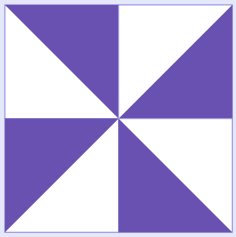
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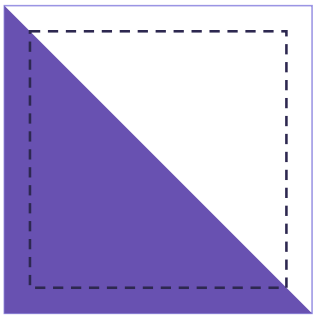
Half-Square Triangle Guide

Half-square triangles two, four and eight at a time: what size to cut, how each method goes together, how to trim them square, and layouts to sew them into.



What an HST is

A half-square triangle, or HST, is a square made of two right triangles sewn along the diagonal. Every method below sews two squares together first and cuts them apart after, so you never sew a loose bias edge.



Unfinished (trim) size: the outside edge.
Finished size: the dashed square, what shows once the unit is sewn into a block.
Unfinished = finished + 1/2 in (a 1/4 in seam on every side).
The seam runs exactly corner to corner.

Pick a method

Method	Start with	How	Outside edges	Good for
Two at a time	2 squares	Draw 1 diagonal, sew both sides, cut	Straight grain	Small counts, many fabric pairs
Four at a time	2 squares	Sew all 4 edges, cut both diagonals	**Bias** on all four sides	No marking; counts in fours
Eight at a time	2 squares	Draw 2 diagonals, sew both sides of each, cut 4 ways	Straight grain	Many units in one fabric pair

Each method has an exact size, sewn with a precise 1/4 in seam and no trimming, and an oversized one you trim down. Oversized costs a little fabric and gives square, accurate units, so this guide uses it except where noted.

You will need

Rotary cutter, mat and ruler; a square ruler with a 45-degree line, larger than your untrimmed unit; a fabric pencil or marker; pins; spray starch if you make four at a time.

CUTTING CHART

What size to cut

Finished	Trim to	2 at a time, exact	2 at a time, oversized	4 at a time	8 at a time
1 1/2	2	2 3/8	**2 1/2**	**3 1/2**	**5**
2	2 1/2	2 7/8	**3**	**4 1/4**	**6**
2 1/2	3	3 3/8	**3 1/2**	**5**	**7**
3	3 1/2	3 7/8	**4**	**5 3/4**	**8**
3 1/2	4	4 3/8	**4 1/2**	**6 1/2**	**9**
4	4 1/2	4 7/8	**5**	**7 1/2**	**10**
4 1/2	5	5 3/8	**5 1/2**	**8 1/4**	**11**
5	5 1/2	5 7/8	**6**	**9**	**12**
6	6 1/2	6 7/8	**7**	**10 1/2**	**14**

All sizes in inches; cut two squares of the size shown, one of each fabric. Bold sizes are oversized: trim every unit to the "Trim to" size.

The rules behind the chart

- **Trim to:** finished + 1/2 in.
- **2 at a time, exact:** finished + 7/8 in. No trimming.
- **2 at a time, oversized:** finished + 1 in.
- **4 at a time:** trim size / 0.64, rounded up to the next 1/4 in, plus 1/4 in.
- **8 at a time:** 2 x (finished + 1 in). The exact version is 2 x (finished + 7/8 in).

Which number is "the size"?

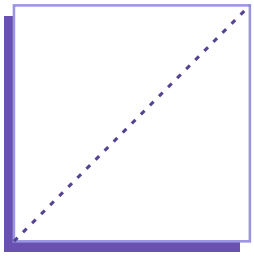
Patterns name an HST by its finished size, the size it shows in the quilt. A loose unit measures 1/2 in more. If a chart doesn't say, check against a block: four 3 in finished HSTs make a 6 in finished block. More in Finished vs unfinished sizes.

> Cut and sew one test pair before cutting a whole quilt's worth. Seams, pressing and fabric vary, and a test unit shows whether you have enough to trim.

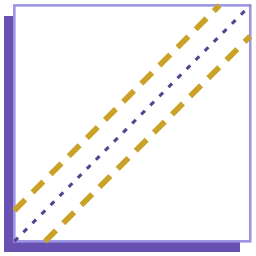
Any size or count: HST calculator.

METHOD 1

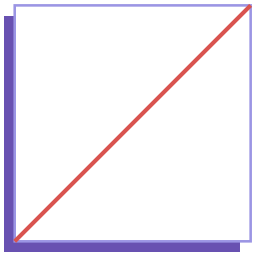
Two at a time



1. Draw a diagonal on the light square. Lay it on the dark one.



2. Sew 1/4 in from the line on both sides.



3. Cut on the drawn line.



4. Press open: two units. Trim each.

1. Draw a diagonal line from corner to corner on the wrong side of the lighter square.
2. Lay it right sides together on the other square, edges matched.
3. Sew 1/4 in from the line on both sides, then cut on the line. You now have two units.
4. Press each unit open, seam toward the darker fabric.
5. Trim each unit to the trim size: lay the ruler's 45-degree line on the seam so the seam runs exactly corner to corner, trim two sides, turn the unit and trim the other two.

Worked example: twelve 3 in HSTs

Pairs of squares	12 / 2 = **6** of each fabric
Exact	3 7/8 in squares, no trimming
Oversized	4 in squares, trim to 3 1/2 in

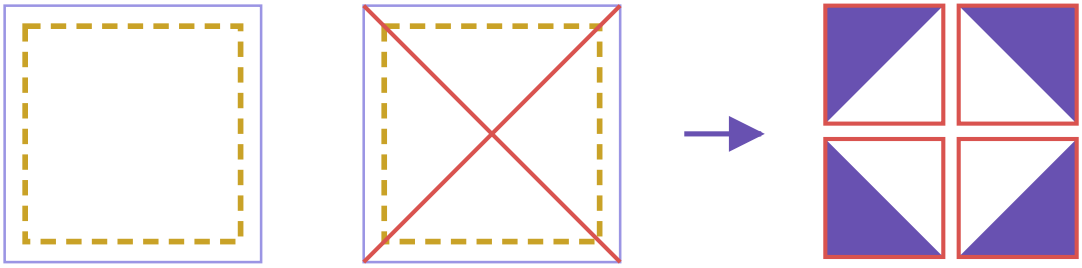
Tips

- A sharp pencil line is thinner than a marker line; sew beside it, not on it.
- A 1/4 in foot, or a line drawn 1/4 in each side, keeps both seams even.
- Chain piece: sew one side of every pair, then turn the chain and sew the other side.

More in Two-at-a-time HSTs.

METHOD 2

Four at a time



1. Sew 1/4 in from all four edges.

2. Cut both diagonals without moving it.

3. Four units. Every outside edge (red) is bias: it stretches.

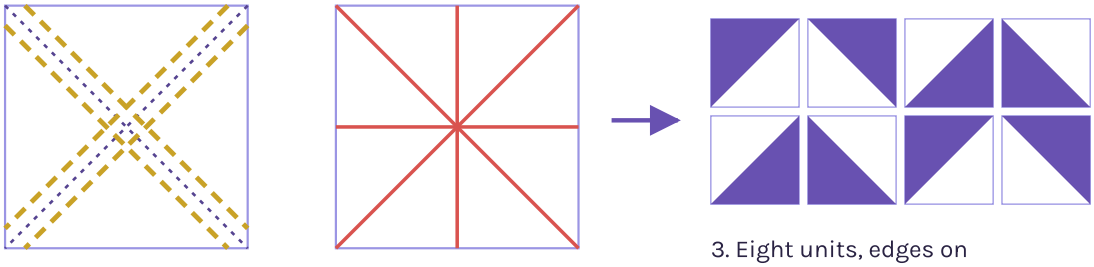
Lay the two squares right sides together, sew 1/4 in from all four edges, then cut both diagonals. No marking, but every outside edge of the four units is on the bias. For 3 in finished HSTs, cut 5 3/4 in squares and trim to 3 1/2 in.

- Starch both fabrics before you cut the squares.
- Press by lifting the iron up and down; don't slide it.
- Keep these units away from the outside edge of a quilt with no border.

More in Four-at-a-time HSTs.

METHOD 3

Eight at a time



1. Draw both diagonals. Sew 1/4 in from both sides of each line.

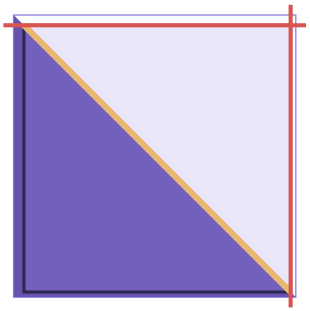
2. Cut through the middle both ways, then on the drawn lines.

3. Eight units, edges on the straight grain.

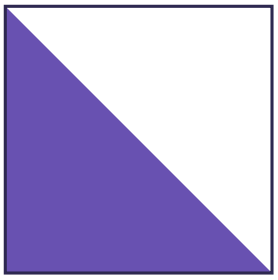
1. Draw both diagonals on the wrong side of the lighter square.
2. Lay it right sides together on the other square, edges matched.
3. Sew 1/4 in from both sides of both lines.
4. Without moving the squares, cut through the center from top to bottom and from side to side, then cut on both drawn lines. You now have eight units.
5. Press each unit open, seam toward the darker fabric, and snip off the stitched corner tips.

Cut every piece before you move any of them, so you don't lose track of the center. More in Eight-at-a-time HSTs.

Trim, press and fix



1. Ruler (shaded) with its 45-degree line (gold) on the seam. Cut the right and top edges (red).



2. Turn it 180 degrees. Cut edges on the trim lines, 45-degree line on the seam again. Cut the other two sides.

Trim with a square ruler a little bigger than the unit. The seam is the line that matters: if the ruler follows a crooked raw edge instead, the seam ends up off the corners and the points won't meet. More in How to trim HSTs.

Which way to press

Press	Why	Watch for
Toward the dark fabric	Quick, and the seams nest against each other when units meet.	Turn units so the seams point opposite ways at each join.
Open	Flattest result where many points meet, as in a pinwheel center.	Takes longer; press from the back first, then the front.

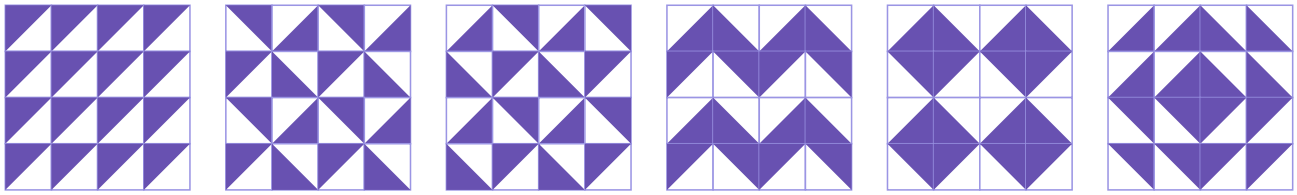
Press, don't iron: set the iron down, lift it, and move it. Sliding it stretches the bias seam.

Fixes

Problem	Likely cause	Fix
Units too small to trim	Seam wider than 1/4 in, or exact squares	Check your seam on a test unit; cut the oversized size.
Seam misses the corners after trimming	Ruler lined up on the raw edges, not the seam	Keep the 45-degree line on the seam in both passes.
Wavy, stretched units	Bias edges pulled while pressing	Starch first, lift the iron, and handle four-at-a-time units as little as you can.
Points cut off in the block	Unit trimmed off-center, or a wide seam when joining	Trim on the seam; sew joins with a 1/4 in seam and the seam crossing at the point.
Dark fabric shows through the light	Seam pressed toward the light side	Press toward the dark fabric, or press open.

USING THEM

Layouts and your plan



Diagonal stripes **Pinwheel** **Broken dishes** **Chevron** **Diamonds** **Big diamond**

The same unit, turned. Lay out a four-unit sample before you sew a whole quilt, and check which corner each dark triangle sits in. More in HST quilt layouts.

Worked example: 48 HSTs, 3 in finished

Eight at a time	48 / 8 = **6 pairs** of 8 in squares, 0 spare
Two at a time	48 / 2 = **24 pairs** of 4 in squares
Either way	trim every unit to 3 1/2 in

Each fabric pair is its own batch: navy/cream and teal/cream can't share a pair of squares.

Your HSTs

Finished size	_____ in	Trim to	_____ in
Fabric pair 1	_____ units	Method, batches	_____
Fabric pair 2	_____ units	Method, batches	_____
Starter squares	_____ in	Squares of each fabric	_____

How we made this guide. QuiltLab wrote and drew it with AI tools from published HST methods, summarized in the articles linked above, which cite their sources. Cut sizes come from the QuiltLab HST calculator, whose sizes are checked against a geometry simulation of the sewing and cutting. The pictures are diagrams, not photos, and no one has sewn a test unit from this guide yet. Spot a mistake? Tell us at quiltlab.co/help.