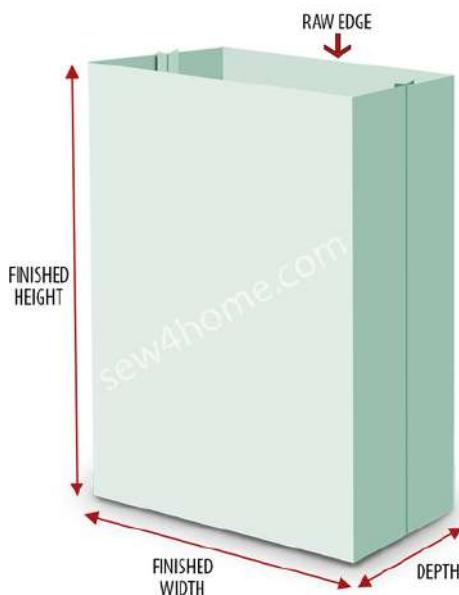




How to Sew Box Corners for Bags and More

Formulas to help you determine the cut width & height of your panels

The drawing below of a simple rectangular bag identifies the main measurements of your finished project. The top edge in these calculations is raw; don't forget to add the inches needed for the hemmed, seamed, or faced finish needed for your particular project.



As you work through our formulas, here is a key to the measurements with which we're working:

Depth; the desired size of the box (or the side of the bag) = **D**

Cutout = **C**

Raw Height (cut size) = **RH**

Finished Height = **FH**

Raw Width (cut size) = **RW**

Finished Width = **FW**

Seam Allowance = **S**

Let's say you want to end up with a bag that is 13½" tall (see the note below regarding any additional height needed for your top finish) x 11" wide x 4" deep. What size panels (front and back) would you need to cut?

For our example, we are working with a standard ½" seam allowance.

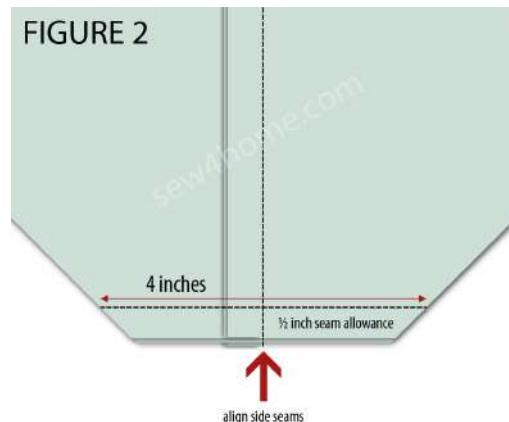
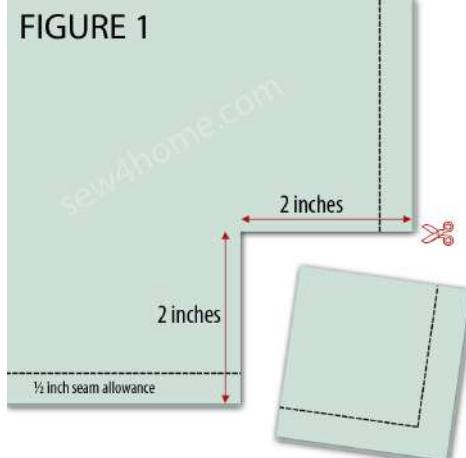
As a formula, cutout is represented as $C = D \div 2$. In our sample: $C = 4" \div 2$ or 2".

Raw or cut height is represented as $RH = FH + C + S$. In our sample: $RH = 13\frac{1}{2}'' + 2'' + \frac{1}{2}''$ or 16".

Raw or cut width is represented as $RW = FW + D + (S \times 2)$. In our sample: $RW = 11'' + 4'' + 1''$ or 16".

Our front and back cut panels should be 16" x 16".

Don't be fooled by your seam allowance when doing the calculations. The diagrams below show a cut-out corner that will result in a 4" boxed corner. In figure 1, the side and bottom seams are both stitched with a ½" seam allowance and the corner box is cut out at 2" x 2". In figure 2, the corner is folded into place to yield the 4" width when stitched across with a matching seam allowance (½"). "But, but, but," you scream. "Where did that ½" go? The ½" seam allowance is accounted for because all three seams are a consistent ½" (side seam, bottom seam, and diagonal seam). A *diagonal* is always wider than an original square cut corner... that's how it works. We love geometry, don't we?



The basic box corner method works in the same manner. Make sure your side and bottom seam allowances are both the same (figure 3 below). Pull and flatten the corner, then draw in the stitching guide line at the point where you measure the desired width – 4" in our example (figure 4 below). You can also measure HALF the desired depth from the point of the seam.

FIGURE 3

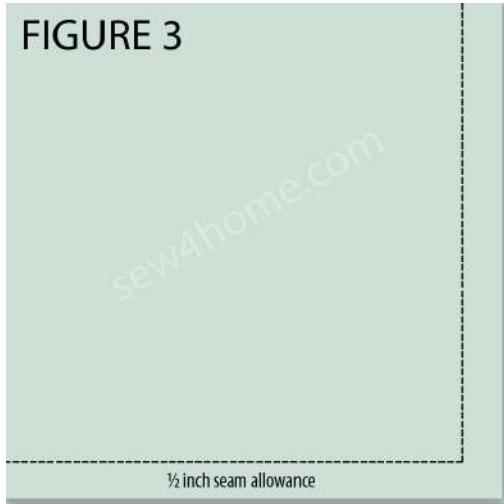
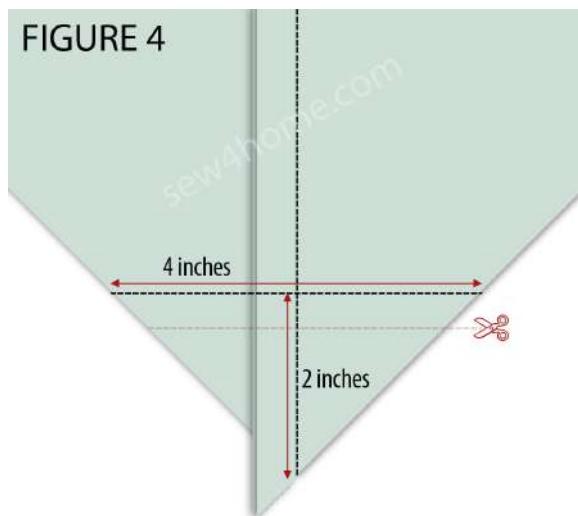


FIGURE 4



So, both methods yield the same result: a 4" boxed corner.

Hopefully this walk through of the formulas also helps your brain wrap around how the height of each panel is reduced. You lose the 2" in the box plus $\frac{1}{2}$ " in the bottom seam allowance.

What about the top?

In our calculations and formulas above, we do *not* address how the top raw edge of your finished box/bag might be handled. There are just too many variables that come into play! Simply remember that you DO need to account for that top finish. For example, if you are just doing a simple hem at the top, you may need to add another 1-2" to the Raw Height to account for that hem.

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