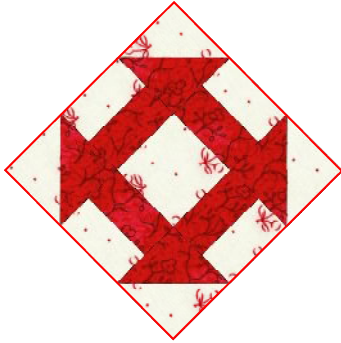
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Quilt Ruler Instructions

Zero Math Quilt Ruler Layout

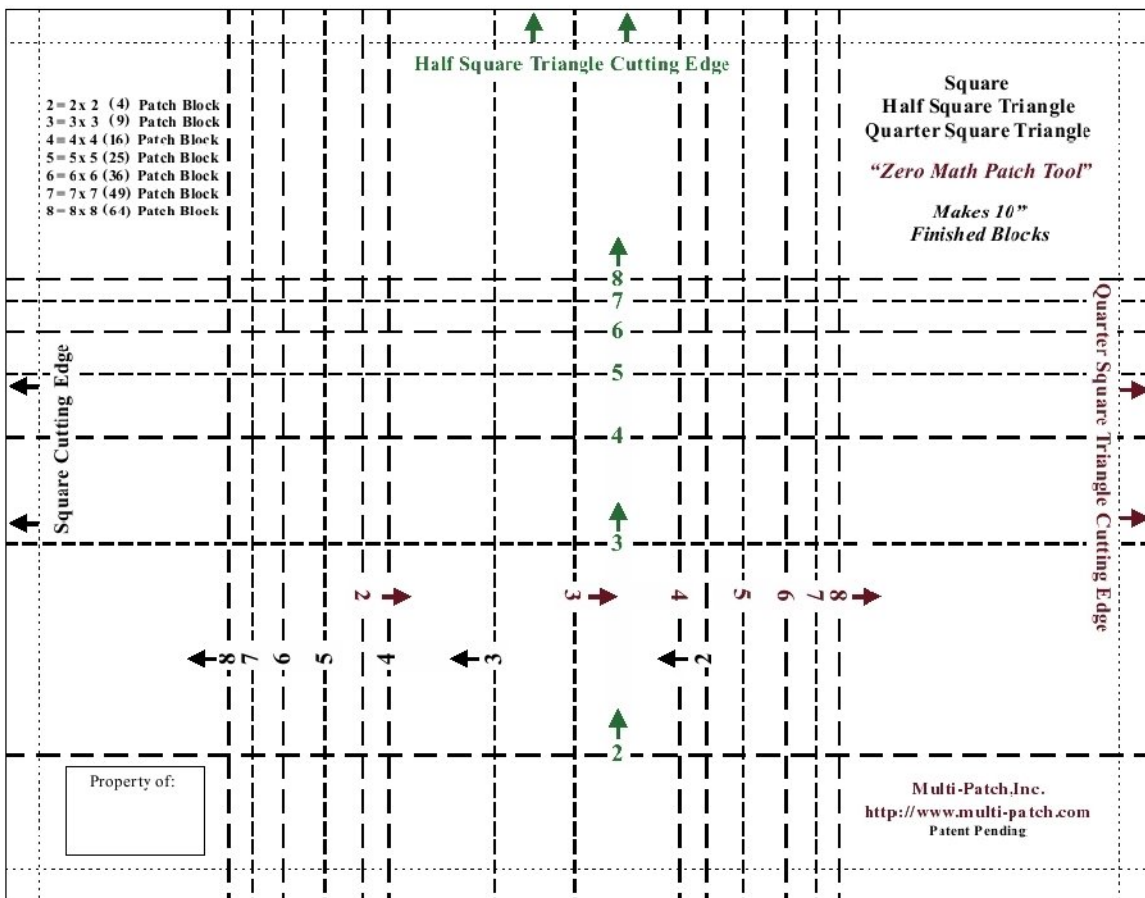
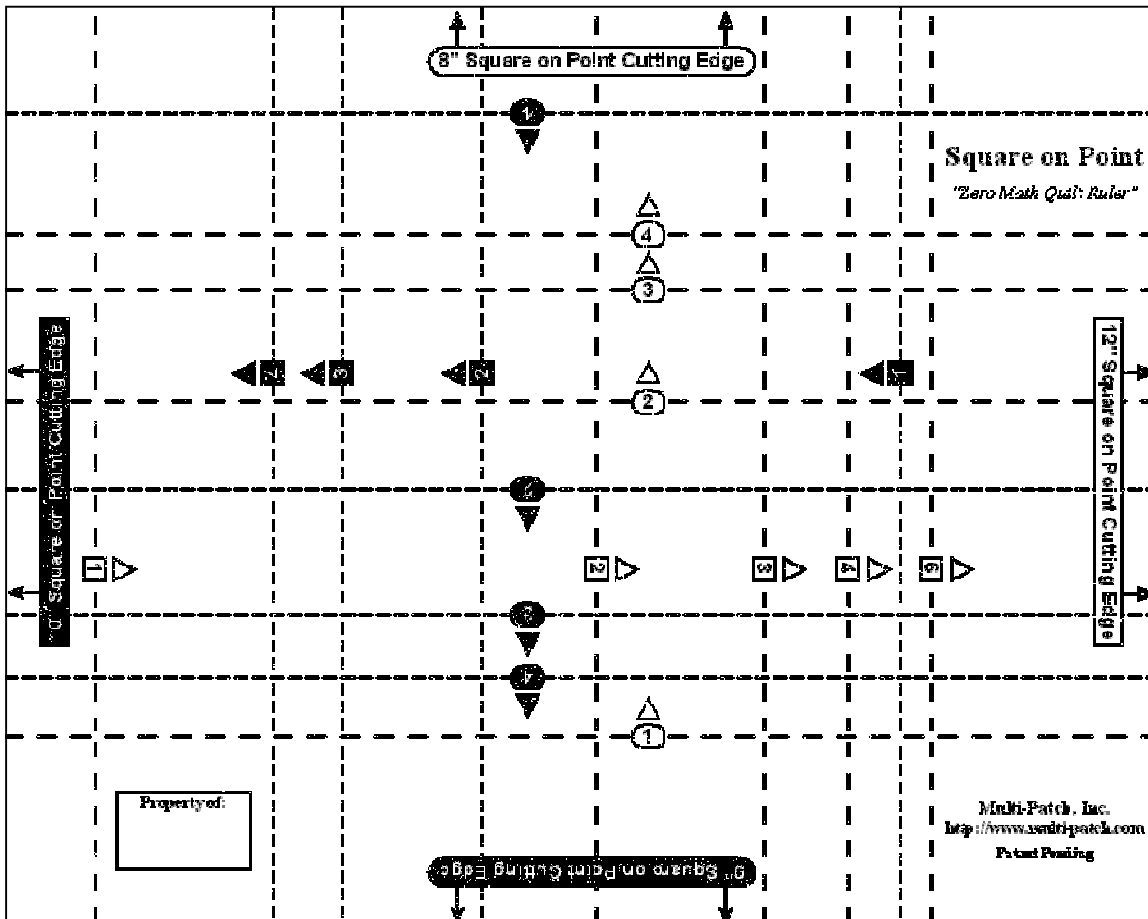


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Square on Point Quilt Ruler Layout (Square in a Square)



Zero Math Quilt Ruler Instructions

The "Zero Math Quilt Rulers" come in 5 finished block sizes (6", 8", 9", 10" & 12").

Each ruler has 3 cutting edges.

- 1) A **Square Cutting Edge** labeled in black is used to cut Square and Rectangular Patches.
- 2) A **Half Square Triangle Cutting Edge** labeled in green is used to cut Half Square Triangle Patches.
- 3) A **Quarter Square Triangle Cutting Edge** labeled in red is used to cut Quarter Square Triangle Patches.

There are only 3 things you need to know to be able to use the Zero Math Quilting Rulers:

- 1) **What size you want your finished block to be?** You can resize or scale the block to your project? For example you can easily make a 9 patch pattern fit either an 8" or a 10" finished block. Simply select the appropriate finished block ruler for the project.
- 2) **What type patch you want to make** because the patch type (Square, Half Square Rectangle, Half Square Triangle and Quarter Square Triangle) determines the cutting edge to use on the zero math quilting rulers?

Note: The long edge of a half square triangle patch is never parallel with the side of the block. The long edge of a quarter square triangle patch is always parallel with the side of the block.

- 3) **How many patches** it would take to go either across or down the block for that specific patch (what portion of the block does that specific patch span)?

Square on Point Quilt Ruler Instructions

The Square on Point Quilting Ruler was designed to accurately create multiple size Square on Point Patches (Square in a Square) for 5 finished blocks sizes (6", 8", 9", 10" and 12") without wasting any fabric. All Square on Point patches are cut on the straight of grain. Patches surrounding the Square on Point patch (square in a square) are created with the Zero Math Quilting Rulers. All 1/4" seam allowances are built into the lines on the Square on Point Quilting Ruler.

There are only 2 things you need to know to be able to use the Square on Point Quilting Ruler:

- 1) **What size you want your finished block to be?** Simply select the appropriate cutting edge for that finished block size.
- 2) **How many square on point patches** it would take to go either across or down the block (what portion of the block does that square on point patch span)?

Your sewing method does not change, but the accuracy of the quilt patches and quilt blocks you assemble sure does.

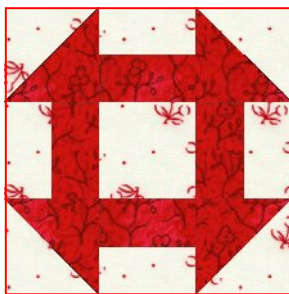
Note: Double the patch count for the 6" square on point patches and use the 12" finished block cutting edge. The 6" square on point is limited to 3 across.

Finished Block Sizes:

6", 8", 9", 10" or 12"

Note:

All dash lines on the rulers include the 1/4" seam allowance.



Churn Dash Block

Abbreviations:

- HSR** = Half Square Rectangle Patch
- HST** = Half Square Triangle Patch
- QST** = Quarter Square Triangle Patch
- SOP** = Square on Point Patch
- SQ** = Square Patch

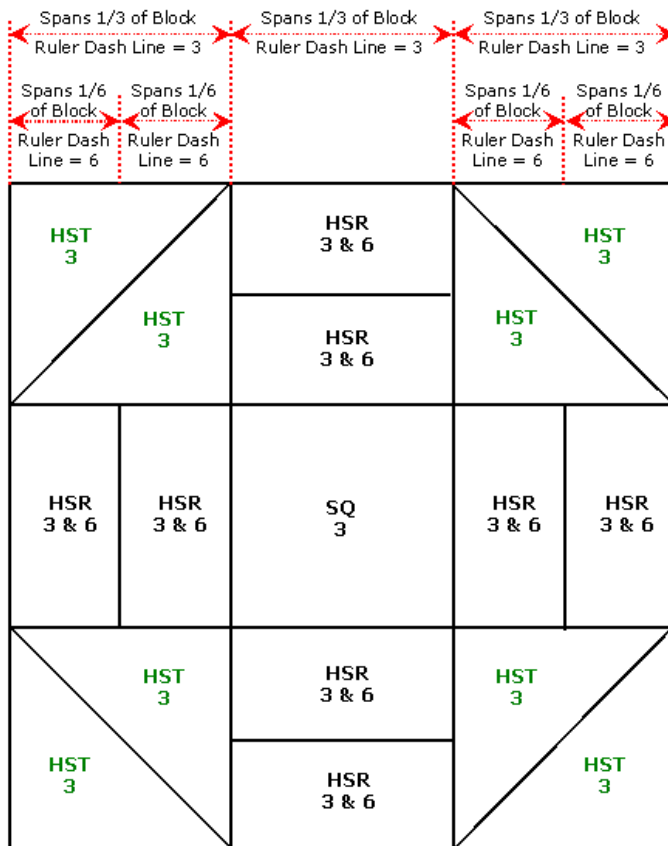
Note: #/s under abbreviations on block is the ruler dash line.

How To Count Patches

Simply look at the block and see what portion of the block that specific **patch spans**.

In the **diagram below** the square (**SQ**) and the half square triangle (**HST**) patches **span 1/3** of the block or it would take **3 of these patches** to go across or down the block so the **patch count is 3**.

The half square rectangle (**HSR**) patches **span 1/3** of the block in one direction or it would take **3 of these patches** to go across or down the block so the **patch count is 3** and the half square rectangle (**HSR**) patches also **span 1/6** of the block in the other direction or it would take **6 of these patches** to go across or down the block so the **patch count is 6**.

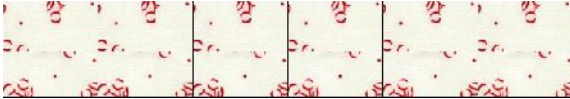




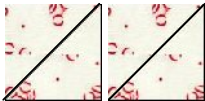
Cut strip/s for **HST** - Place the **HST** cutting edge on the fabric and position appropriate patch count line (**3**) on the edge of the fabric.



Cut Squares for **HST**- Place the **HST** cutting edge on the fabric strip and position the appropriate patch count line (**3**) on the short edge of the fabric strip. You need 2 of these squares (4 **HST** Patches) per block.



Cut strip/s for **HST** - Place the **HST** cutting edge on the fabric and position appropriate patch count line (**3**) on the edge of the fabric.



Cut Squares for **HST**- Place the **HST** cutting edge on the fabric strip and position appropriate patch count line (**3**) on the short edge of the fabric strip. You need 2 of these squares (4 **HST** Patches) per block.



Assemble **HST** units— Use either the face to face method marking a center line and sewing a 1/4" seam on both sides of the center line or diagonally cut the squares and piece them individually.



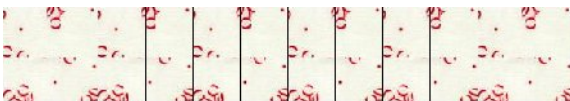
You need 4 of these **HST** units per block.



Cut strip/s for **HSR** - Place the **SQ** cutting edge on the fabric and position appropriate patch count line (**3**) on the edge of the fabric.



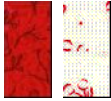
Cut **HSR**- Place the **SQ** cutting edge on the fabric strip and position the appropriate patch count line (**6**) on the short edge of the fabric strip. You need 4 of these **HSR** Patches per block.



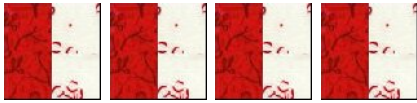
Cut strip/s for **HSR** - Place the **SQ** cutting edge on the fabric and position appropriate patch count line (**3**) on the edge of the fabric.



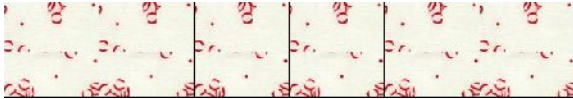
Cut **HSR**- Place the **SQ** cutting edge on the fabric strip and position the appropriate patch count line (**6**) on the short edge of the fabric strip. You need 4 of these **HSR** Patches per block.



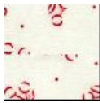
Assemble **HSR** units.



You need 4 of these **HSR** units per block.

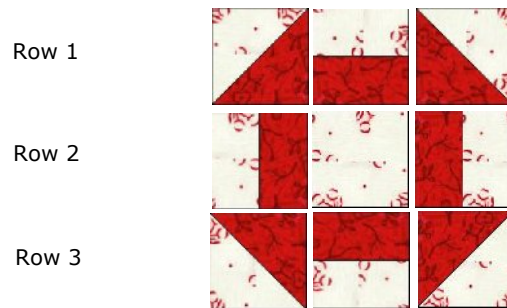


Cut strip/s for **SQ** - Place the **SQ** cutting edge on the fabric and position appropriate patch count line (**3**) on the edge of the fabric.



Cut **Squares** - Place the **SQ** cutting edge on the fabric strip and position the appropriate patch count line (**3**) on the short edge of the fabric strip. You need 1 **Square** Patch per block.

Assemble patch units in rows than sew rows together.



Abbreviations:

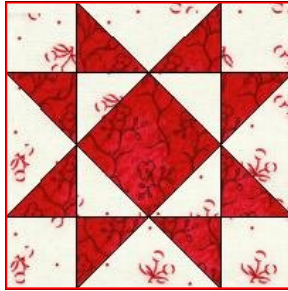
- HSR** = Half Square Rectangle Patch
- HST** = Half Square Triangle Patch
- QST** = Quarter Square Triangle Patch
- SOP** = Square on Point Patch
- SQ** = Square Patch

Finished Block Sizes:

4", 4.5", 5",
6", 8", 9", 10" or 12"

Note:

All dash lines on the rulers include the 1/4" seam allowance.



Abbreviations:

- HSR** = Half Square Rectangle Patch
- HST** = Half Square Triangle Patch
- QST** = Quarter Square Triangle Patch
- SOP** = Square on Point Patch
- SQ** = Square Patch

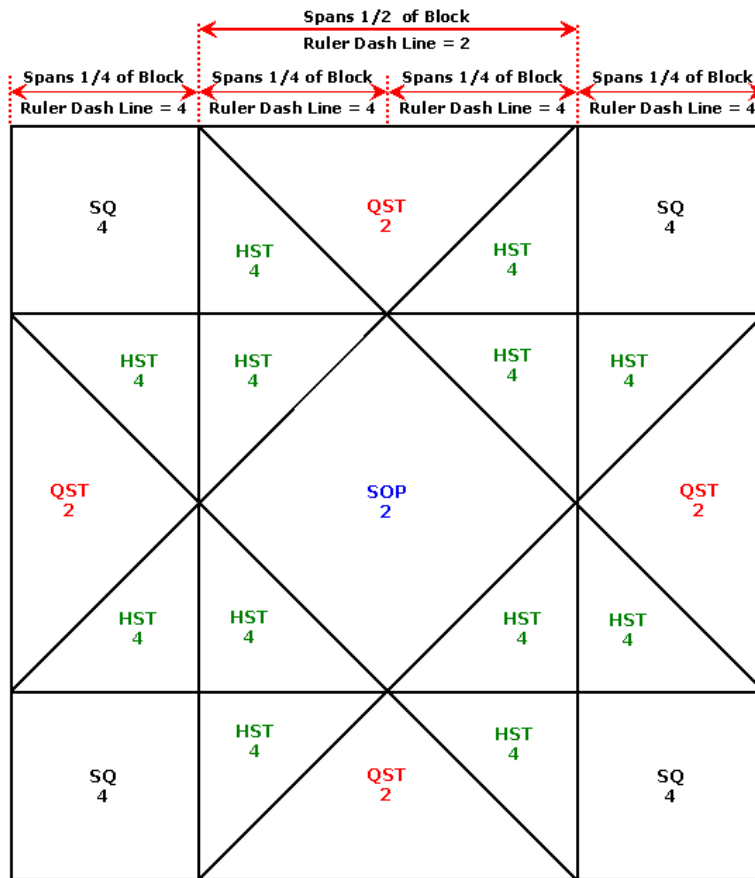
Note: #/s under abbreviations on block is the ruler dash line.

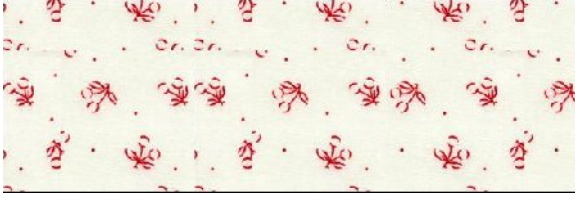
**Eight Point Star Block
How To Count Patches**

Simply look at the block and see **what portion** of the block that specific **patch spans**.

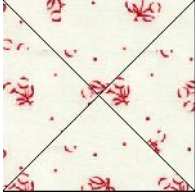
In the **diagram below** the quarter square triangle (**QST**) patches and the Square on Point (**SOP**) patch **span 1/2** the block or it would take **2 of these patches** to go across the block so therefore the **patch count is 2**.

The square (**SQ**) and the half square triangle (**HST**) patches **span 1/4** the block or it would take **4 of these patches** to go across the block so therefore the **patch count is 4**.



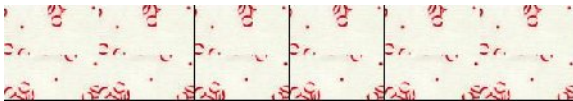
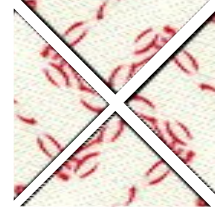


Cut strip/s for **QST** - Place the **QST** cutting edge on the fabric and position appropriate patch count line (**2**) on the edge of the fabric.

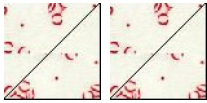


Cut Squares for **QST**- Place the **QST** cutting edge on the fabric strip and position the appropriate patch count line (**2**) on the short edge of the fabric strip. You need 1 of these squares (4 **QST** Patches) per block.

Diagonally cut **QST** Square corner to corner twice creating 4 **QST** patches.

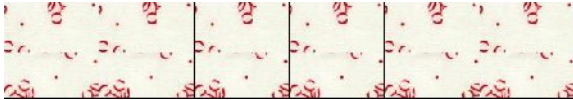
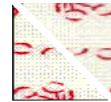


Cut strip/s for **HST** - Place the **HST** cutting edge on the fabric and position appropriate patch count line (**4**) on the edge of the fabric.

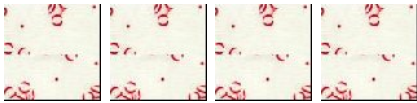


Cut Squares for **HST**- Place the **HST** cutting edge on the fabric strip and position the appropriate patch count line (**4**) on the short edge of the fabric strip. You need 2 of these squares (4 **HST** Patches) per block.

Diagonally cut each **HST** Square creating 2 **HST** patches.



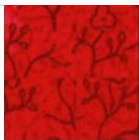
Cut strip/s for **SQ** - Place the **SQ** cutting edge on the fabric and position appropriate patch count line (**4**) on the edge of the fabric.



Cut **Squares** - Place the **SQ** cutting edge on the fabric strip and position the appropriate patch count line (**4**) on the short edge of the fabric strip. You need 4 **SQ** Patches per block.



Cut strip/s for **SOP** - Place the **SOP** cutting edge on the fabric and position appropriate patch count line (**2**) on the edge of the fabric.



Cut Squares for **SOP** - Place the **SOP** cutting edge on the fabric strip and position the appropriate patch count line (**2**) on the short edge of the fabric strip. You need 1 **SOP** Patch per block.



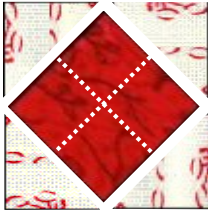
Cut strip/s for **HST** - Place the **HST** cutting edge on the fabric and position appropriate patch count line (4) on the edge of the fabric.



Cut Squares for **HST**- Place the **HST** cutting edge on the fabric strip and position the appropriate patch count line (4) on the short edge of the fabric strip. You need 4 of these squares (8 **HST** Patches) per block.



Diagonally cut each **HST** Square creating 2 **HST** patches. You need 8 **HST** patches per block.



Assemble **SOP** Unit - Finger fold the **SOP** Patch in half side to side creating a crease. Finger fold the **SOP** Patch in half again using the other two sides creating a second crease. Position the **HST** patch face to face with the **SOP** so that its long edge is on one side of the **SOP** patch. Place the point of the **HST** on the **SOP** crease. Sew a 1/4" seam along the edge. Repeat for the other 3 sides.

One (1) **SOP** unit per block.



Assemble Flying Geese Unit - Place **QST** and **HST** face to face so that the long side of the **HST** is aligned along one of the short sides of the **QST** and the short side of the **HST** is aligned on the long side of the **QST**. The points of the **HST** and the **QST** should match. Sew a 1/4" seam along the edge. Repeat for the other side.



Four (4) **Flying Geese** unit per block

Assemble patch units in rows than sew rows together.

Row 1



Row 2



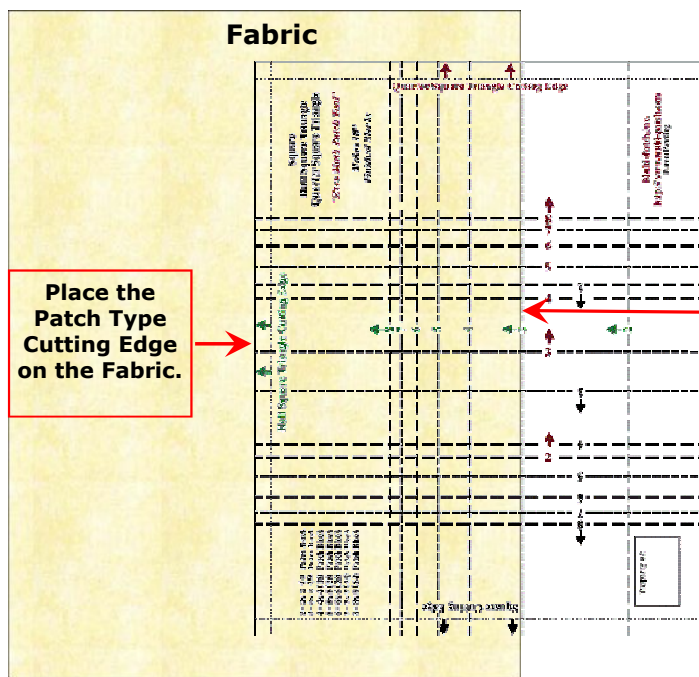
Row 3



Abbreviations:

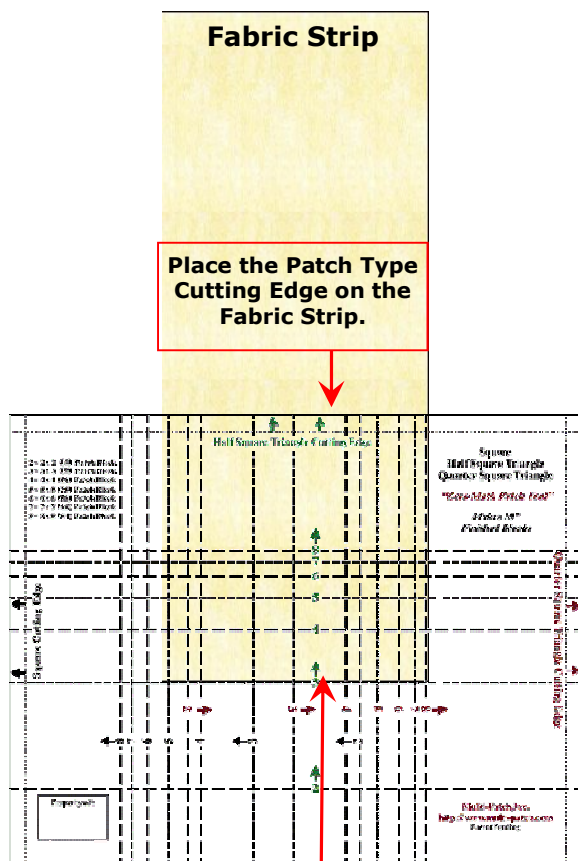
- HSR** = Half Square Rectangle Patch
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Positioning the Zero Math Quilt Rulers



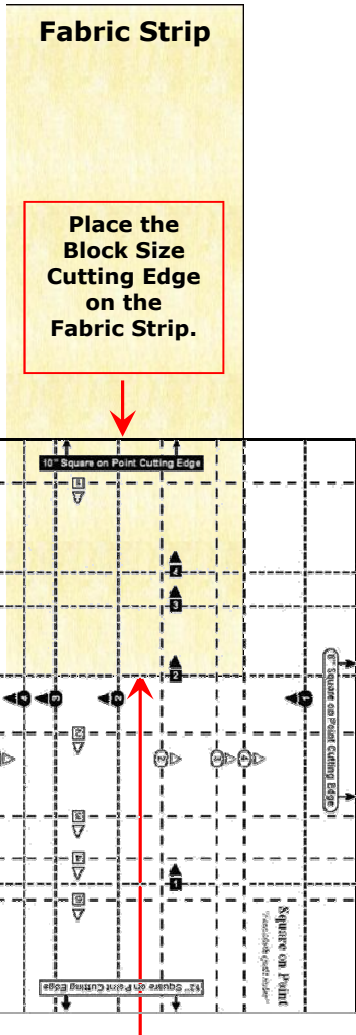
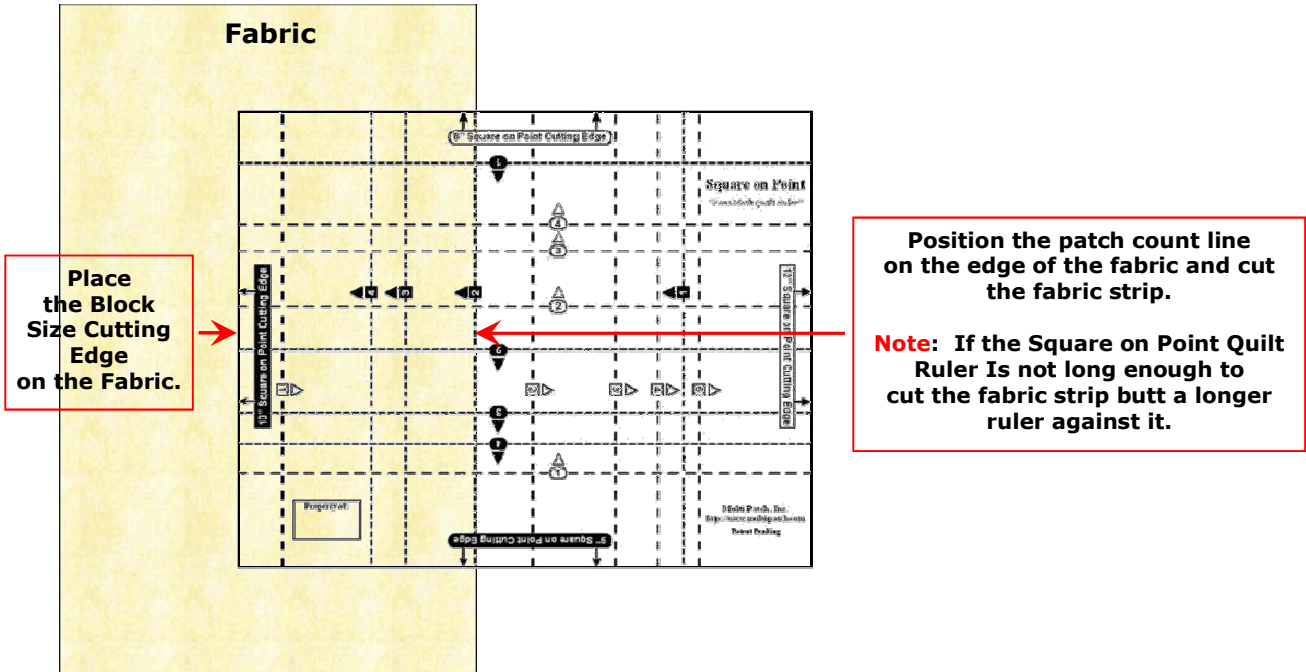
Position the patch count line on the edge of the fabric and cut the fabric strip.

Note: If the Zero Math Quilt Ruler is not long enough to cut the fabric strip but a longer ruler against it.



Position the patch count line on the short edge of the fabric strip and cut the patch.

Positioning the Square on Point Ruler



Position the patch count line on the short edge of the fabric strip and cut the patch.

Plan Your Quilt - Work Your Plan

Block 1

Fabric	Patch Type	Ruler Dash Line	# of Patches In Block	* Adjust for Patch Type	# of Blocks	Total #
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____

Block 2

Fabric	Patch Type	Ruler Dash Line	# of Patches In Block	* Adjust for Patch Type	# of Blocks	Total #
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____
_____	_____	_____	_____	x	_____	= _____

*** Adjustment for Patch Type:**

Half Square Triangle Patch divide # of Patches in Block by 2
 Quarter Square Triangle Patch divide # of Patches in Block by 4

Suggested Abbreviations Patch Type:

- | | |
|--|---|
| HSR = Half Square Rectangle Patch | HST = Half Square Triangle Patch |
| QST = Quarter Square Triangle Patch | SOP = Square on Point Patch |
| SQ = Square Patch | |