Creating Blocks of Four Quarter-square Triangles Without Cutting Triangles

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I discovered this technique when I became convinced there had to be a way to do this and started experimenting. I was very pleased when I got it worked out, and am happy to share it with you☺

My goal was a block that looked like this, where the dashed lines just indicate the perimeter of each piece:

I wanted to be able to make this block with up to 4 different fabrics, let's call them A, B, C and D. So the block has a triangle of each of the four fabrics.

Leaving the suspense aside, here's how you do it without cutting any triangles.

If you want a finished block size of N", cut two squares of size $(((N + .5) * 1.4142) / 2) + .25$ of each of the four fabrics, A, B, C and D. So, if you are aiming for a finished block size of 6", the calculation is:

$$(((6 + .5) * 1.4142) / 2) + .25 = ((6.5 * 1.4142) / 2) + .25 = (9.1923 / 2) + .25 = 4.85$$

So you will cut squares of 4.85". Feel free to round up to 5" and you can cut the resulting block down to 6.5" (what you need for a finished block size of 6").

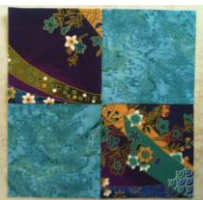1. Create two four patches from the eight squares, looking like this:

A	B		C	D
B	A		D	C

2. Place the two blocks good sides facing. Sew a ¼" seam all around the perimeter of the square.

3. Then cut the square along the two diagonals.

4. Press the 4 resulting blocks open and you have four blocks of quarter-square triangles with fabrics A, B, C and D in the quarter squares.
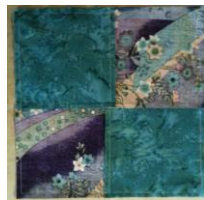
Step 1:   Step 2:   Step 3:   Step 4:   Finished: