

An Ergonomic Mitten

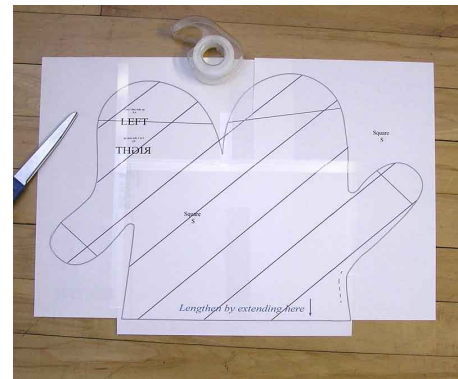
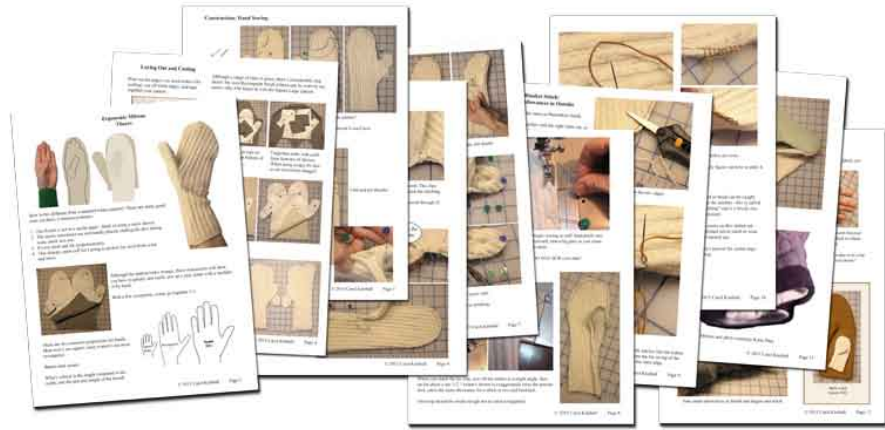


Contents

Page 3 Theory

Instructions

- Page 4 Felting knits
- Page 5 Printing patterns, Laying out, Cutting
- Page 6 Cutting out sweaters with designs
- Page 7 Hand sewn mittens
- Page 9 Machine sewn mittens
- Page 11 Controlling machine stitching
Blanket stitch (decorative exposed seams)
- Page 13 Lined Mittens
- Page 15 Fingerless Mitts
- Page 16 Mittens for the shelter



Patterns:

- Page 17 Square Baby
- Pages 18-19 Square Child 1
- Pages 20-21 Square Child 2
- Pages 22-23 Square (Adult) XS
- Pages 24-27 Square S
- Pages 28-32 Square M
- Pages 33-37 Square L
- Pages 38-43 Square XL

- Page 44 Rectangular Child 1
- Page 45 Rectangular Child 2
- Page 46-47 Rectangular (Adult) XS
- Pages 48-50 Rectangular S
- Pages 51-54 Rectangular M
- Pages 55-59 Rectangular L
- Pages 60-64 Rectangular XL

Children's mittens from five thrift-store felted sweaters.



Ergonomic Mittens Theory and Pattern Development



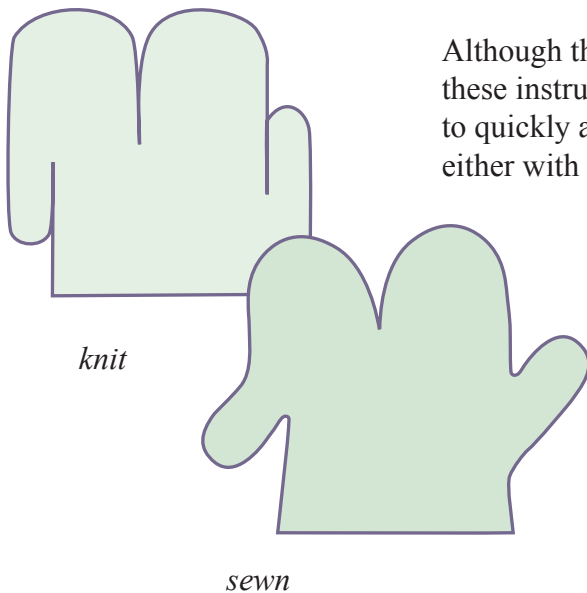
A good mitten pattern has the thumb set across the palm rather than sticking out the side.

Cuffs should be as long as possible and snug at the wrist to keep out wind and snow.

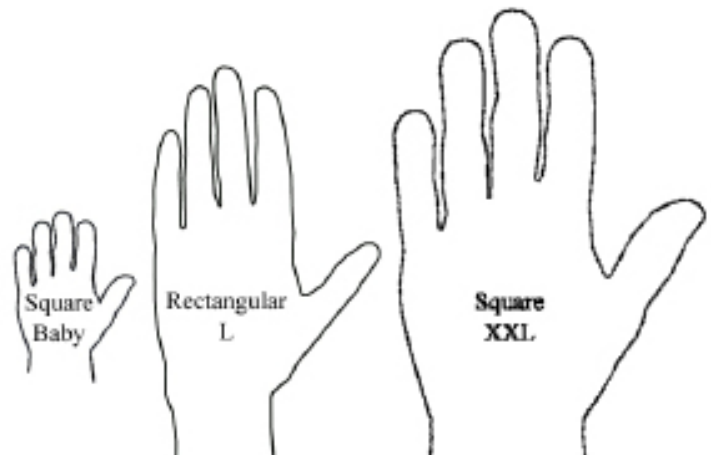


These patterns were adapted from a clever one-piece knit mitten published by Martha Stewart.

They have been substantially modified to be sewn from a less stretchy fabric, such as a felted sweater.



Although the pattern looks strange, these instructions will show you how to quickly and easily sew up a pair, either with a machine or by hand.



Mittens (and gloves) are usually designed for square (men's) hands. Most women's are rectangular.

What's critical is the length compared to the width, and the size and length of the thumb. Both square and rectangular patterns are given for each size, other than the baby's.

Felting Knits



You may have sweaters already felted that have become too small to wear, prime candidates for mittens.

If choosing sweaters to deliberately felt, look for natural animal fibers. As well as those labeled wool, these include merino (a kind of sheep), lambswool, cashmere, alpaca, yak, etc. Silk, plant fibers (cotton, linen, hemp, rayon, ramie), and synthetics (nylon/polyamide, acrylic, polyester) will not felt. Blends must be primarily wool.

If sweaters have been cleaned with a lanolin or oil-replacing wash (Woolite, Eucalan), particularly the brands that are meant not to be washed out, those must be removed first, as must be fabric softeners. Coated fibers won't shrink. Water dropped on them will bead up, and they'll feel slightly greasy or soapy.

Orvus soap (actually a super-wetting agent with a neutral PH) will remove the oil. It's used by museums for fabric conservation and oddly, by livestock owners to wash their horsies. Its primary ingredient is sodium lauryl sulfate, often the main ingredient in cheap shampoo. If you don't have access to a tack store and can't find Orvus at a reasonable price (quilting stores carry it in small, expensive quantities), check your local dollar store. Avoid shampoos with strong fragrances.

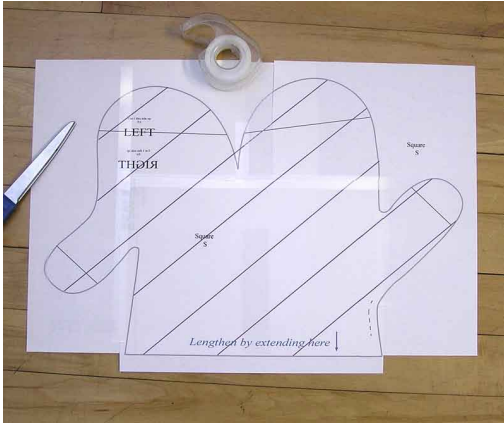
Sweaters often throw lint, which is bad for your washer/dryer. Zip your knitting into lingerie bags, or fold them into a pillowcase and safety-pin the end shut in four or five places. Don't skimp on the pinning, they'll escape!

Wash and dry them at the hottest temperatures and the highest agitation. Clean out your lint filters afterward.

Shrinkage can be dramatic - compare the oatmeal-colored argyle sweater before and after.

Laying Out and Cutting

Print out the pages you need, cut off the white edges, and tape together your pattern. Those diagonal lines will help match the pieces up.



Although a range of sizes is given, there's considerable slop factor. My own Rectangular Small mittens can be worn by my intern, who'd be better fit with the Square Large pattern.



Mittens laid out at tops of sleeves, cuffs from bottom of sleeves.



Fingerless mitts with cuffs from bottoms of sleeves. When using scraps, be sure to cut two mirror images!

See Page 15 for adding cuffs.



Lay your felted sweater pieces with the bottom edge of the pattern on ribbing, if possible. For longer mittens, slide the pattern up. Extend the sides to the hems at the same angles.

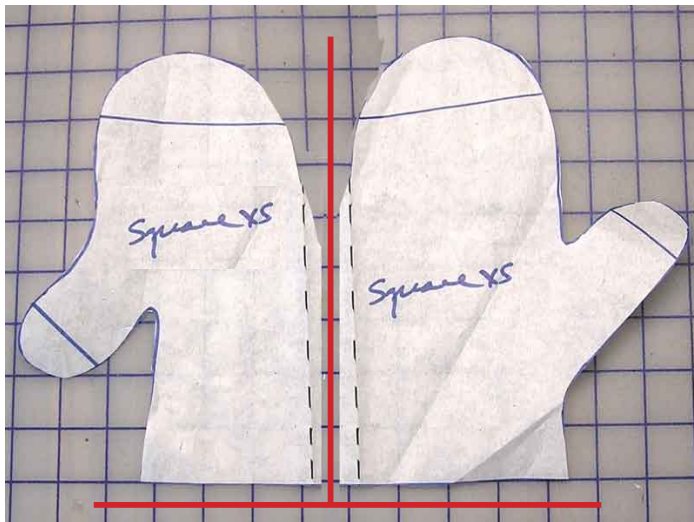
If the doubled fabric is difficult to cut, do the top layer first and then the second while everything is pinned together.

Immediately fold the mittens into mirror images. For seams inside the mittens, fold the right sides together. For exposed seams, fold the wrong sides together.

Set one folded piece aside.



Laying Out and Cutting Sweaters with Designs



The first step is to split your pattern into a front and a back.

Square up from the bottom and add a seam allowance to each half.



Fold your sweater right-sides-together exactly through the middle of the pattern and cut the larger, squarer pieces from that. Cut the plain smaller ones from the back or sleeves.

Ribbing from the sleeves can be used for the pair from the upper parts.



The design is only on the front.

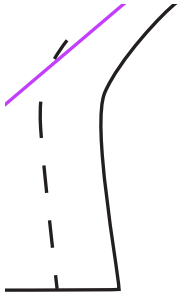
The sleeves and back are plain.



OR fold the pattern and lay it out one side at a time, cutting extra at the joining sides (as at right). Be sure you don't forget the seam allowances. If you're making longer mittens, be sure to extend both patterns.

IMMEDIATELY split the halves and lay the pieces out as they will be sewn.

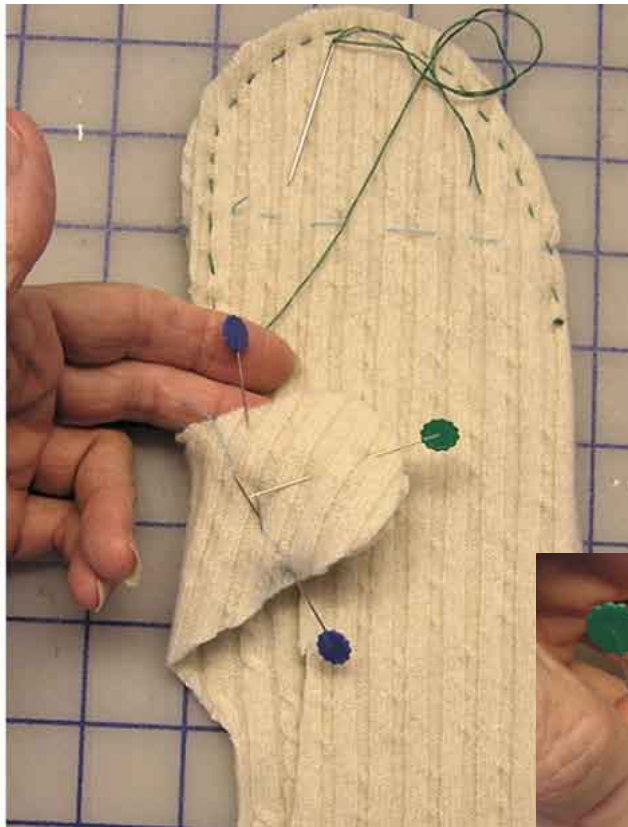
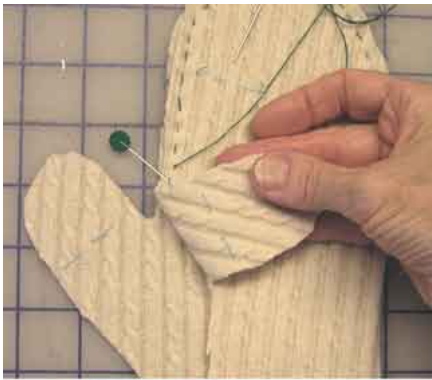
Construction: Hand Sewing



Seam allowances are shown at the bottom right corner of each pattern. They are narrow!

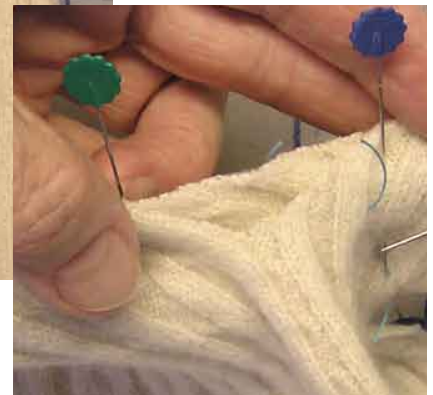
Align and sew the top, starting at the side opposite the thumb. Thick contrast thread is used here.

A double strand of ordinary matching thread will be invisible.



Continue to the start of the thumb curve.

Fold and pin thumb pieces.



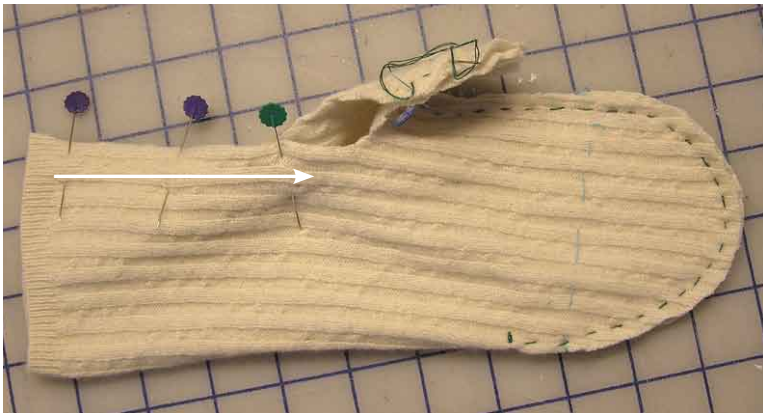
Gently stretch so that the raw edges match.



Pin in center and clip only the tight side to release tension.

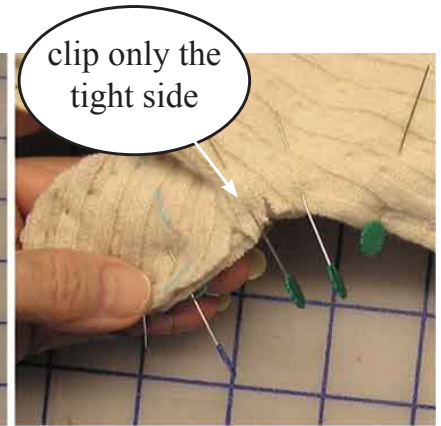


Sew around the thumb. The clips must not go through the stitching.

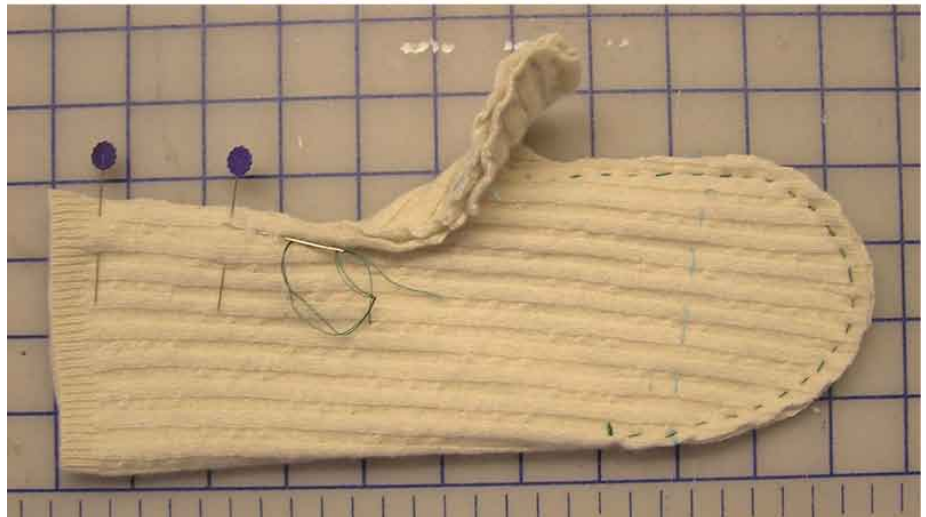


Match sides at hems and pin up to thumb.

Gently stretch.
Pin, clip.



Sew to hem.



Construction: Sewing Machine

A narrow seam allowance is included (see top of Page 9).

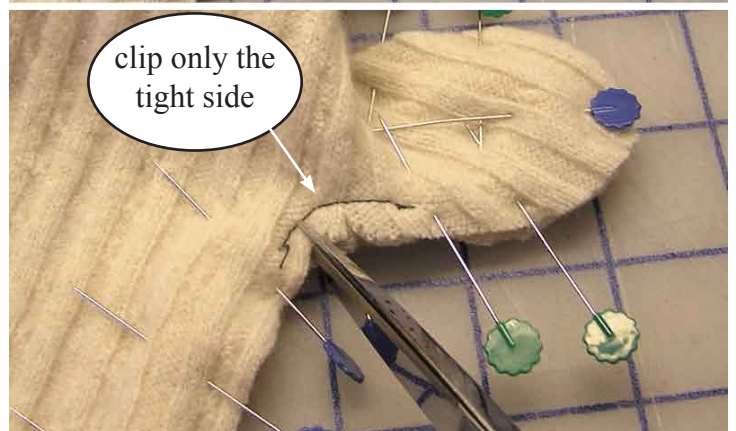
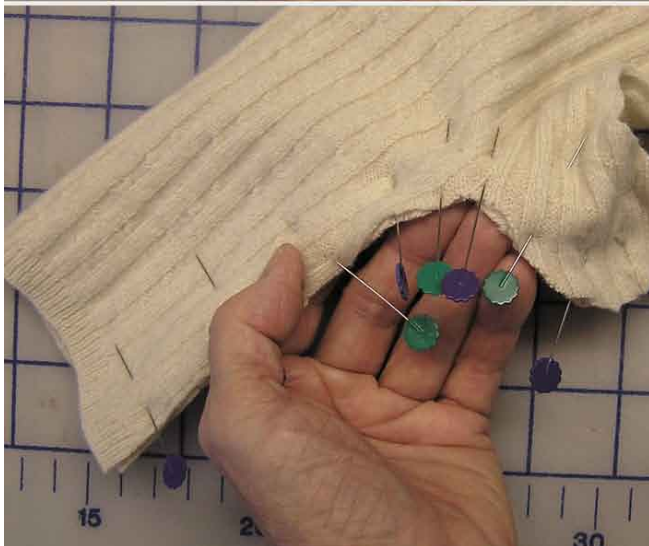
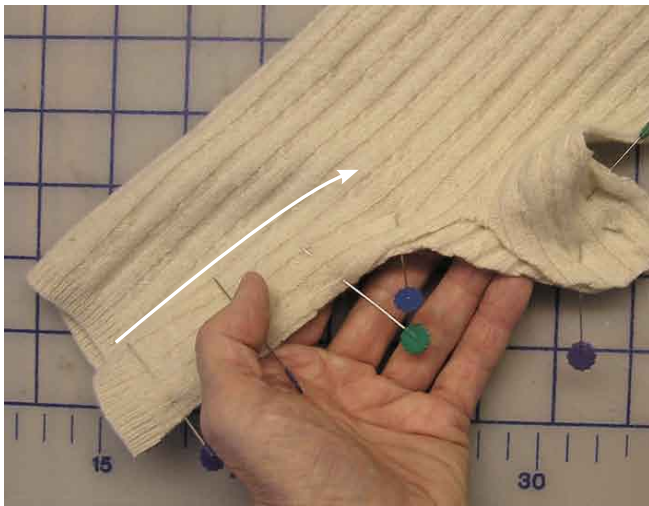
These steps are different than hand sewing! Basting the curves at each side of this thumb gives greater control and makes machine-sewing much faster and easier than trying to match everything as you come to it.

Sew several pair before skipping this step.

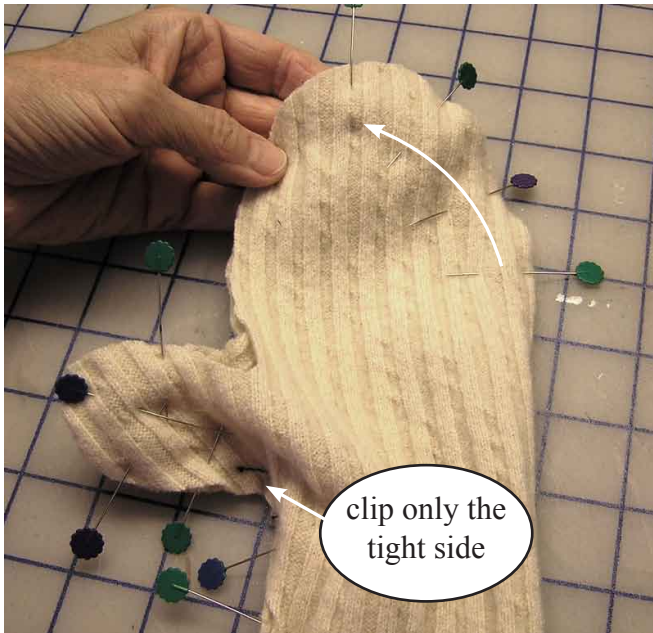


Fold right sides together, pin thumb.

Pin from cuff up; gently stretch curves to fit, pin.



Machine-baste the curve only. Clip just to the stitching with the tips of your scissors.



Pin from the edge opposite the thumb around the top of the mitten.

At curve by thumb, repeat previous technique: stretch gently, pin at center, machine-stitch curve, clip almost to stitching with tips of scissors.



Begin sewing at cuff: backstitch, sew forward. Remove pins as you come to them.

DO NOT SEW over pins!

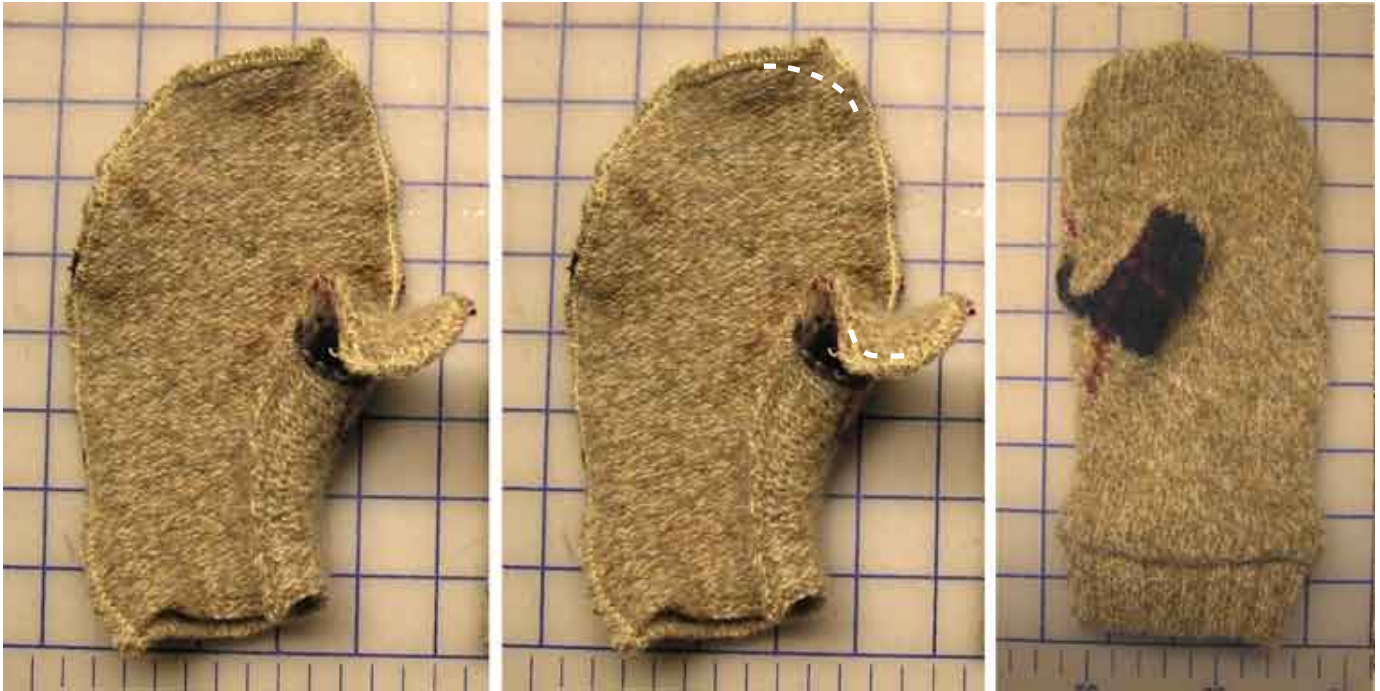


When you reach the side going into the fold, sew off the mitten at a slight angle. Sew on for about a cm./1/2 " (what's shown is exaggerated), raise the presser foot, catch the seam allowance for a stitch or two and backtack.

The loop should be small enough not to catch a fingernail.



Controlling Sewing Machine Stitching



Unless you have a walking foot or go very slowly when machine sewing, a frequent problem is the edge stretching. A curve that came out too square can be re-sewn (dotted lines). Smooth those curves by re-sewing (no need to take the old stitching out), then dampen, pat gently into shape and let dry.

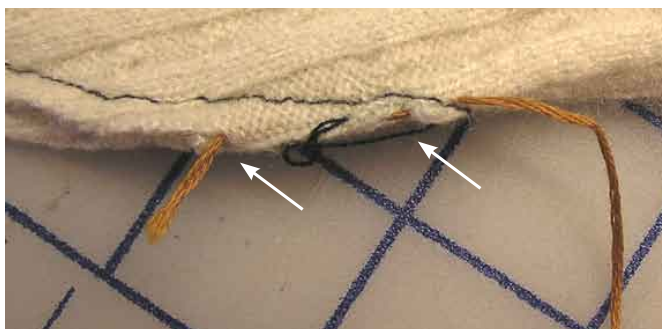
Blanket Stitch: Seam Allowances to Outside

Blanket Stitch is the same as Buttonhole Stitch.

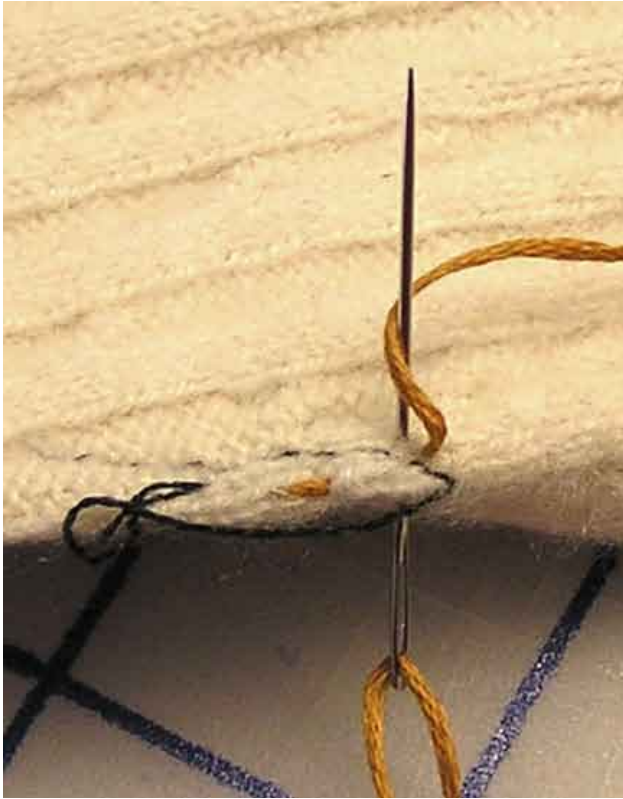
Sew the mitten together with the right sides out, so the seam allowances are exposed. Machine sewing (with matching rather than contrast thread) makes this hand work easier and is strongly suggested.

Don't rely on the more fragile decorative thread alone to hold the mitten together.

Neatly trim the raw edges.



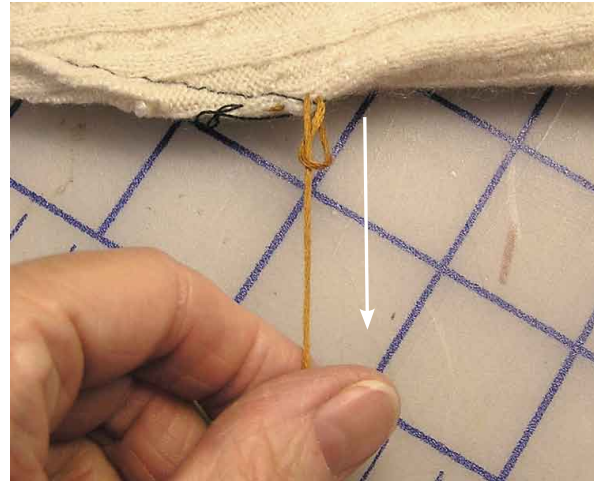
Do not knot your decorative thread. Bring your needle through the narrow tube at the outside of the hand with one tiny stitch through the side, and gently pull the thread until it's not showing.



Take a stitch and wrap the strand around the needle.

Here the work is going right to left, wrapping the stitches clockwise.

It doesn't matter whether you work left to right or right to left, wrapping clockwise or counterclockwise. As long as you're consistent, you're fine.



Pull up the stitch. A variation is to pull your stitches into the mitten rather than away from it. This puts the bar on top of the machine stitching rather than at the outer edge.



Repeat. The machine stitching gives not only stability but a guide so that your stitches are even.

As you're learning, check where the needle enters on the other side. You'll quickly figure out how to poke it through straight.



A cord, braid, or piece of contrast (bulky?) yarn can be caught inside the stitches - this is called “couching” and is a lovely embellishment.

The seams on this mitten are positioned not to catch or wear with normal use.

How close or far apart your decorative stitches are is up to you.

Lined Mittens

For lined mittens, two pair are made, and one (usually the lighter weight) used as the lining. Seam allowances do not show as they’re inside the sandwich.

Start with a pattern at least one size bigger due to the extra thickness.



Felted mittens with a contrast band at bottom, lined in pale pink cashmere (!).

Mittens and photo courtesy Karin Pauc



Cut out two pair of mittens.

They can be the same length, hemmed together at the bottom.

The bottom edges can be bound with matching ribbing or a contrast strip.

The lining can be cut shorter and the outside mitten turned in and up to cover it.

The lining may be cut long and turned up to the outside.



After sewing each set, tack together mirror images at the tops of the fingers and at the end of the thumb, barely catching the seam allowances. Only a few stitches are needed. A machine zigzag is fast and easy.

Turn the outside mitten over the lining.

Be sure your inside mitten hasn't twisted.

Finish your hem.

Fingerless Mitts

These keep your fingertips warm because they insulate the wrist, which is where most heat loss takes place.

Remember running cold water over your wrists in the summer to cool down?



A seam allowance is included for the thumb and fingers' openings. Heavily felted fabric can be trimmed to be its own edge rather than folded in.

The angle may be adjusted, though see photo (above) for what the pattern gives.



Sew the mitts according to mitten directions. Turn right side out.

If adding a separate cuff, slip it over the bottom with right sides together.

Use a wide zigzag stitch so that the stitches won't pop when getting them on or off.



Turn under allowances at thumb and fingers and stitch.

Mass Production (Mittens for a Shelter)



When doing mittens as a community service, it's an extra kindness to sort and vary layouts, color combinations, and bindings.

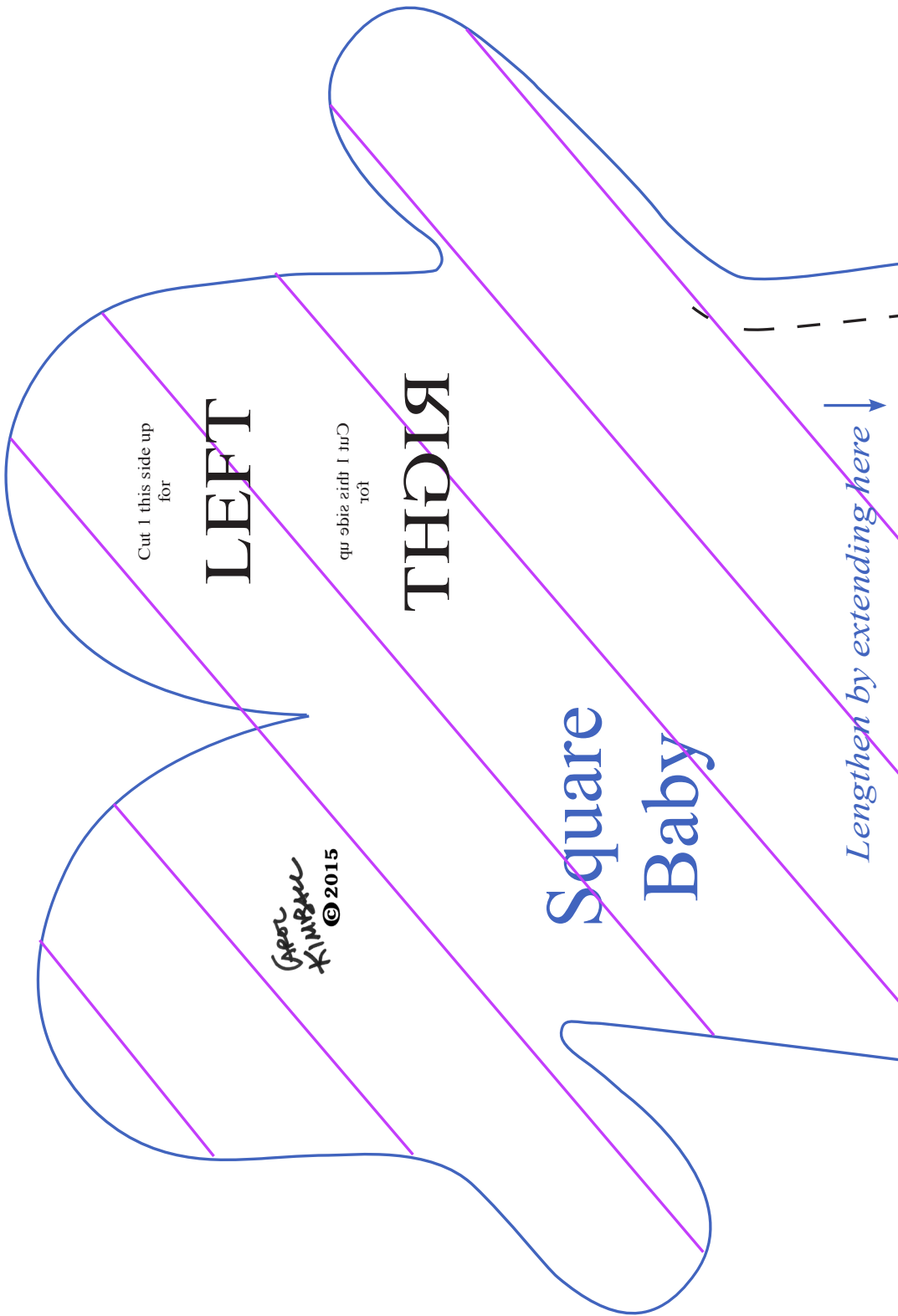
Five pair of red mittens will cause confusion. It's bad enough if they're the same size. It's worse if they're different.

Stripes were laid out both horizontally and vertically, and the two pairs going the same way are of obviously different sizes and have different cuffs.

Always fold together each pair in correct sewing order as soon as the pieces are cut.

Baby's and
Square XXL





Cut 1 this side up
for

LEFT

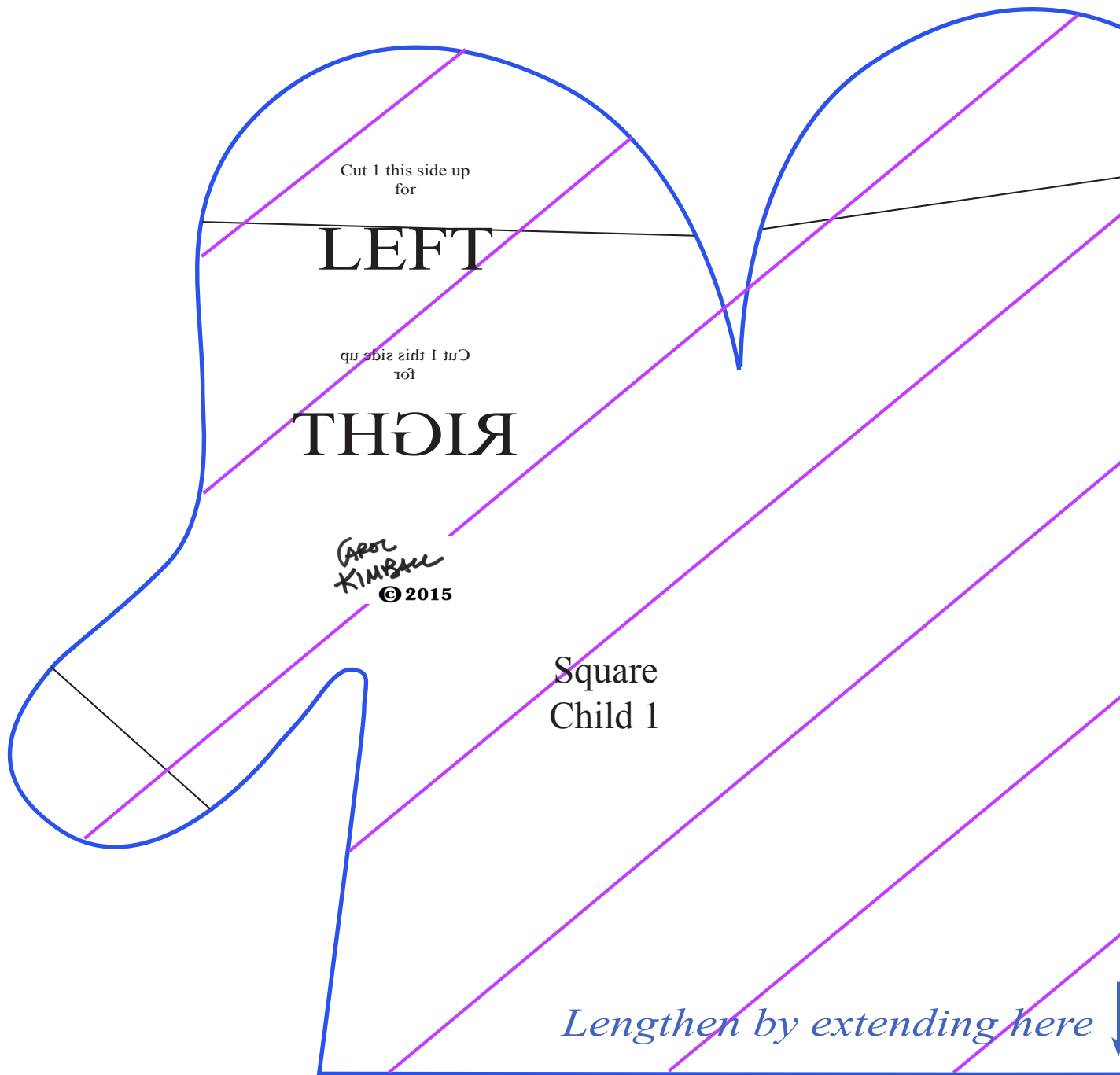
Cut 1 this side up
for

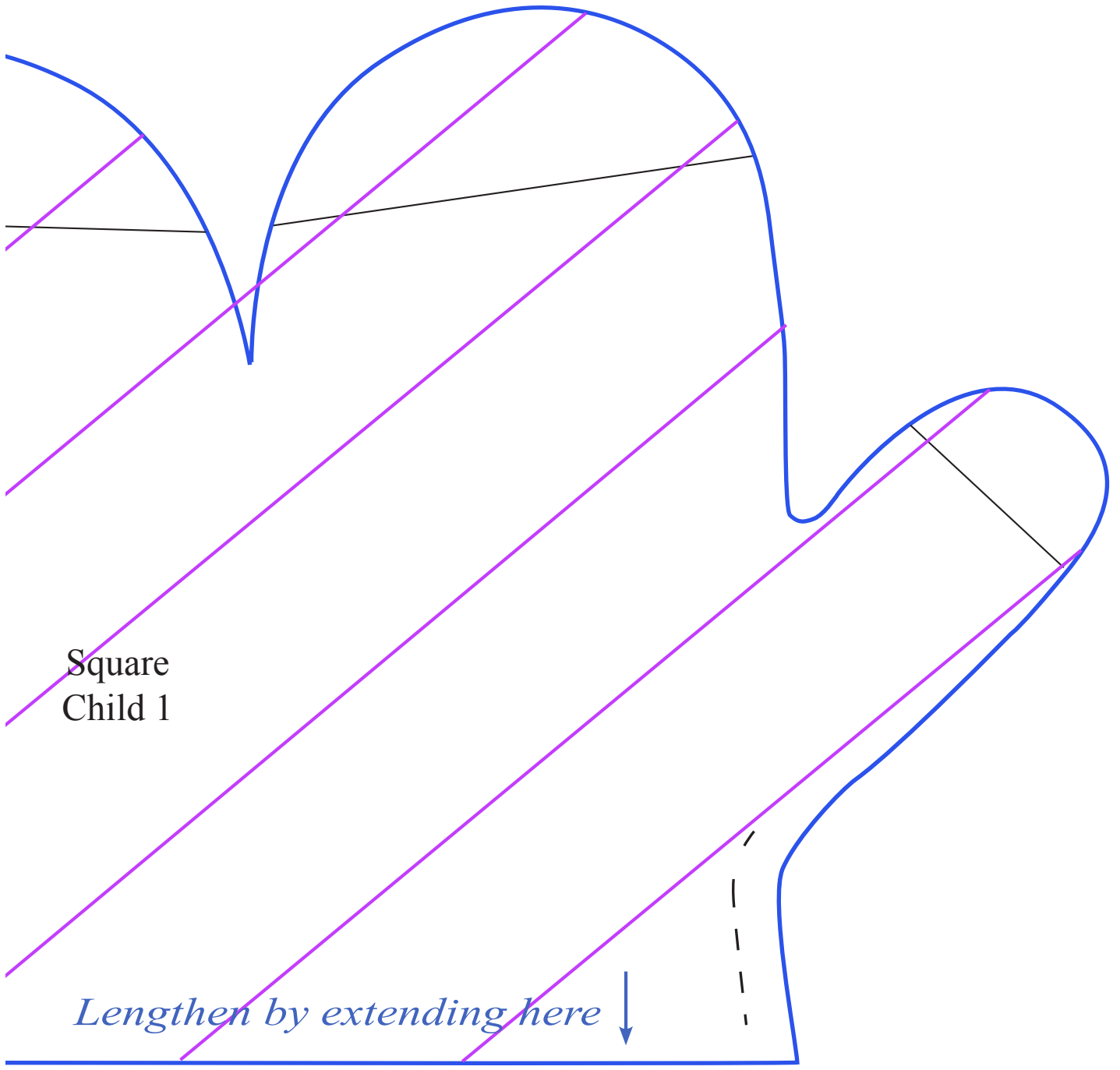
RIGHT

Carol
Kimball
© 2015

**Square
Baby**

Lengthen by extending here ↓

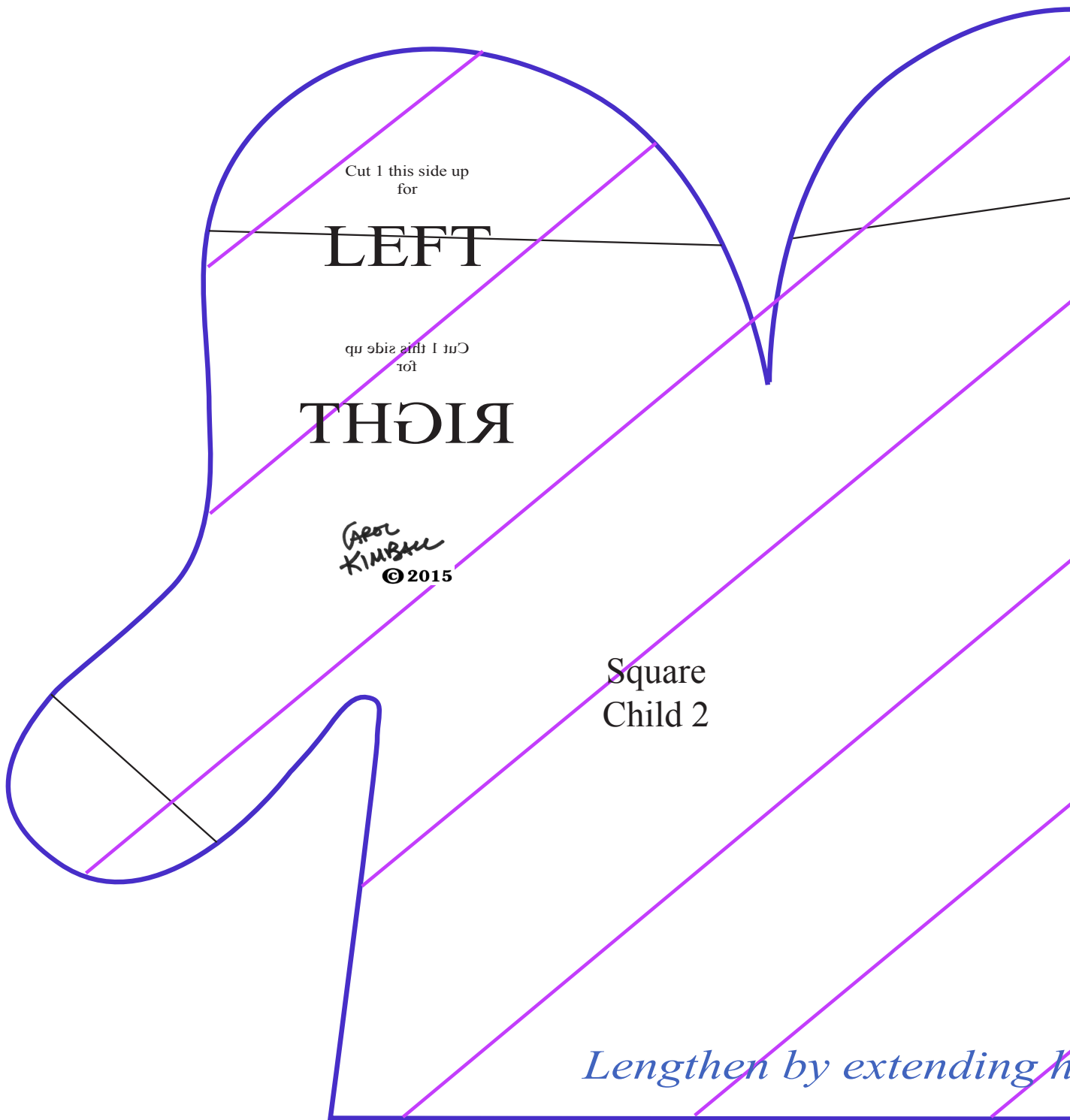




Square
Child 1

Lengthen by extending here





Cut 1 this side up
for

LEFT

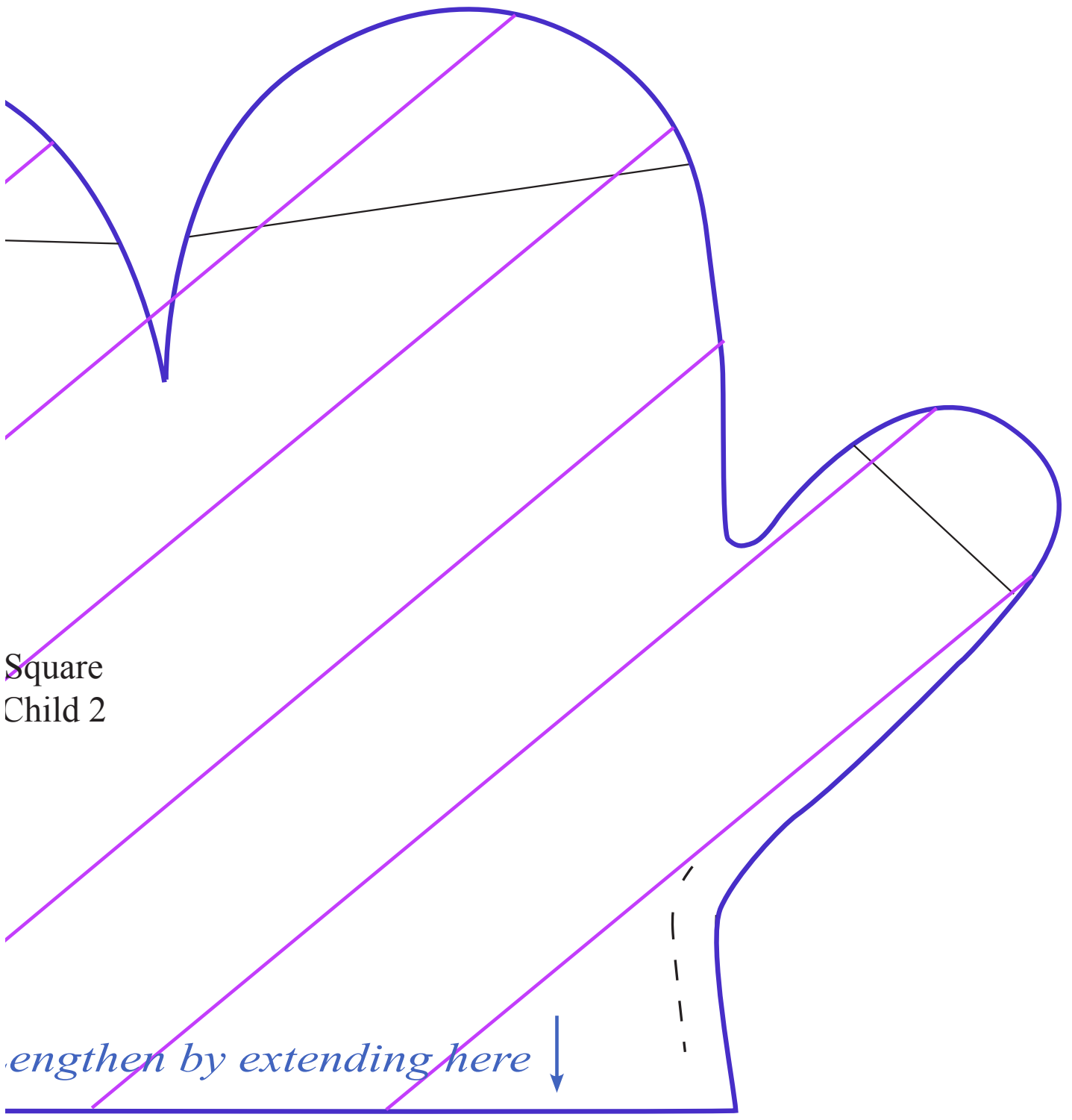
Cut 1 this side up
for

RIGHT

Carol
Kimball
© 2015

Square
Child 2

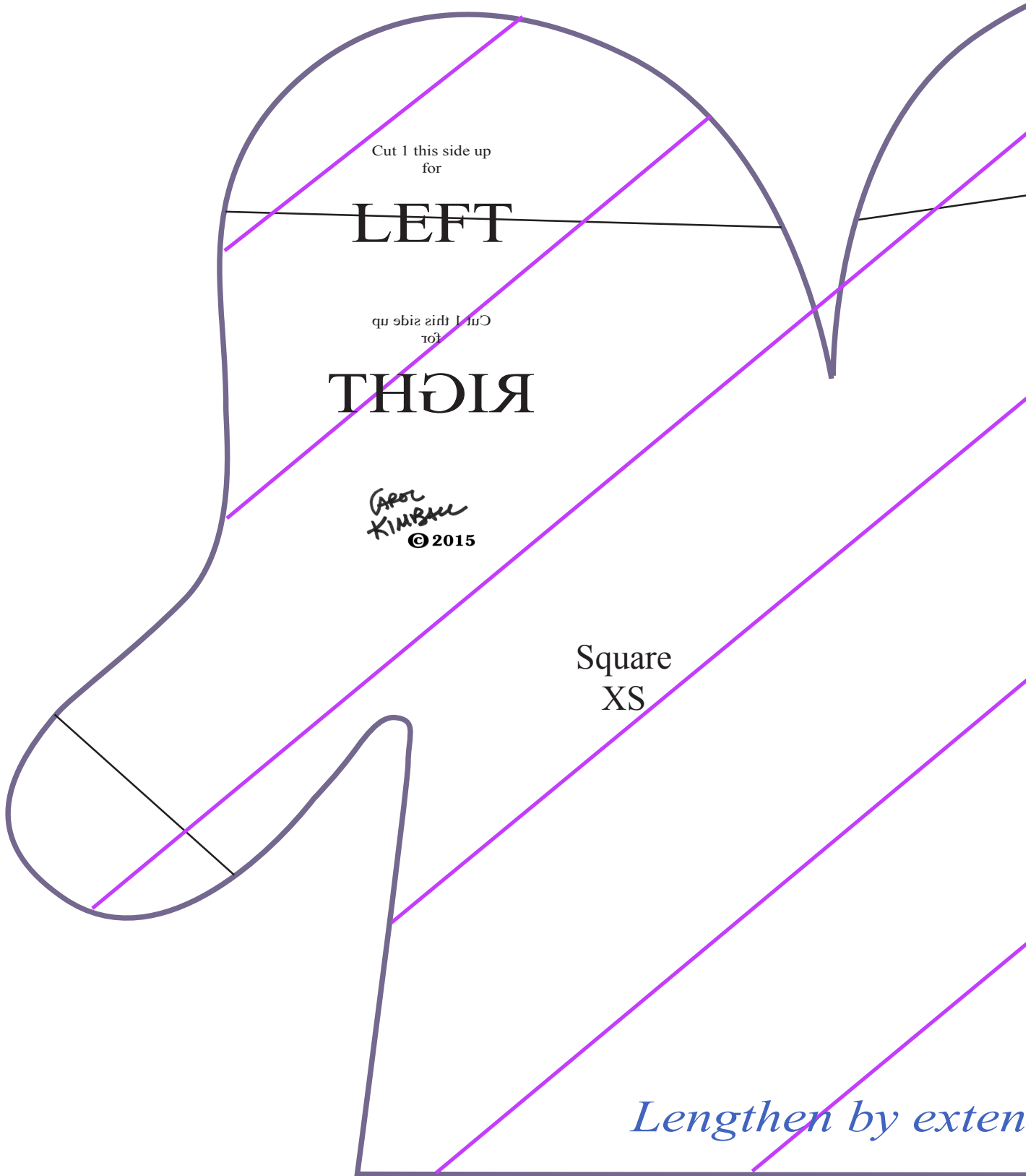
Lengthen by extending h

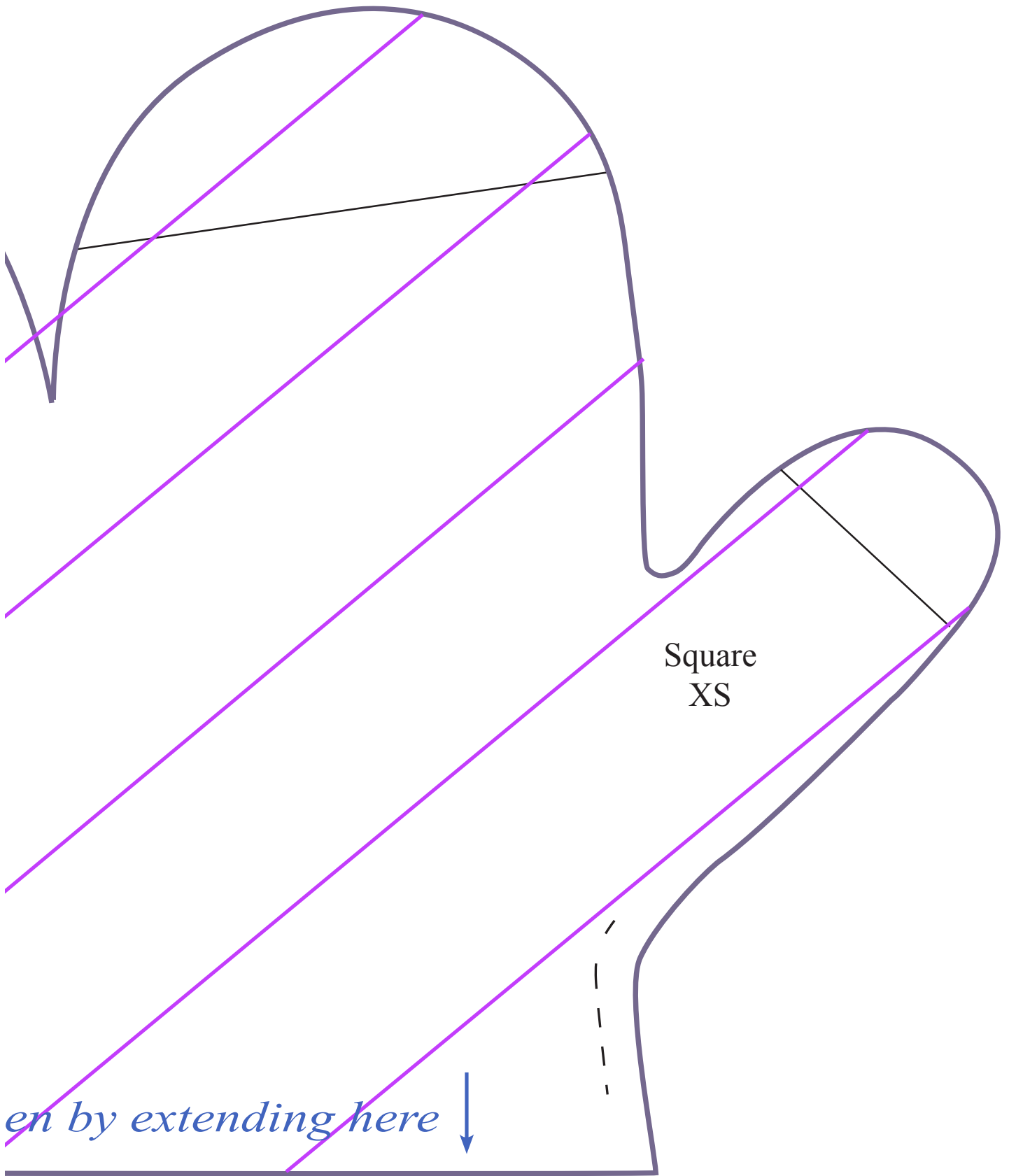


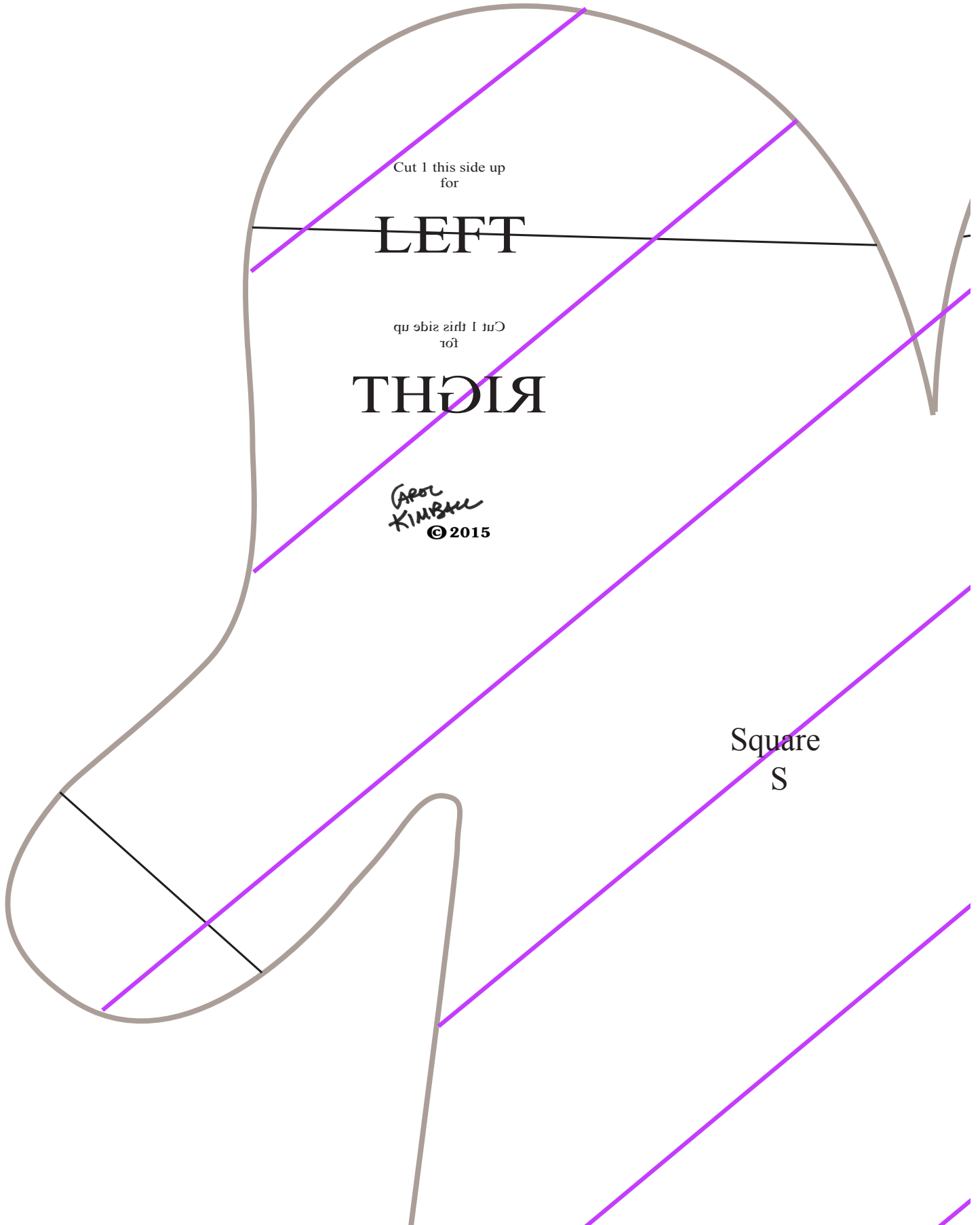
Square
Child 2

lengthen by extending here









Cut 1 this side up
for

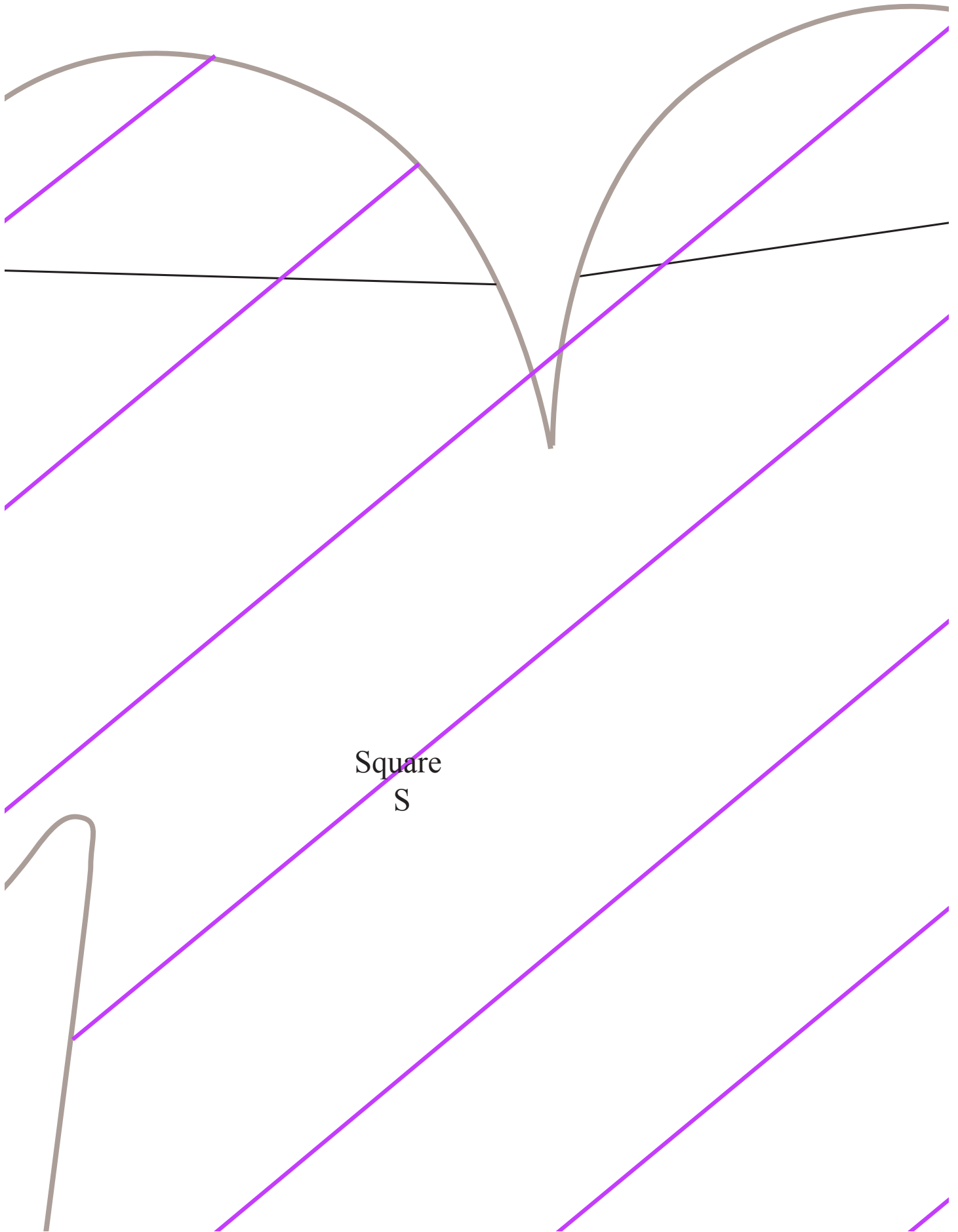
LEFT

Cut 1 this side up
for

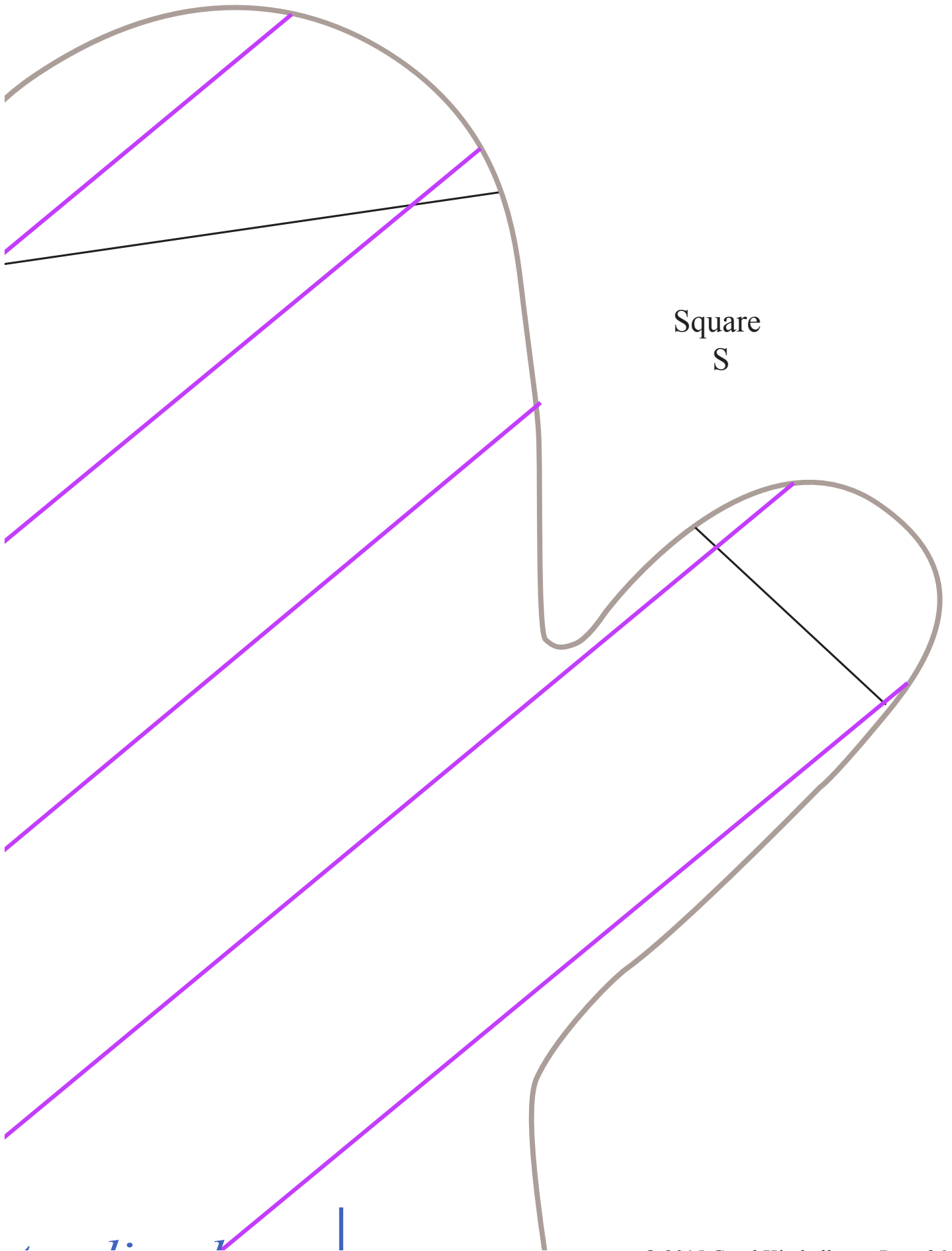
RIGHT

Carol
Kimball
© 2015

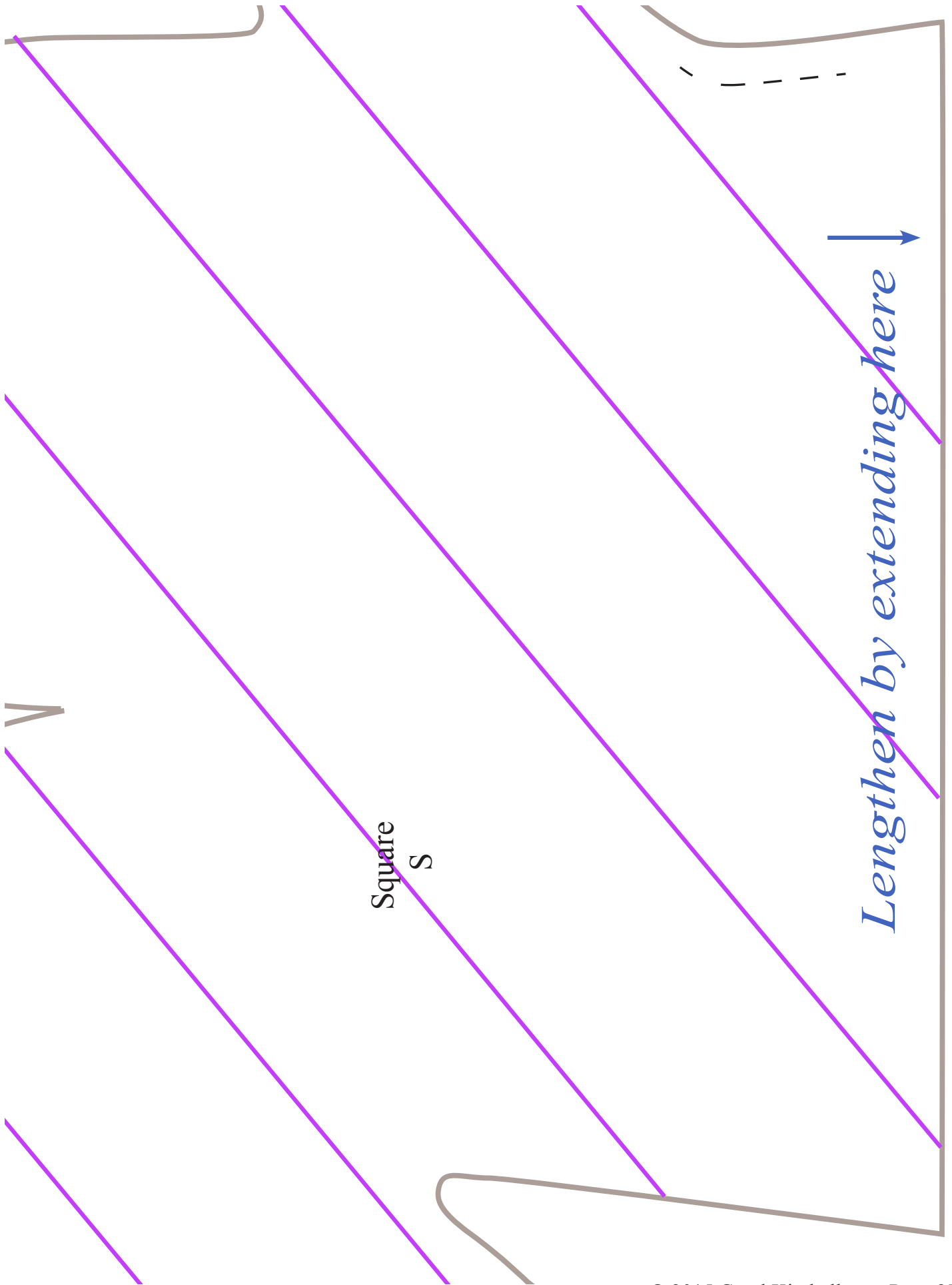
Square
S

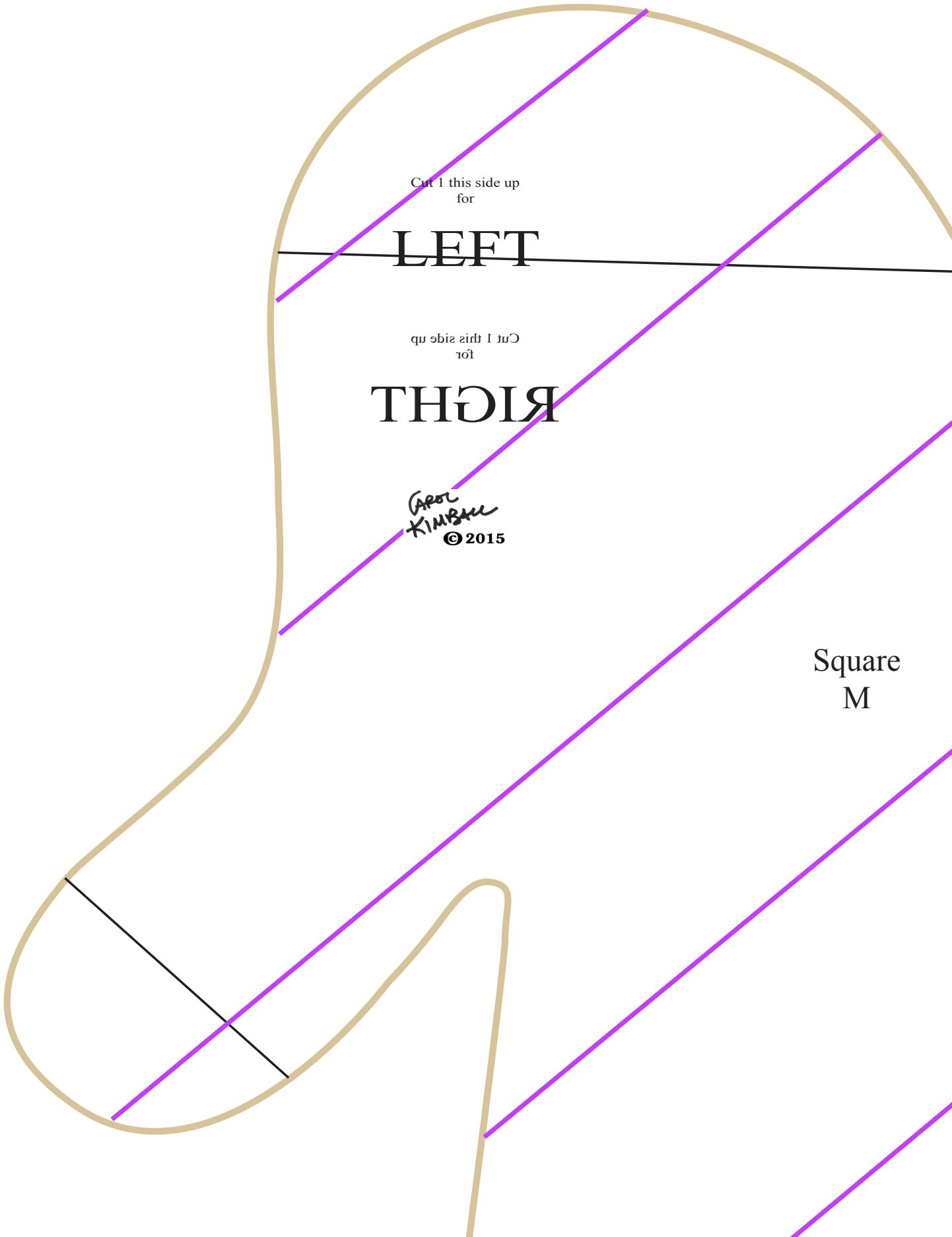


Square
S



Square
S





Cut 1 this side up
for

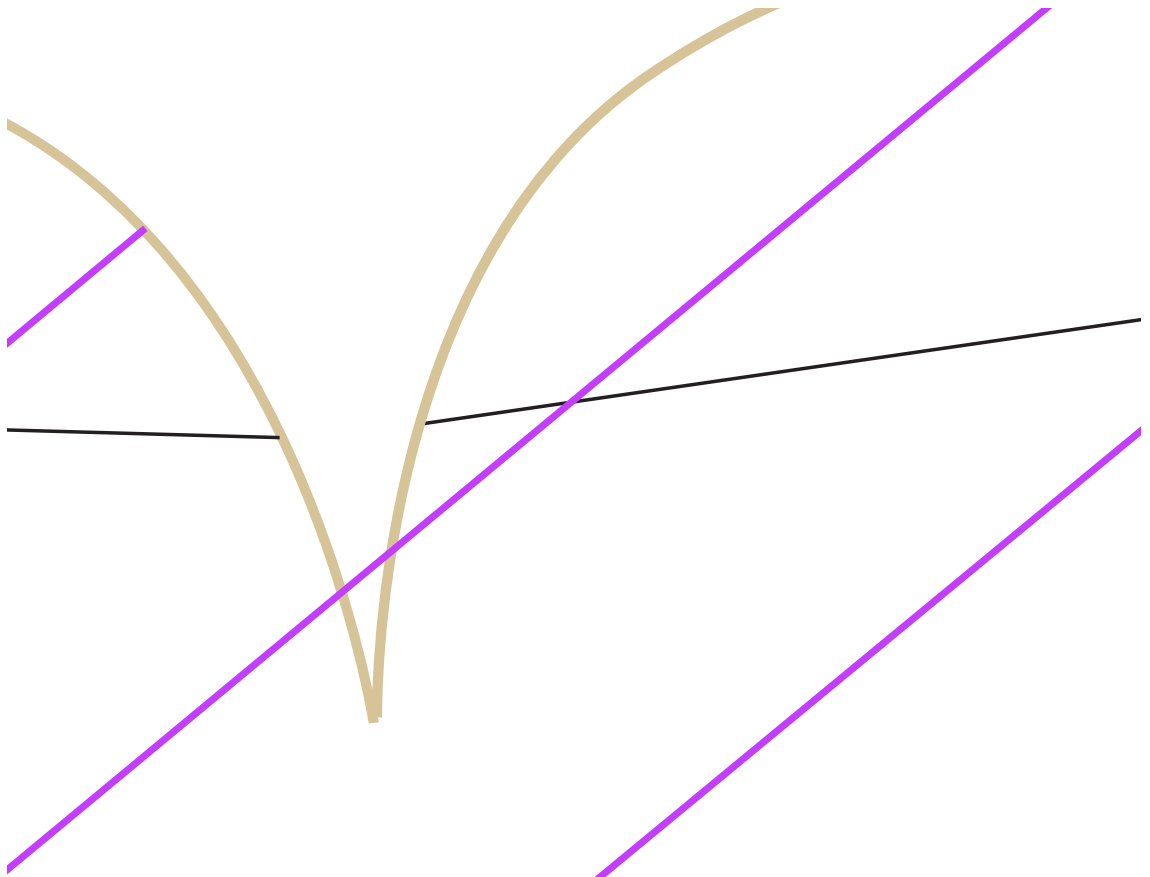
LEFT

Cut 1 this side up
for

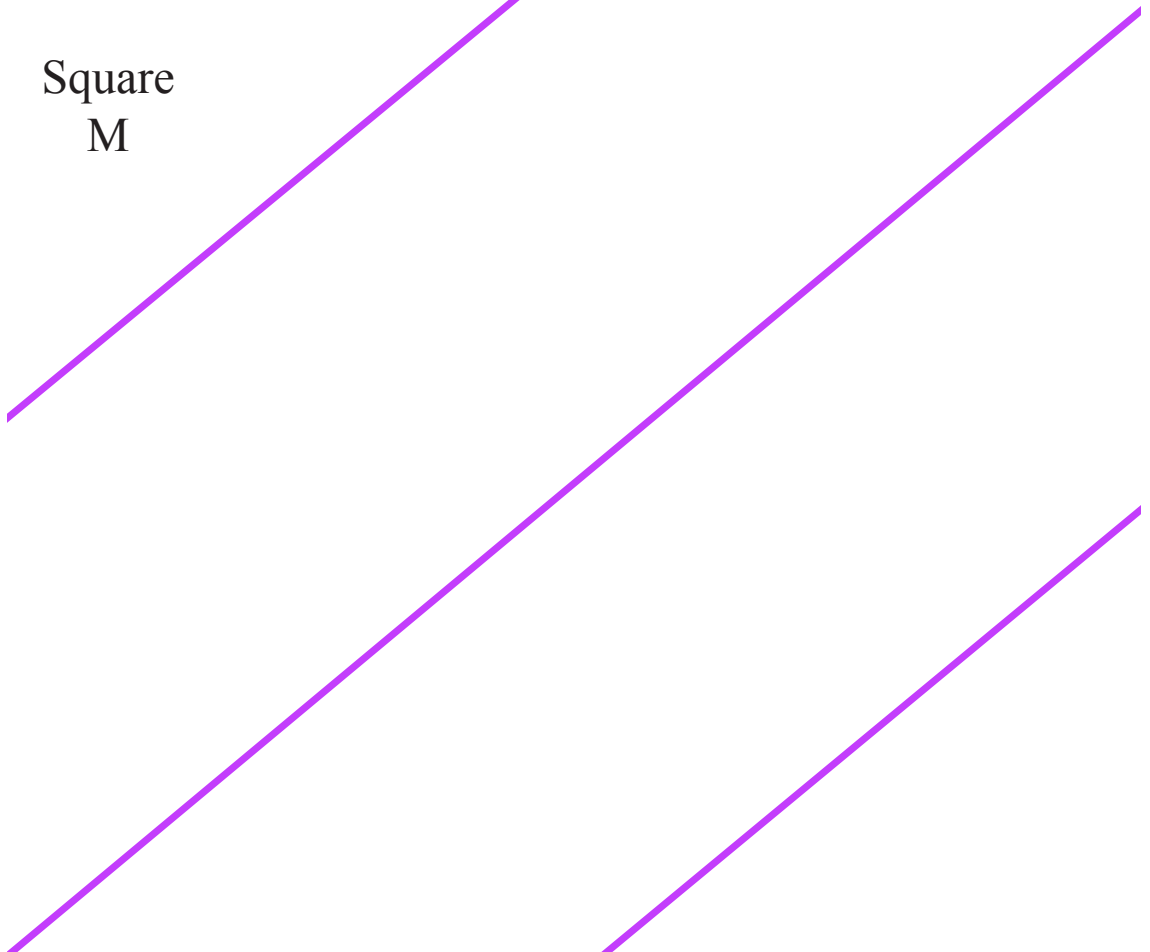
RIGHT

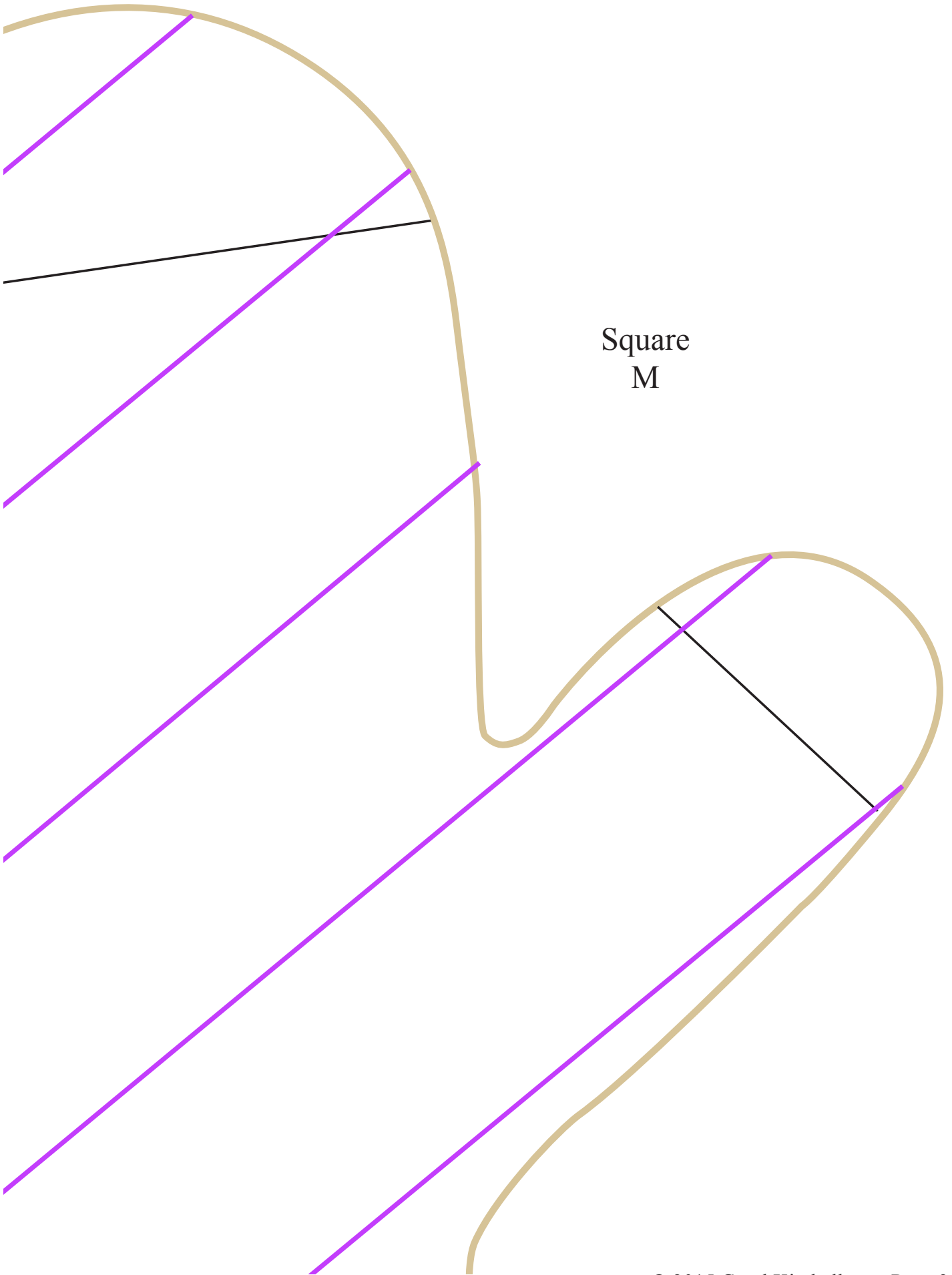
Carol
KIMBALL
© 2015

Square
M

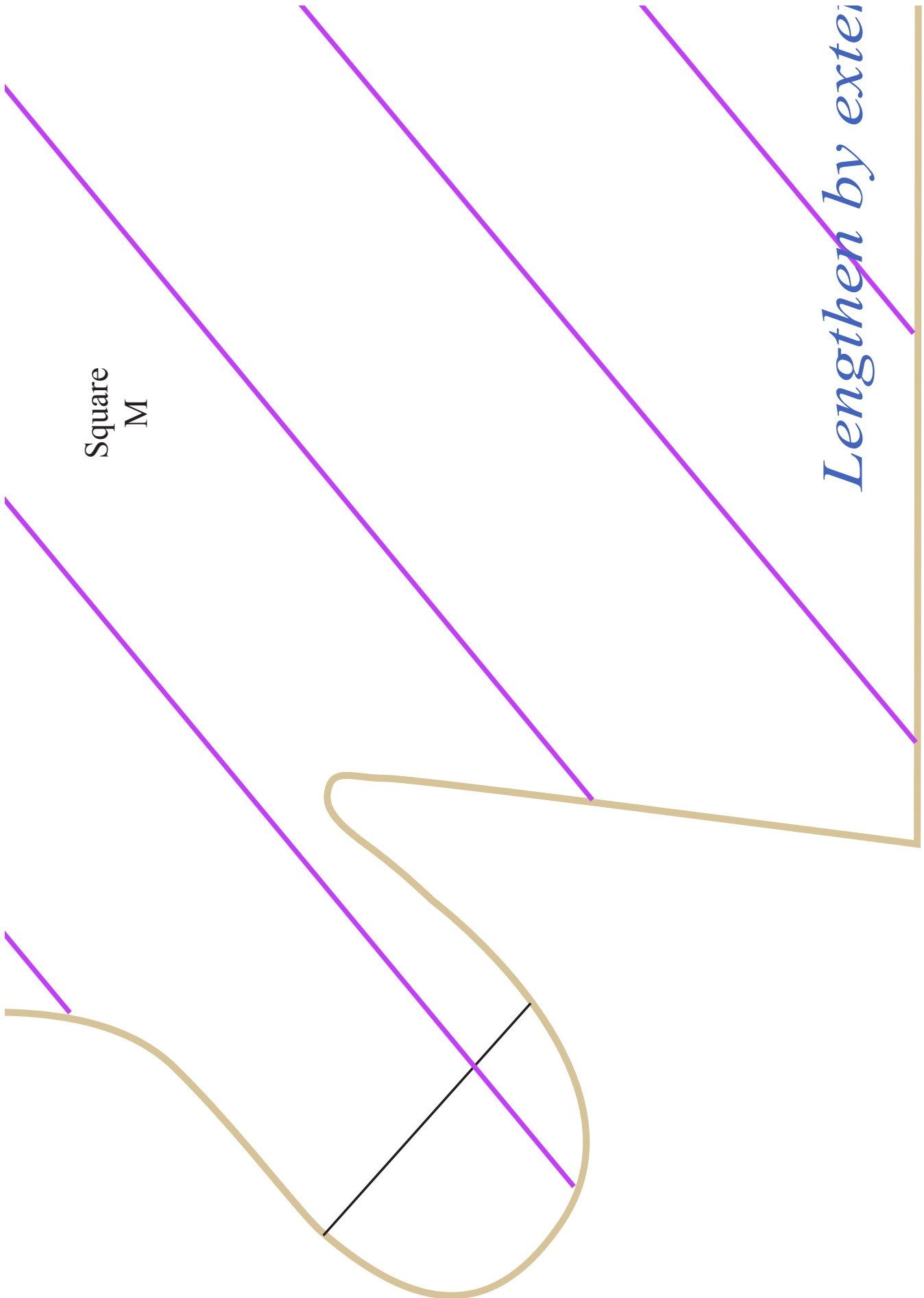


Square
M



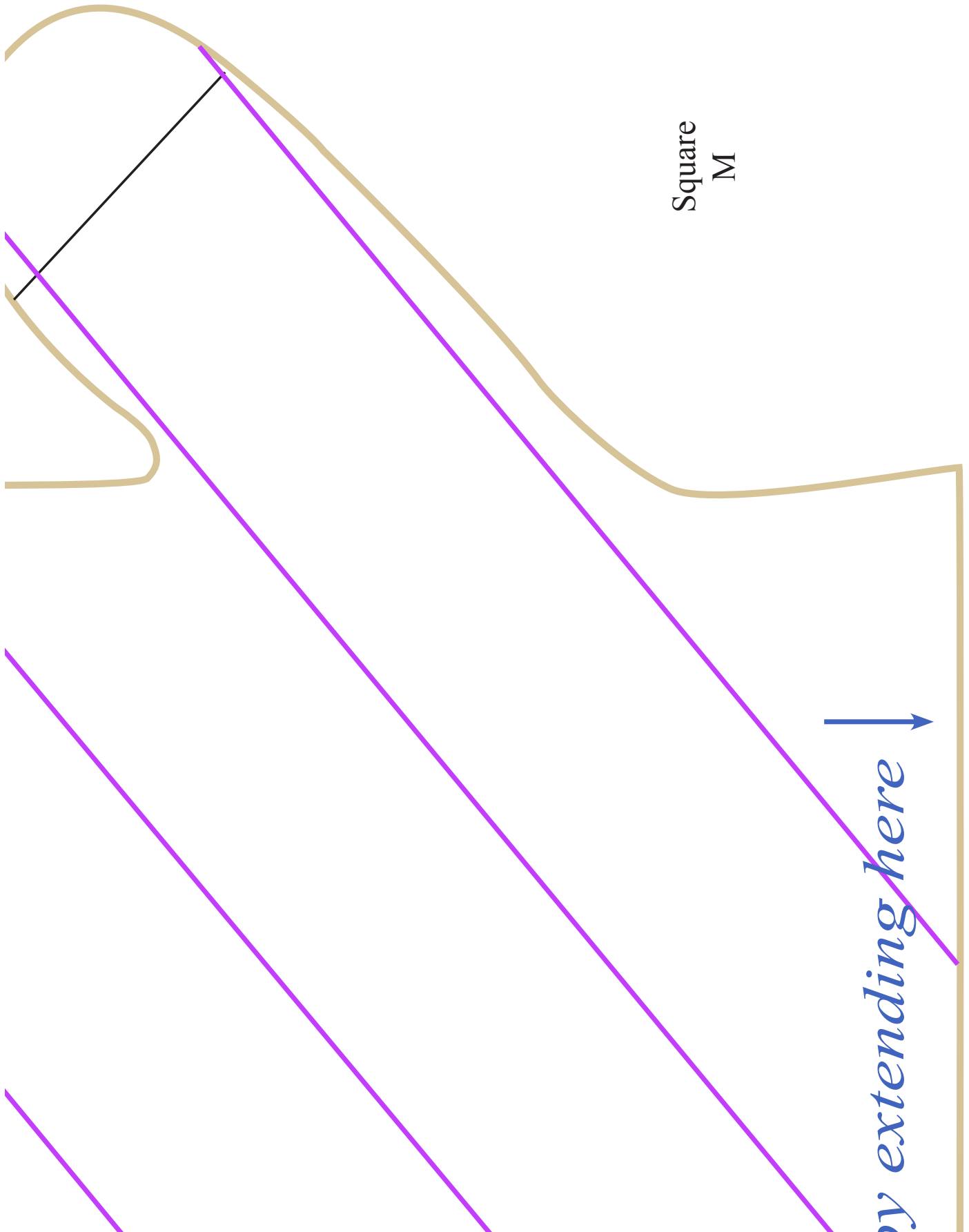


Square
M



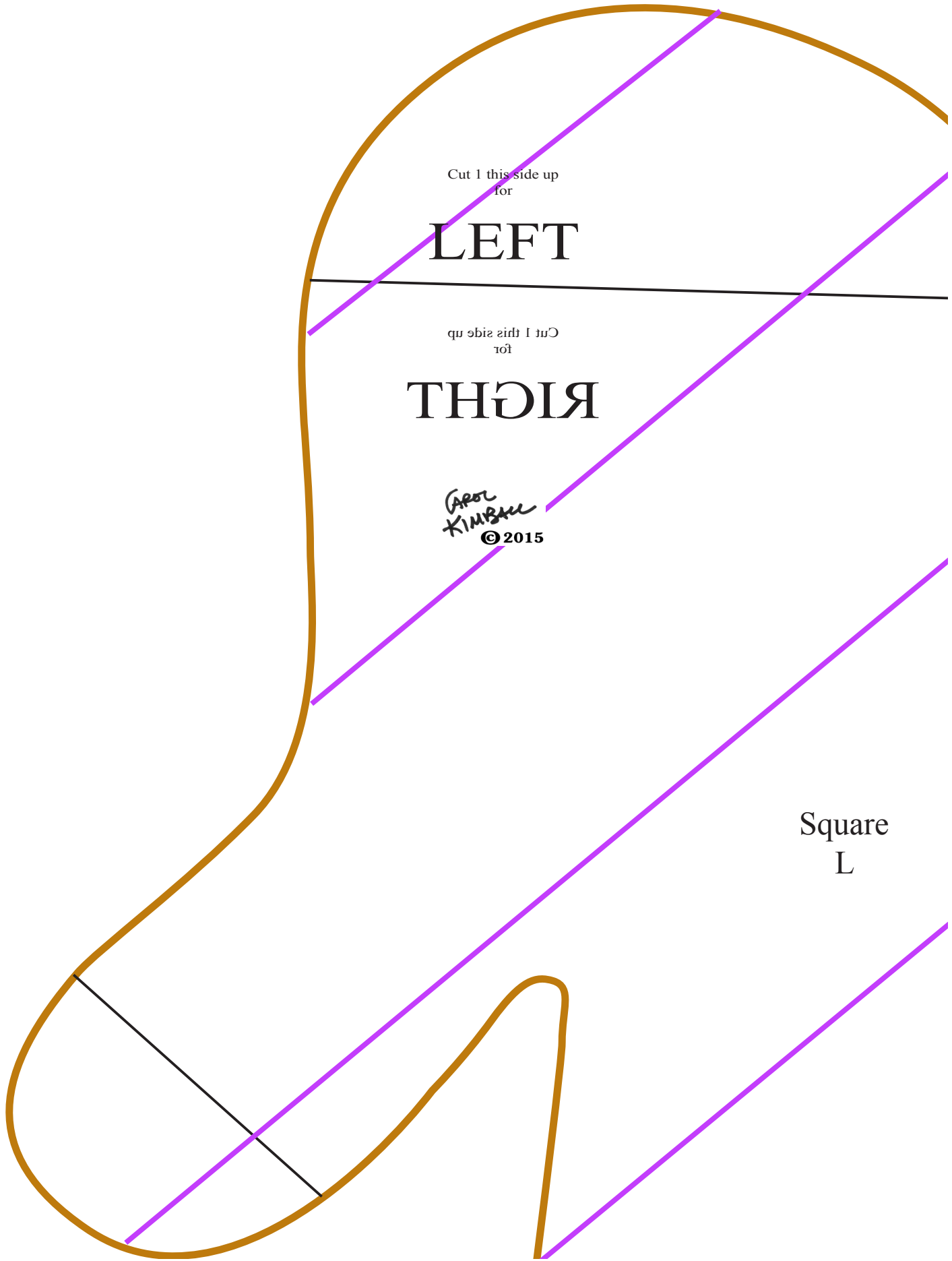
Square
M

Lengthen by exte



Square
M

y extending here



Cut 1 this side up
for

LEFT

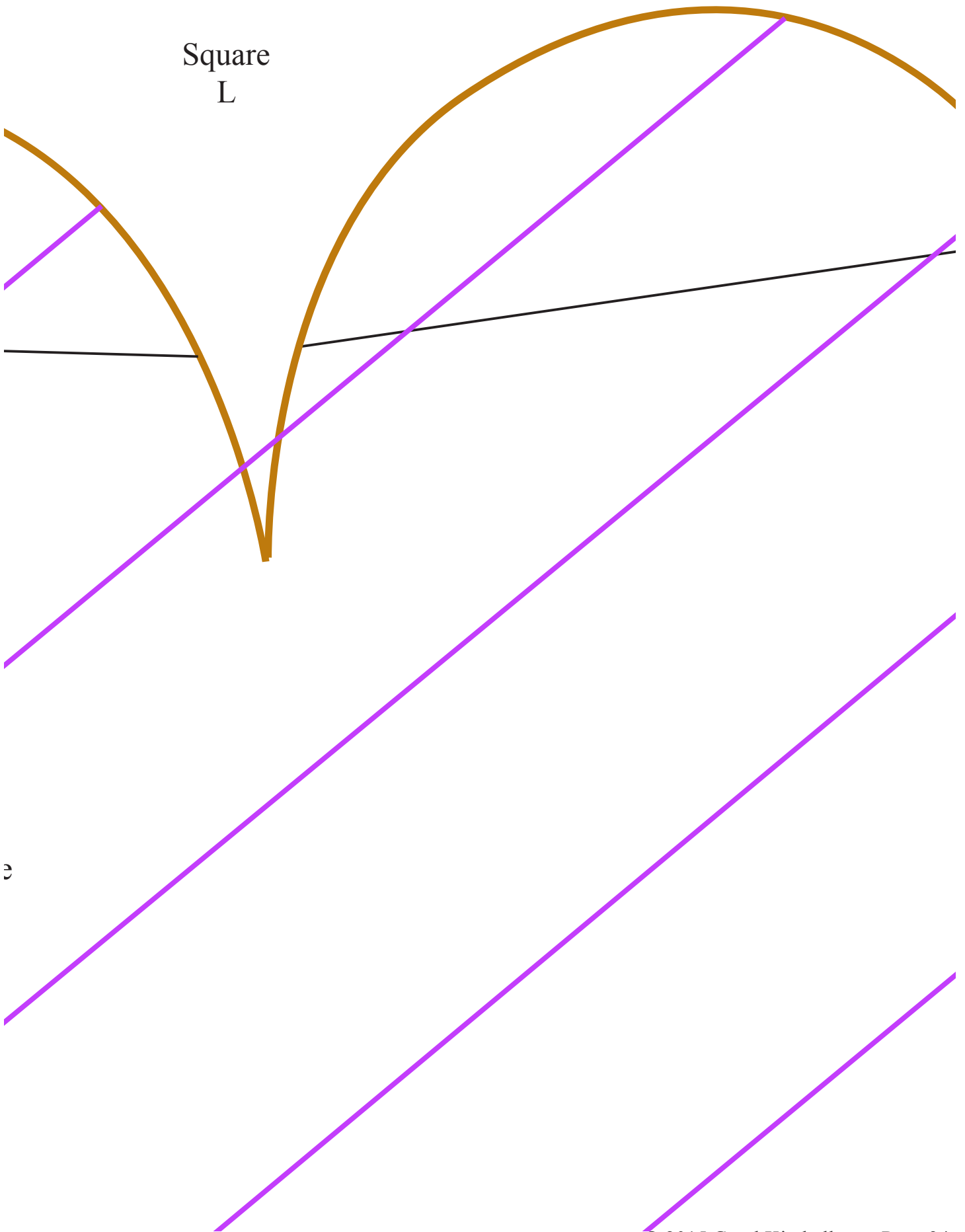
Cut 1 this side up
for

RIGHT

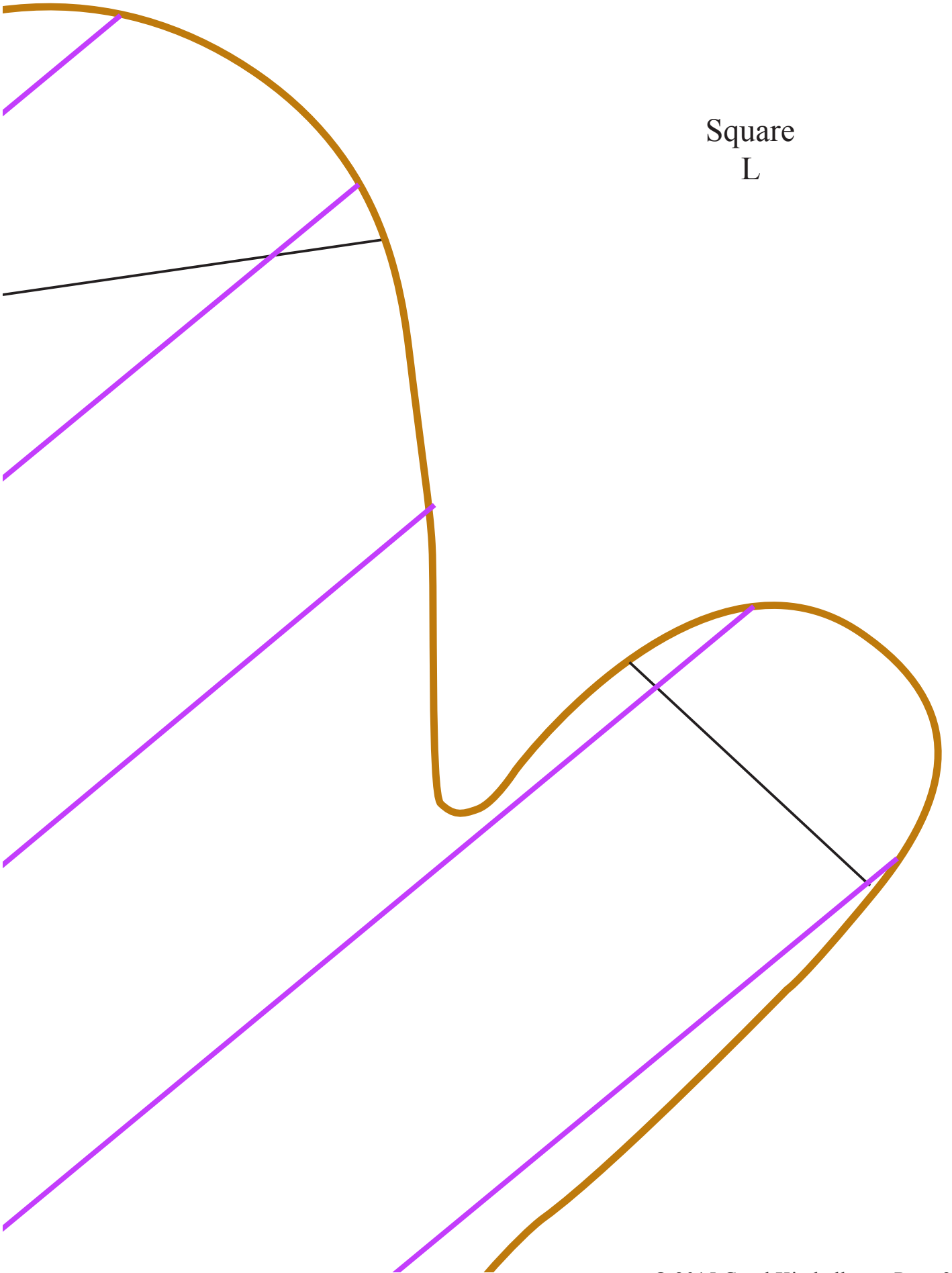
Carol
Kimball
© 2015

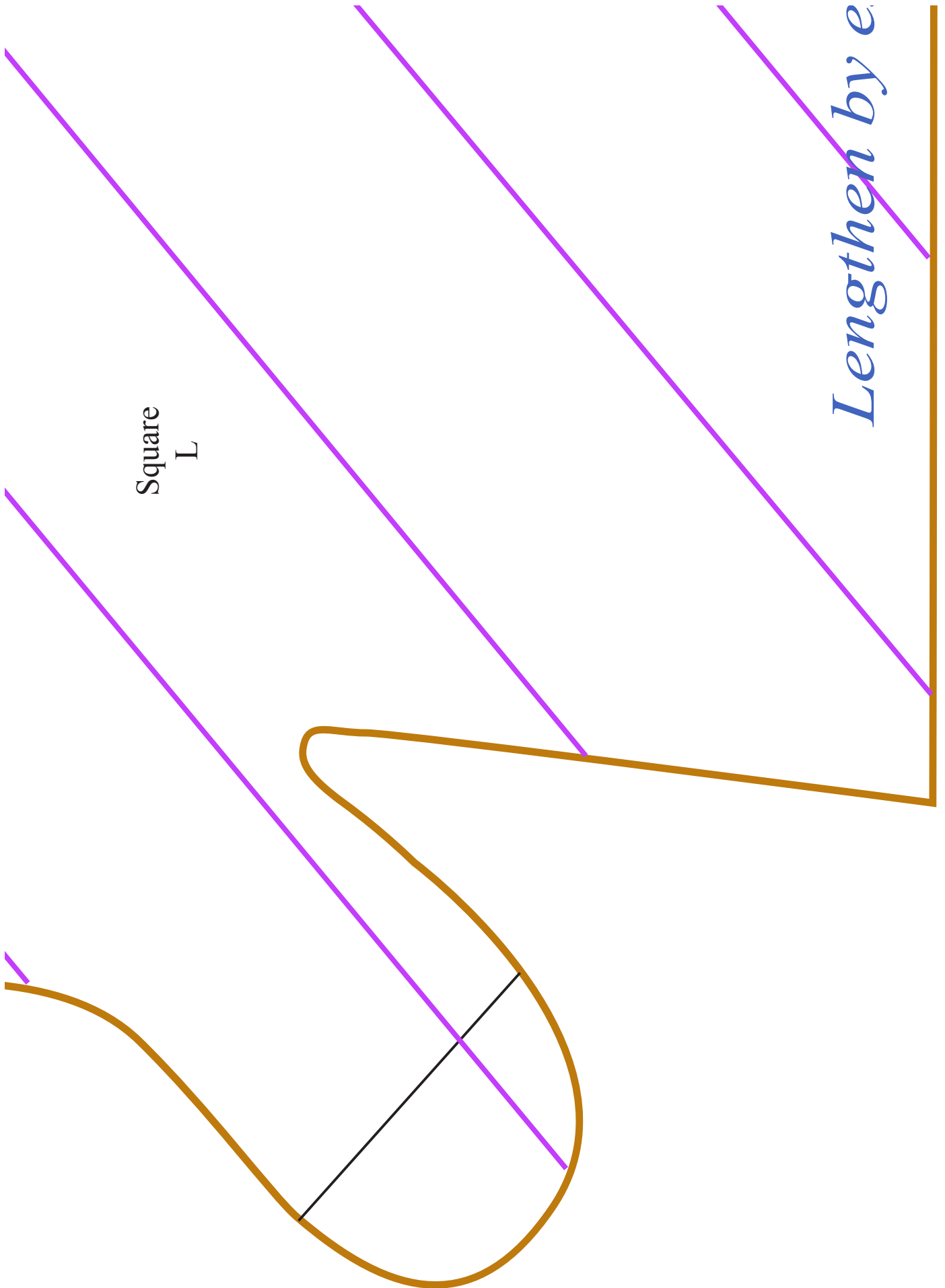
Square
L

Square
L



Square
L





Square
L

Lengthen by e

Square
XL

Cut 1 this side up
for

LEFT

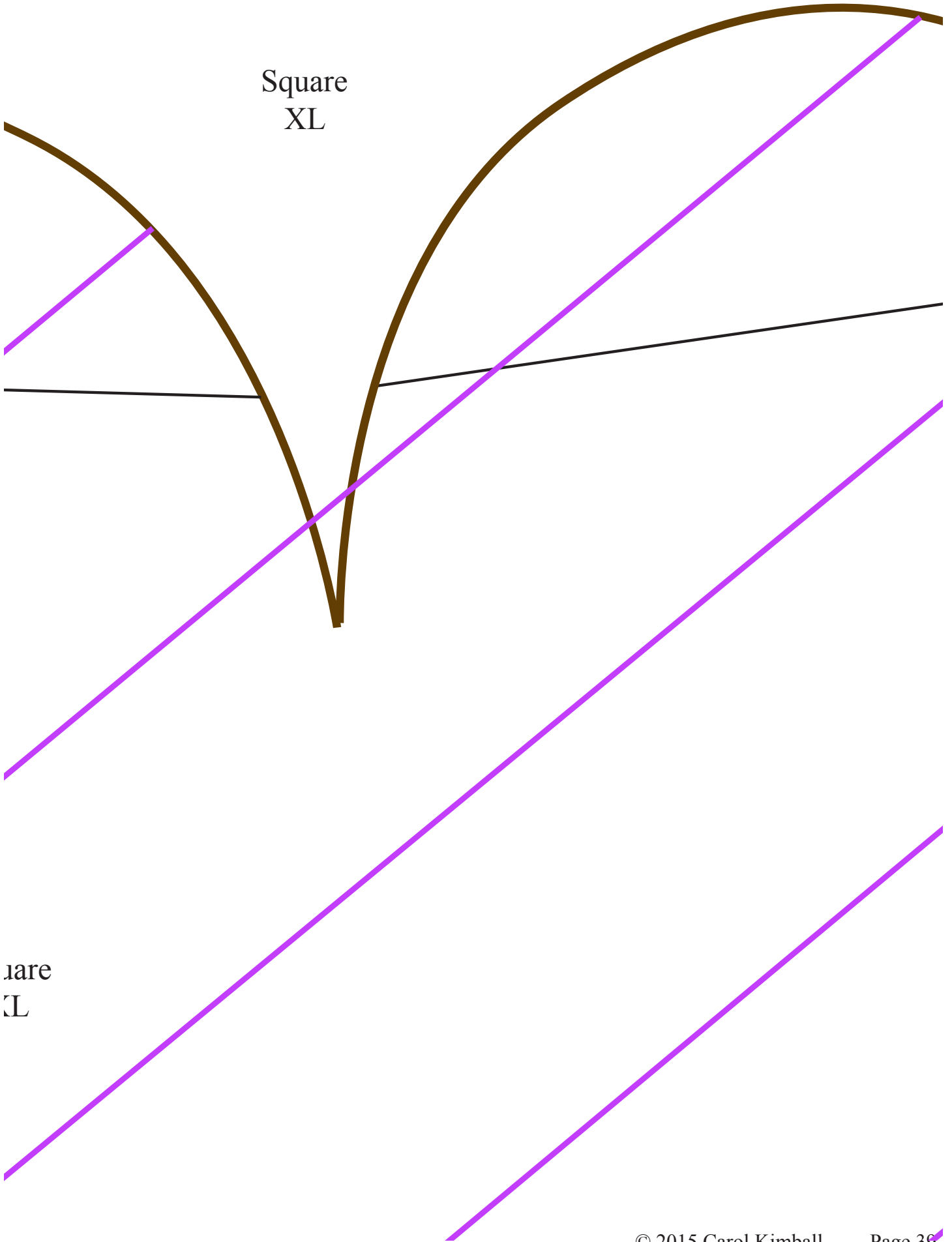
Cut 1 this side up
for

RIGHT

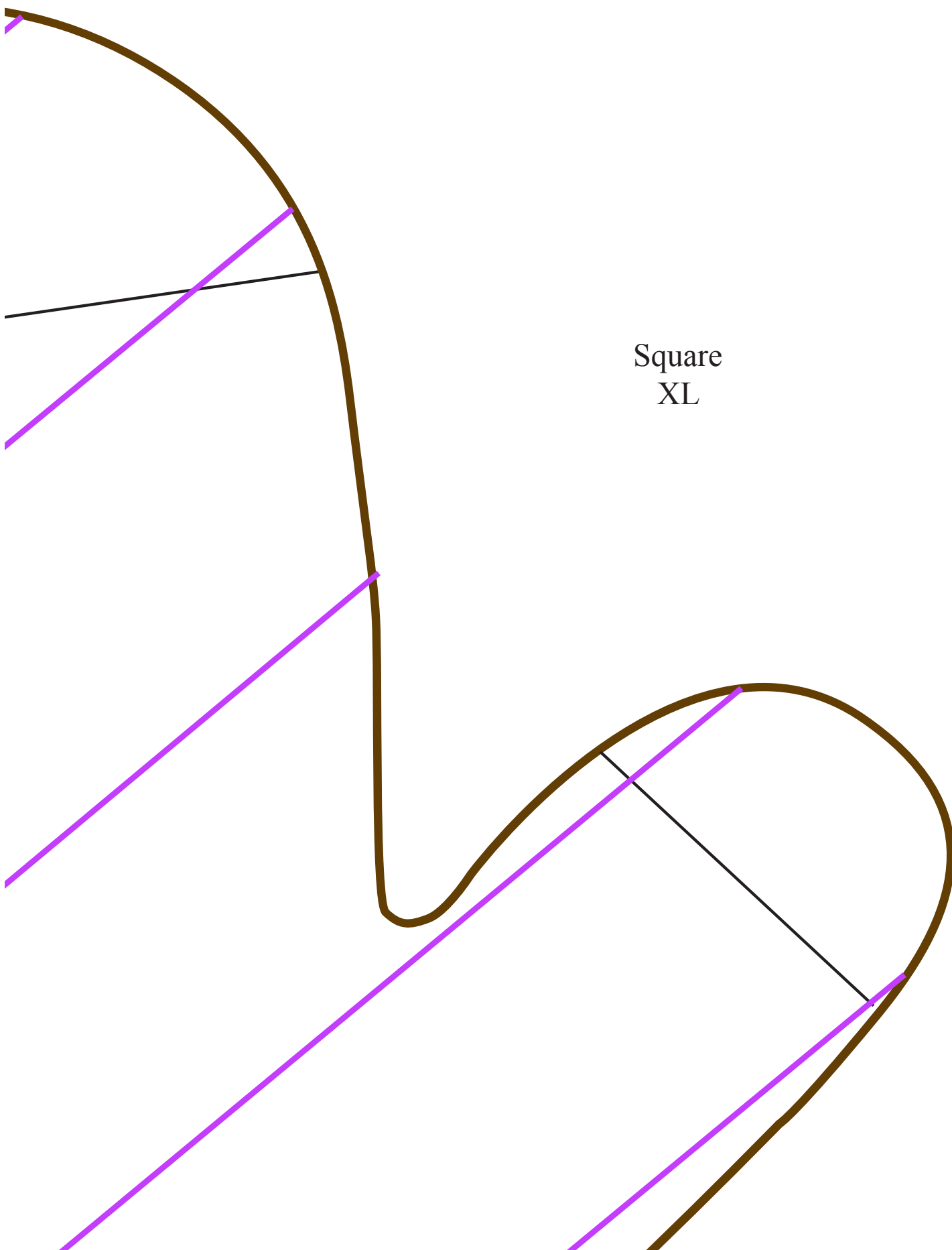
*Carol
KIMBALL*
© 2015

Square
XL

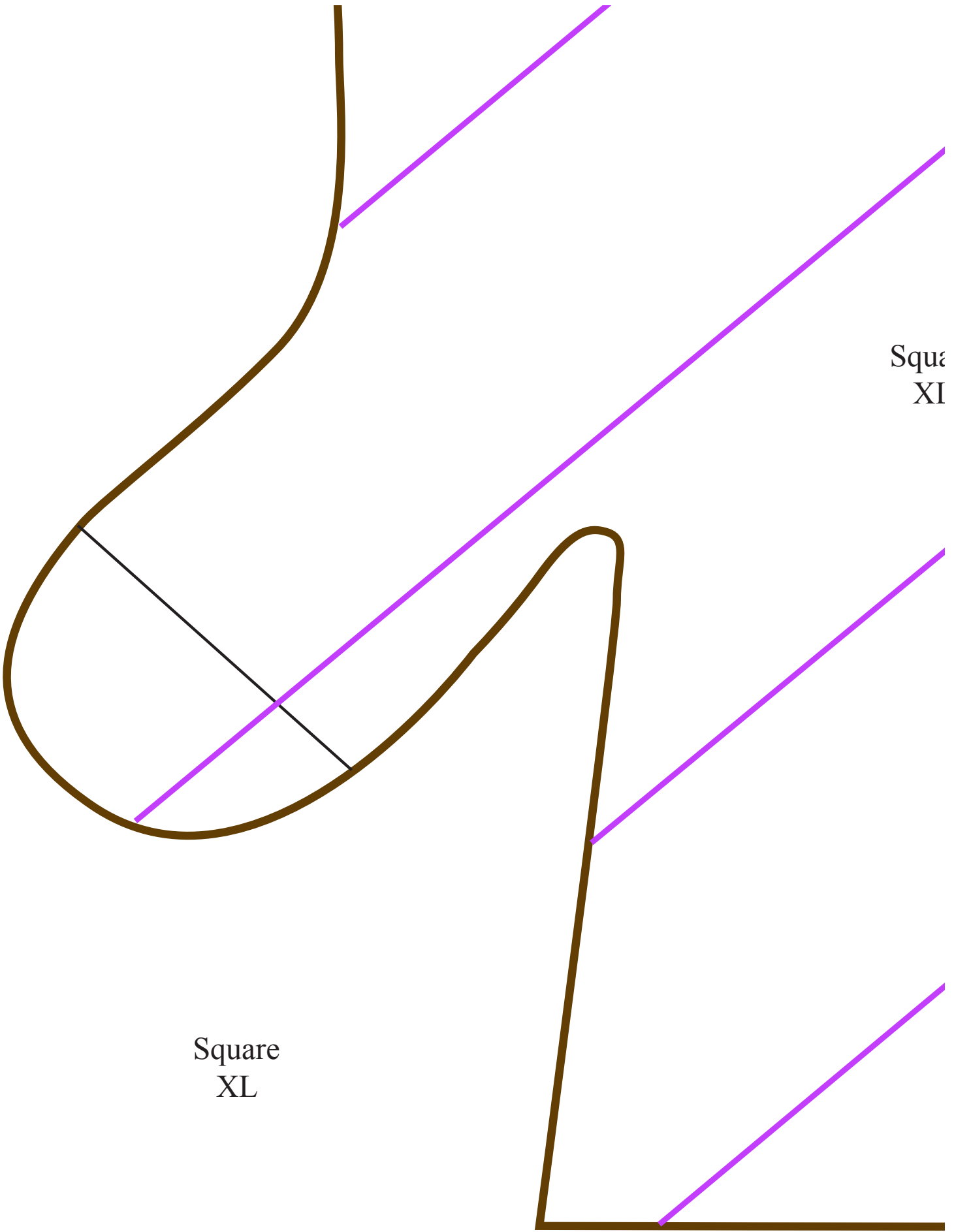
Square
XL



iare
L

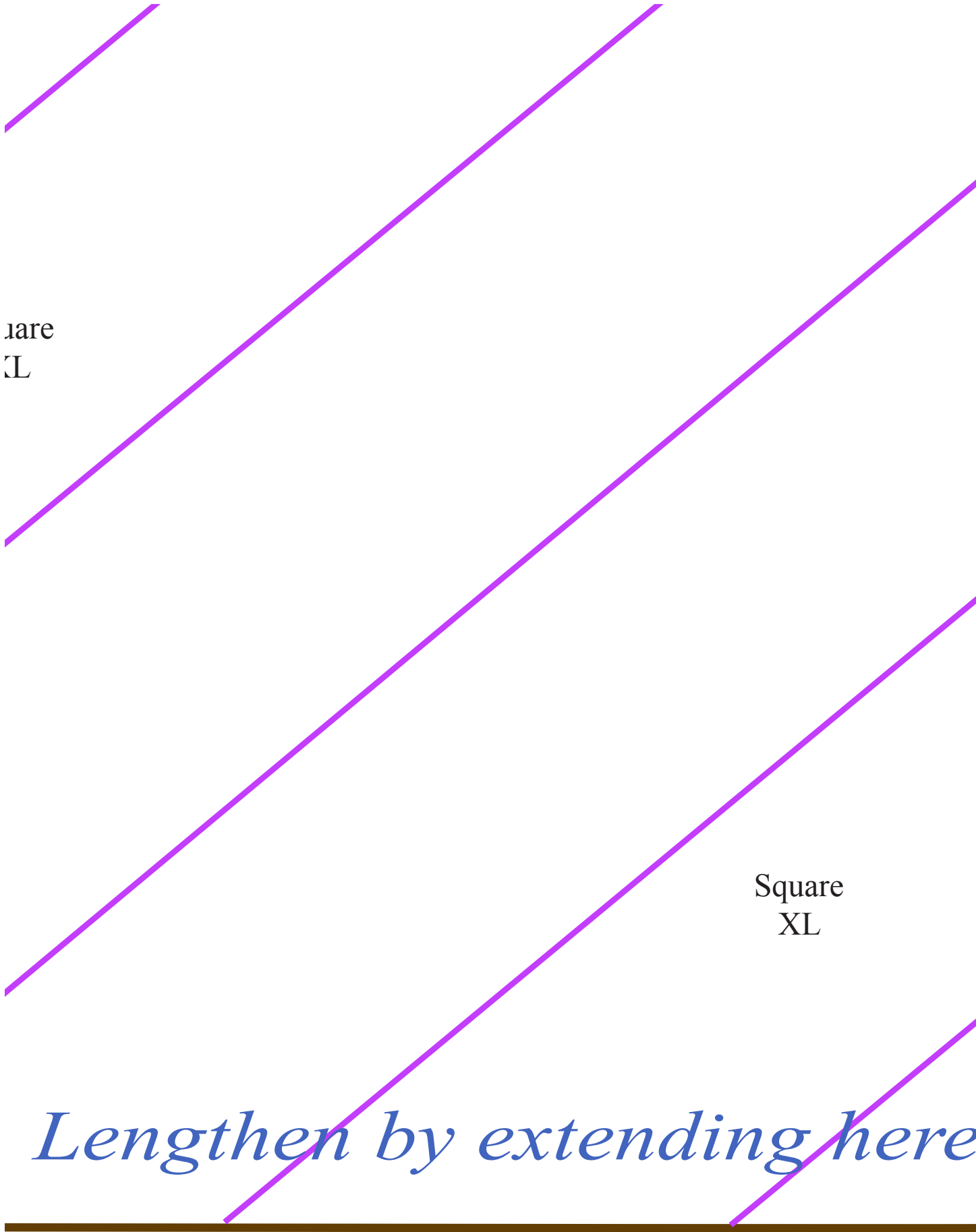


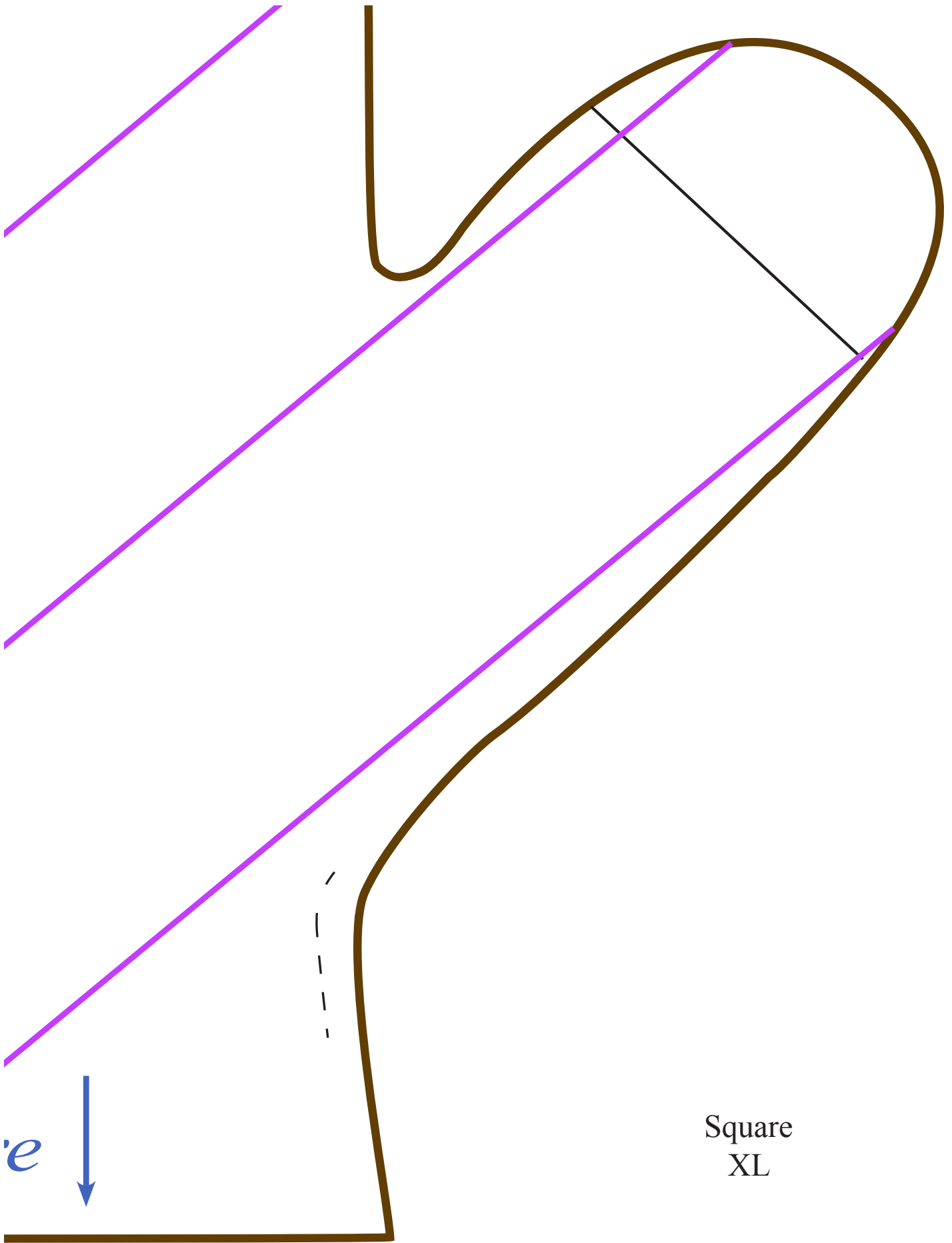
Square
XL



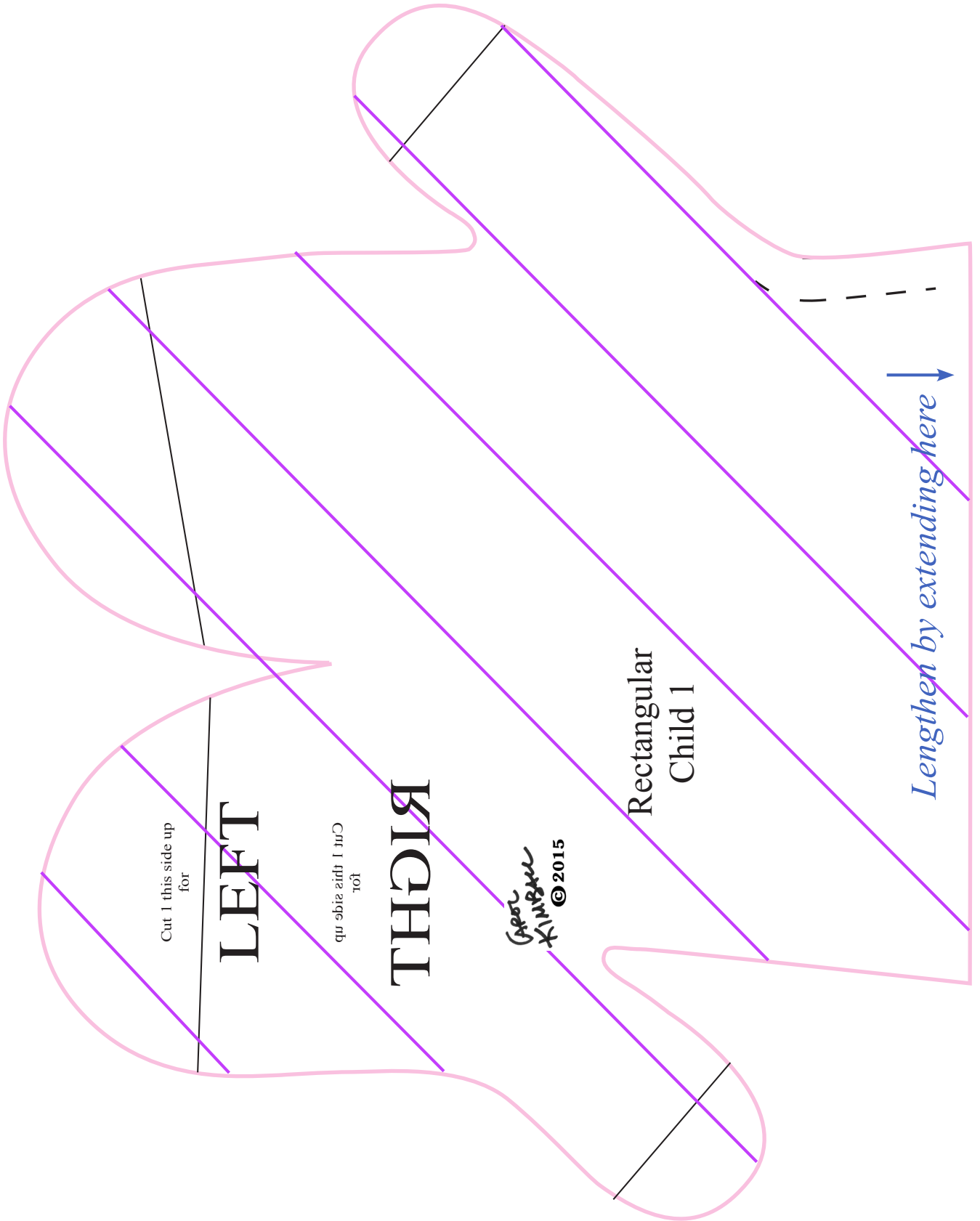
Squa
XI

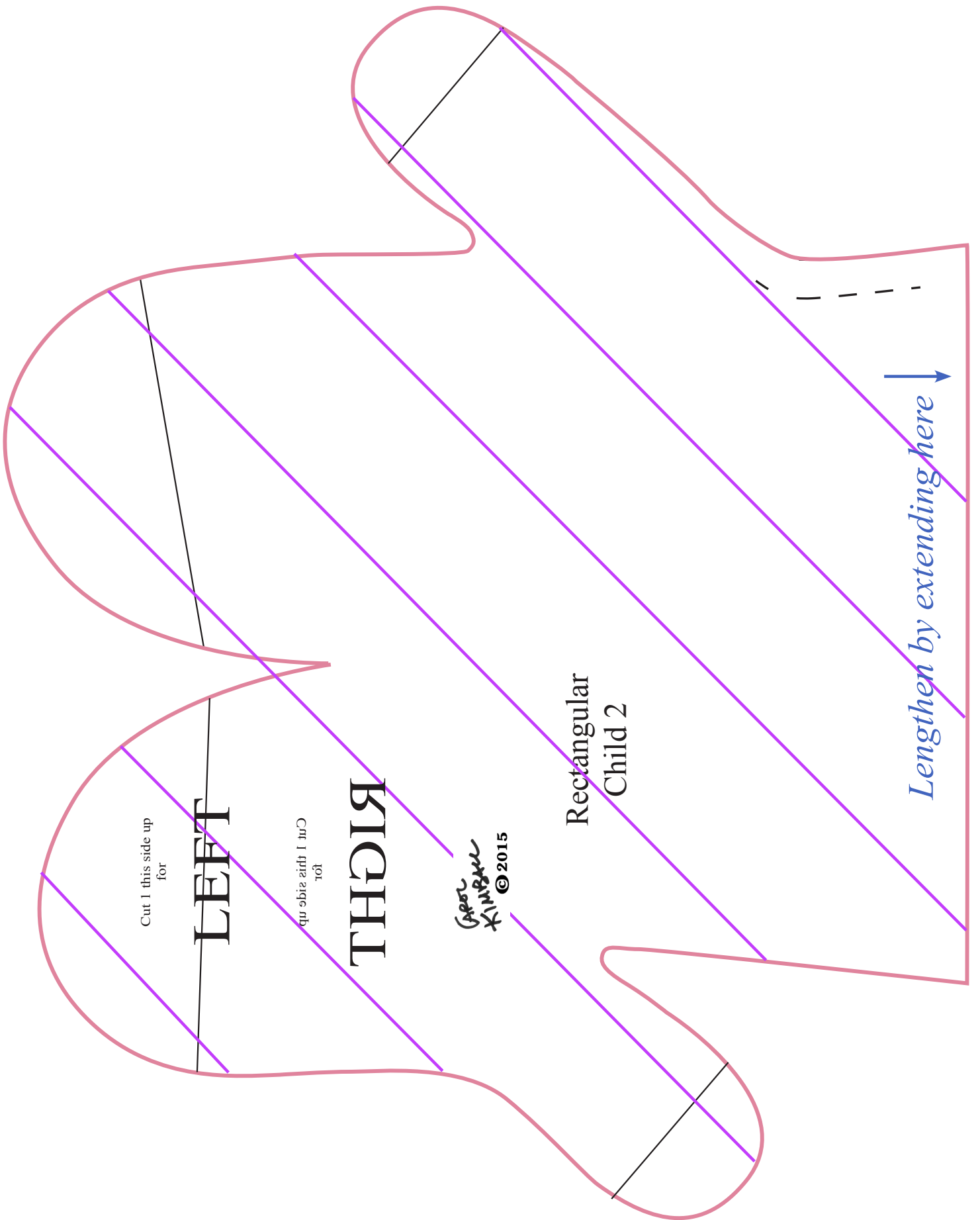
Square
XL





Square
XL





Cut 1 this side up
for

LEFT

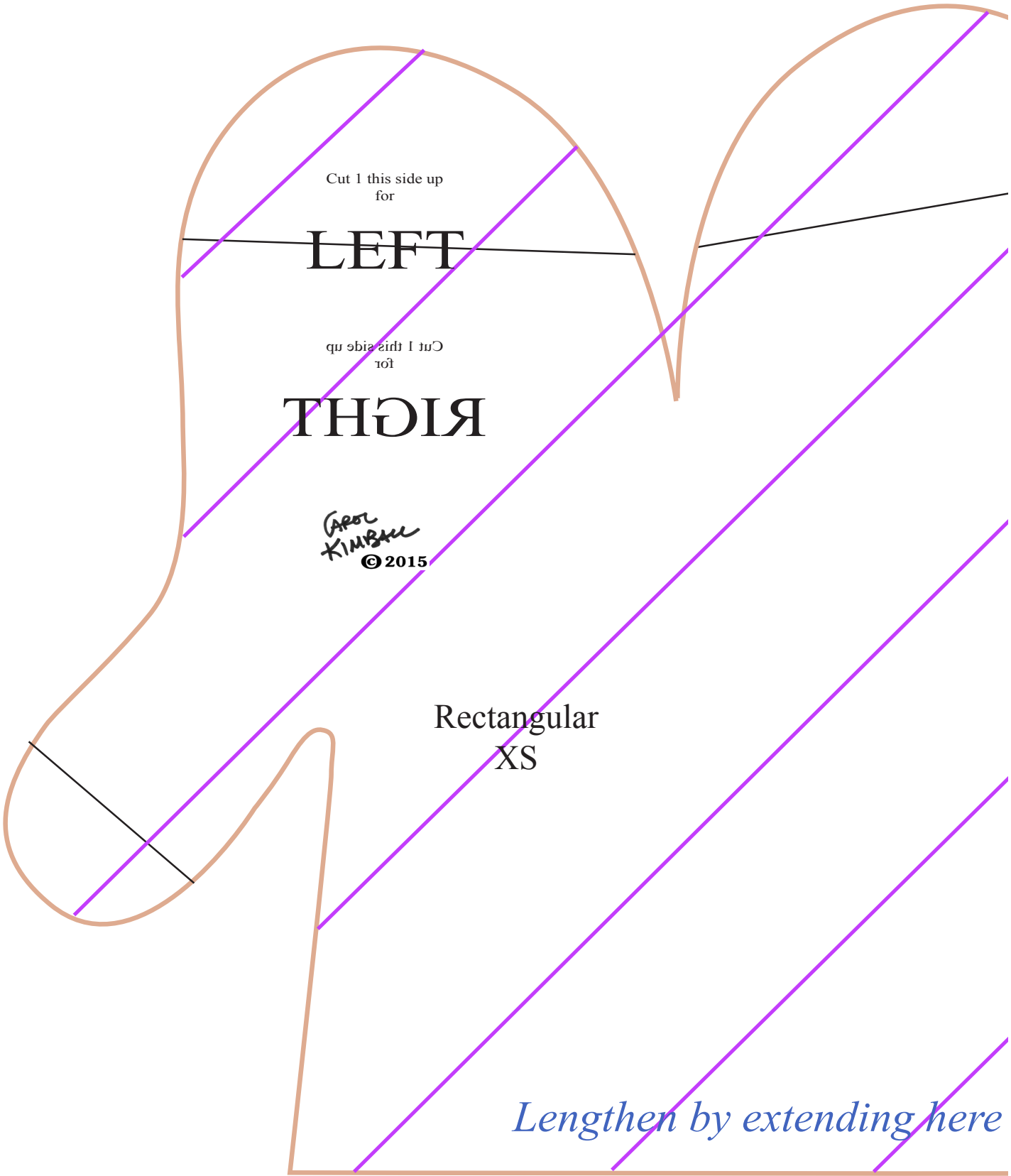
Cut 1 this side up
for

RIGHT

Carol
Kimball
© 2015

Rectangular
Child 2

Lengthen by extending here ↓



Cut 1 this side up
for

LEFT

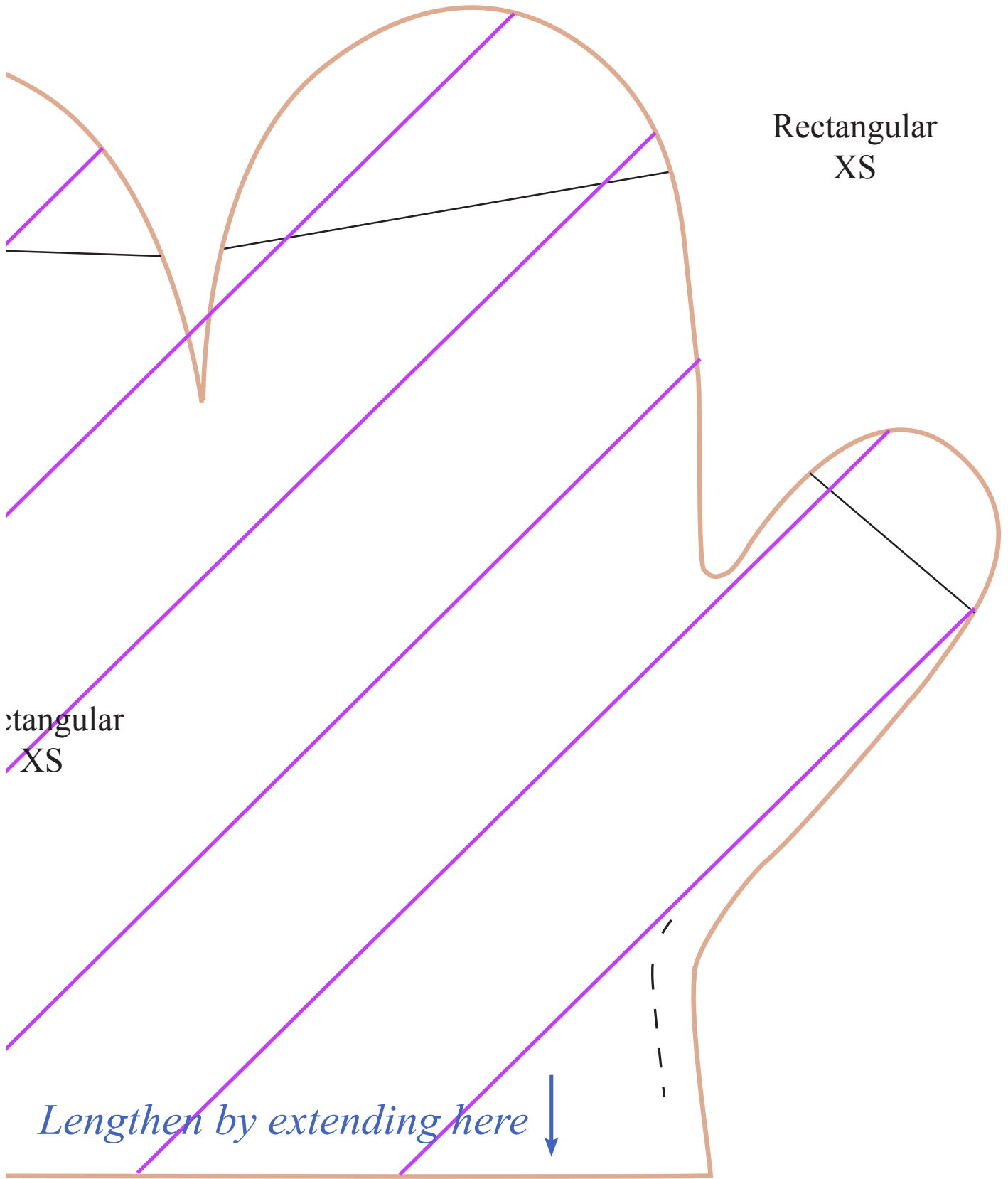
Cut 1 this side up
for

RIGHT

*Carol
Kimball*
© 2015

Rectangular
XS

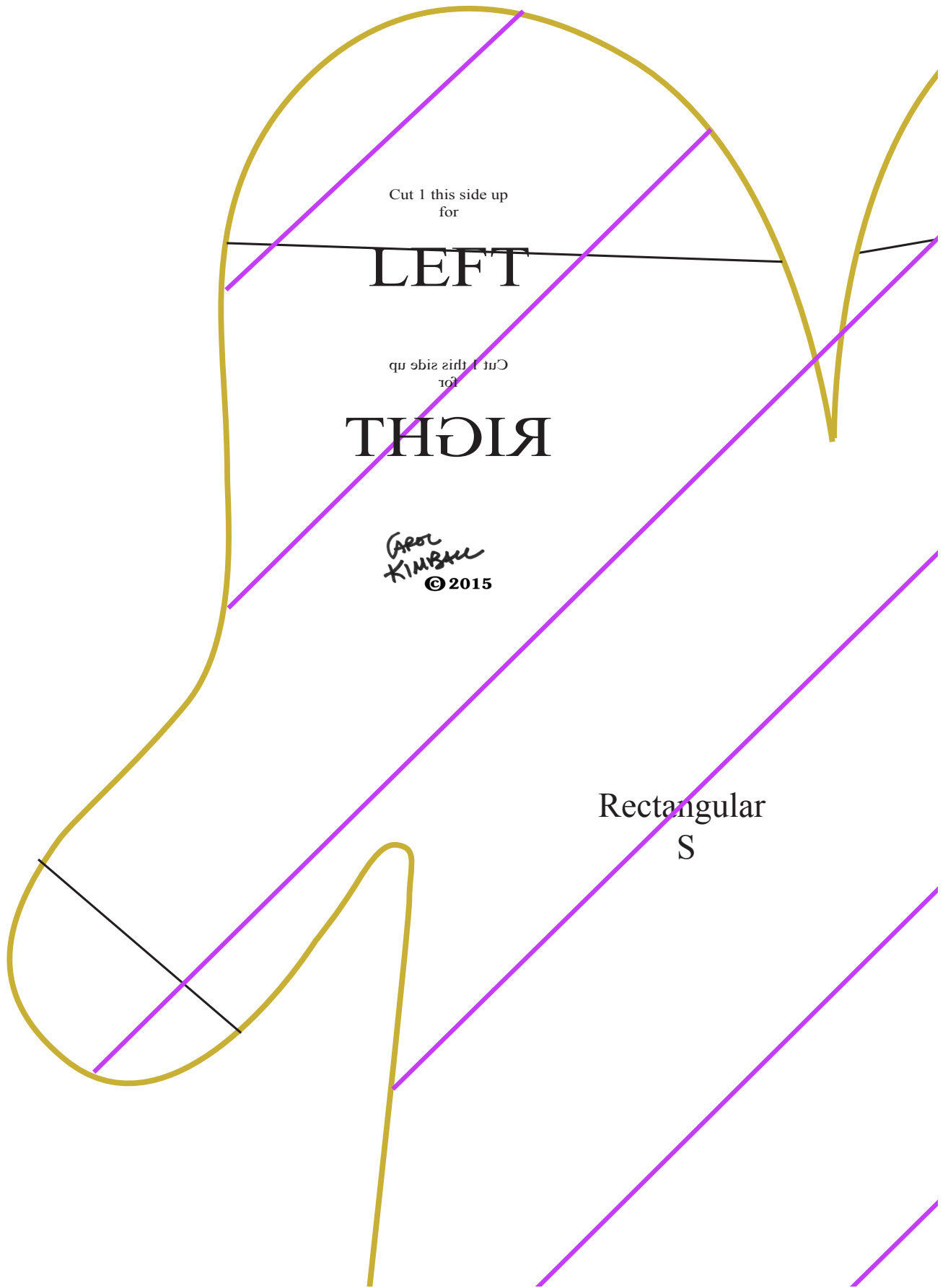
Lengthen by extending here



Rectangular
XS

Rectangular
XS

Lengthen by extending here ↓



Cut 1 this side up
for

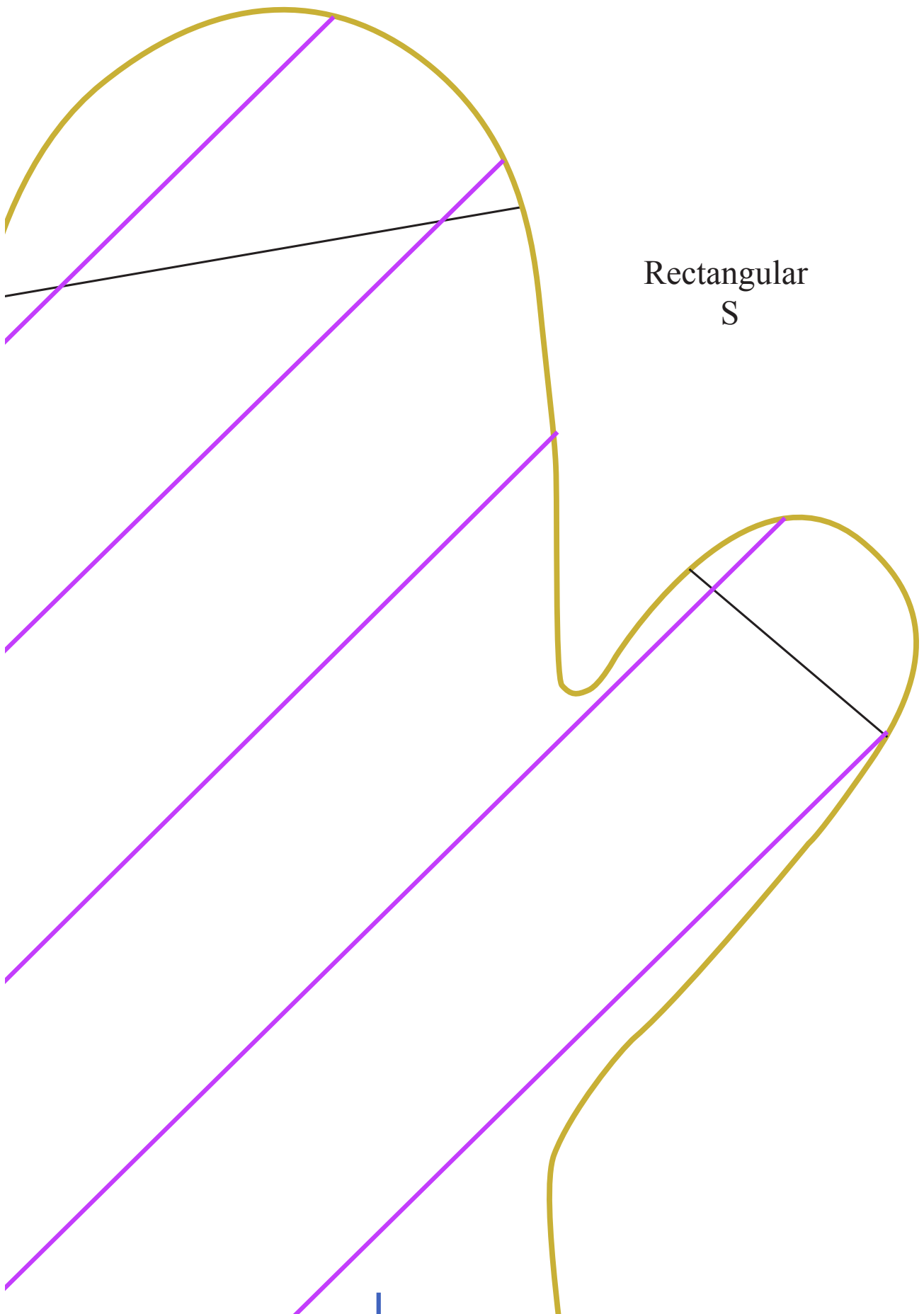
LEFT

Cut 1 this side up
for

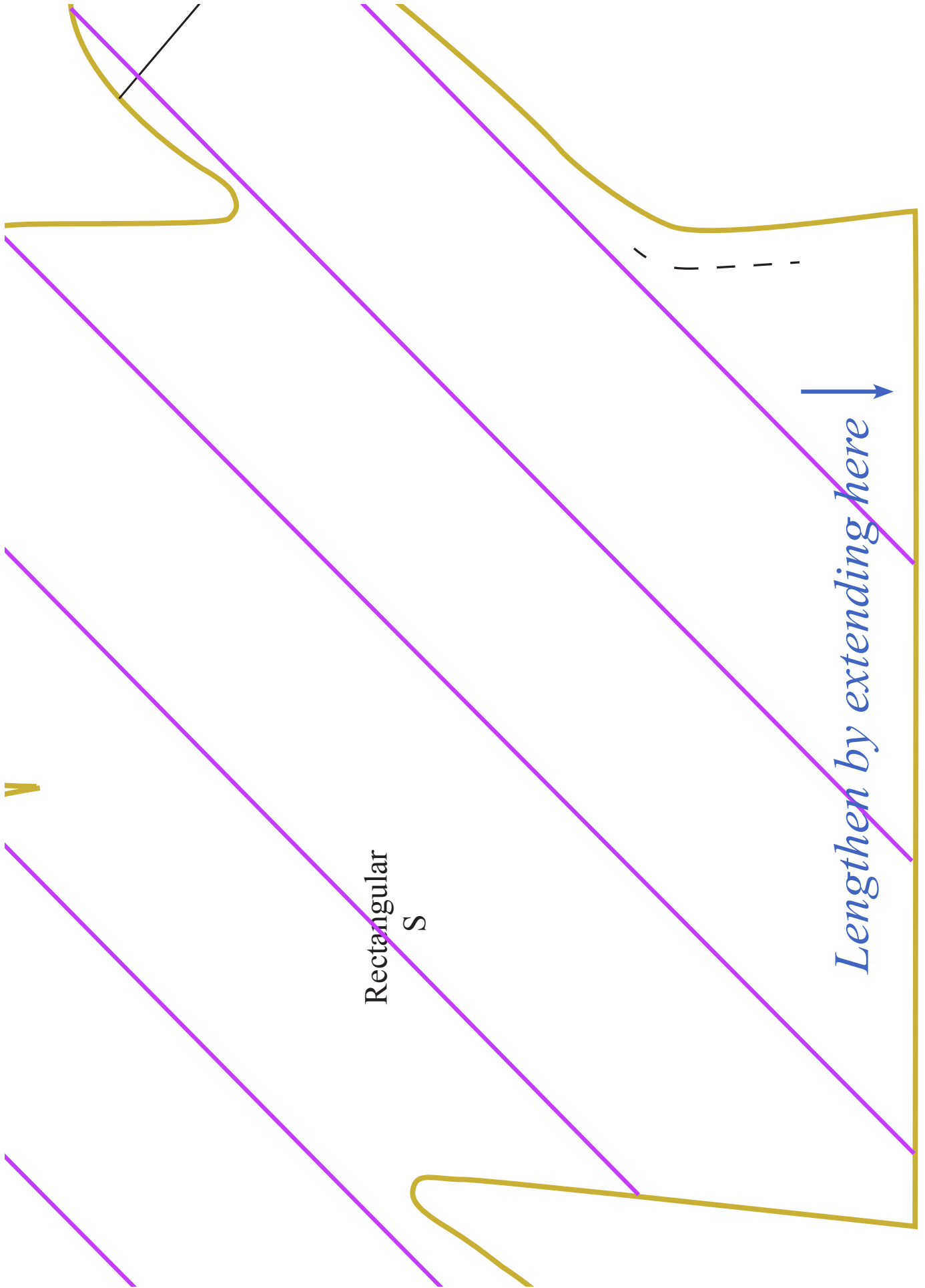
RIGHT

Carol
Kimball
© 2015

Rectangular
S



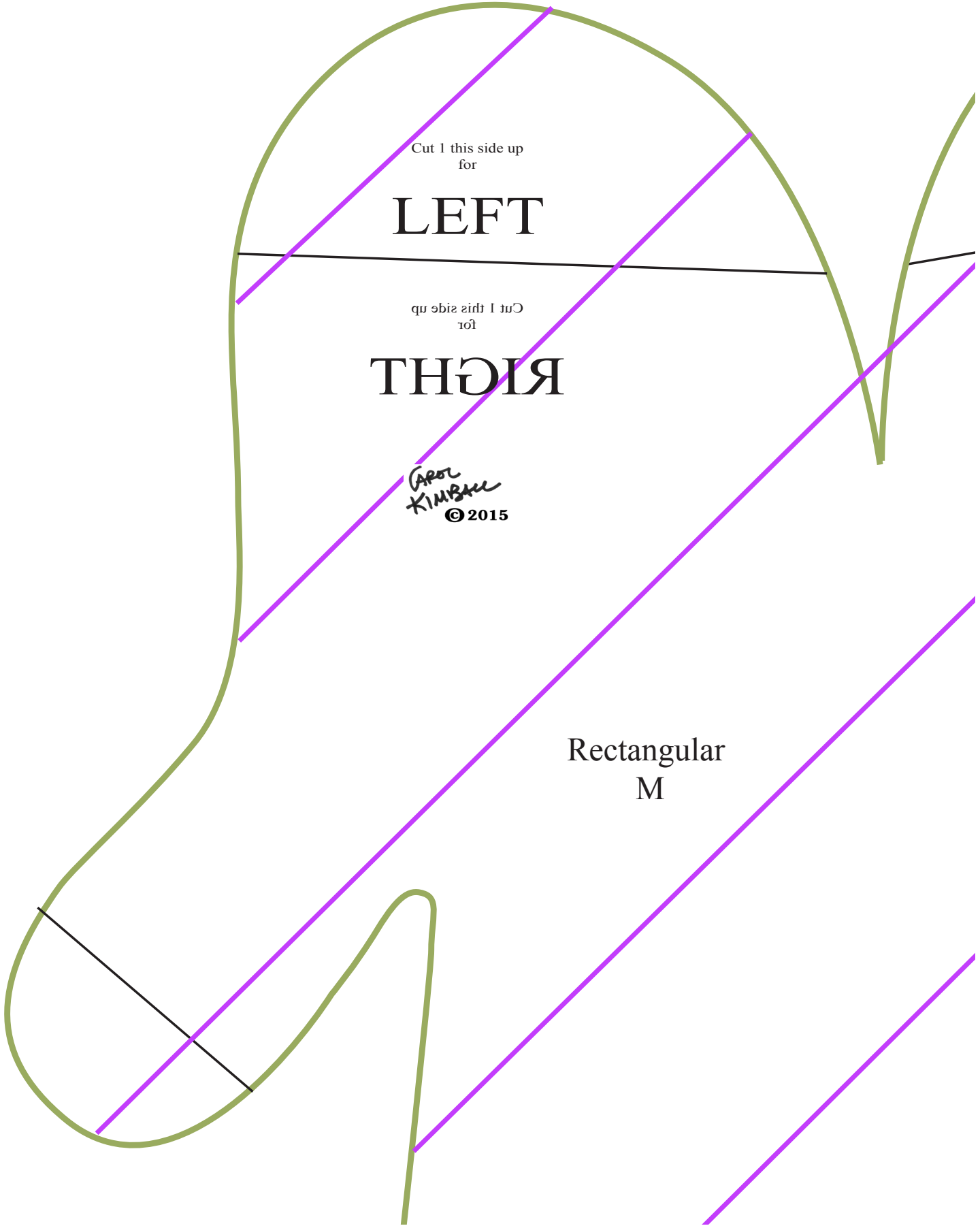
Rectangular
S



V

Rectangular
S

Lengthen by extending here



Cut 1 this side up
for

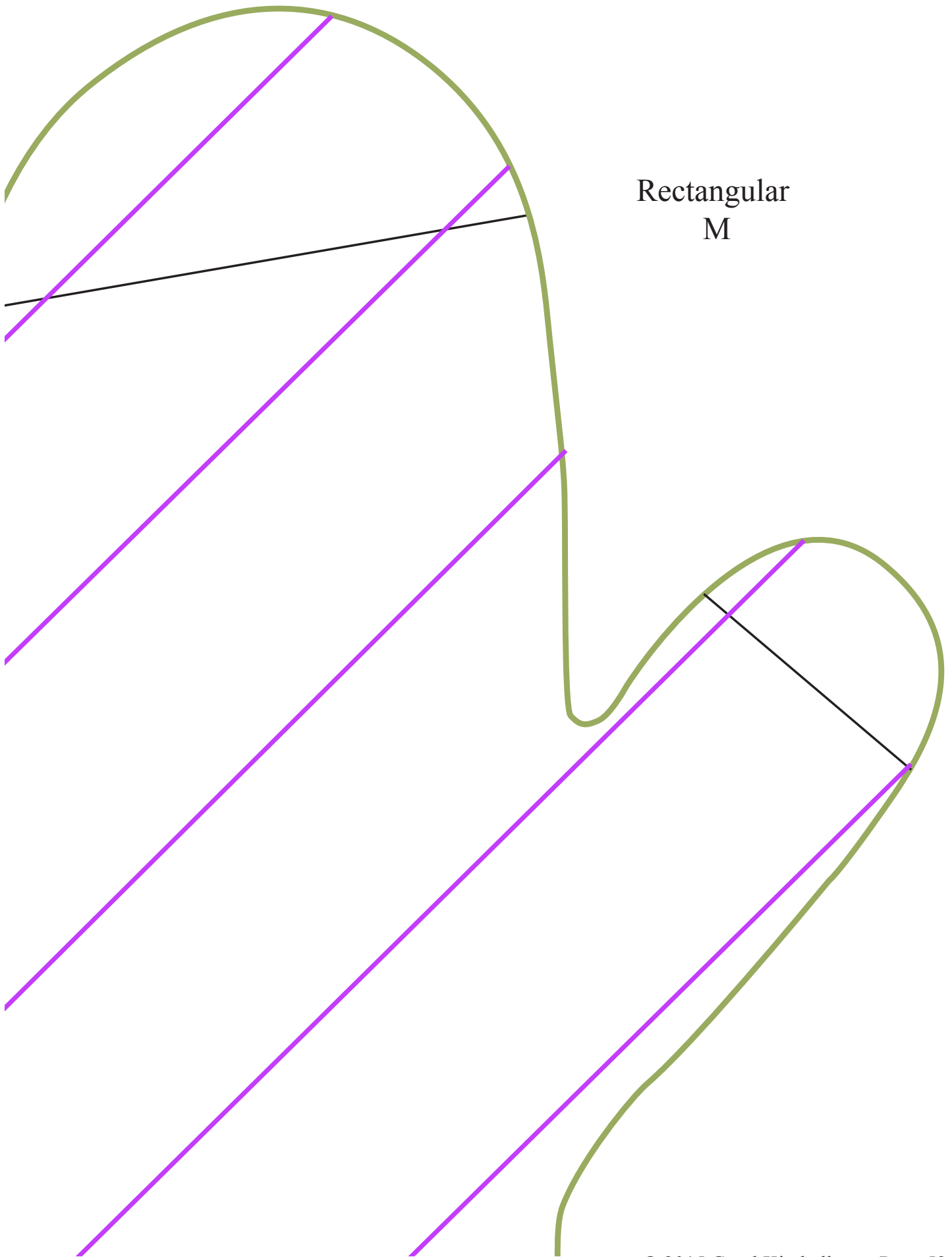
LEFT

Cut 1 this side up
for

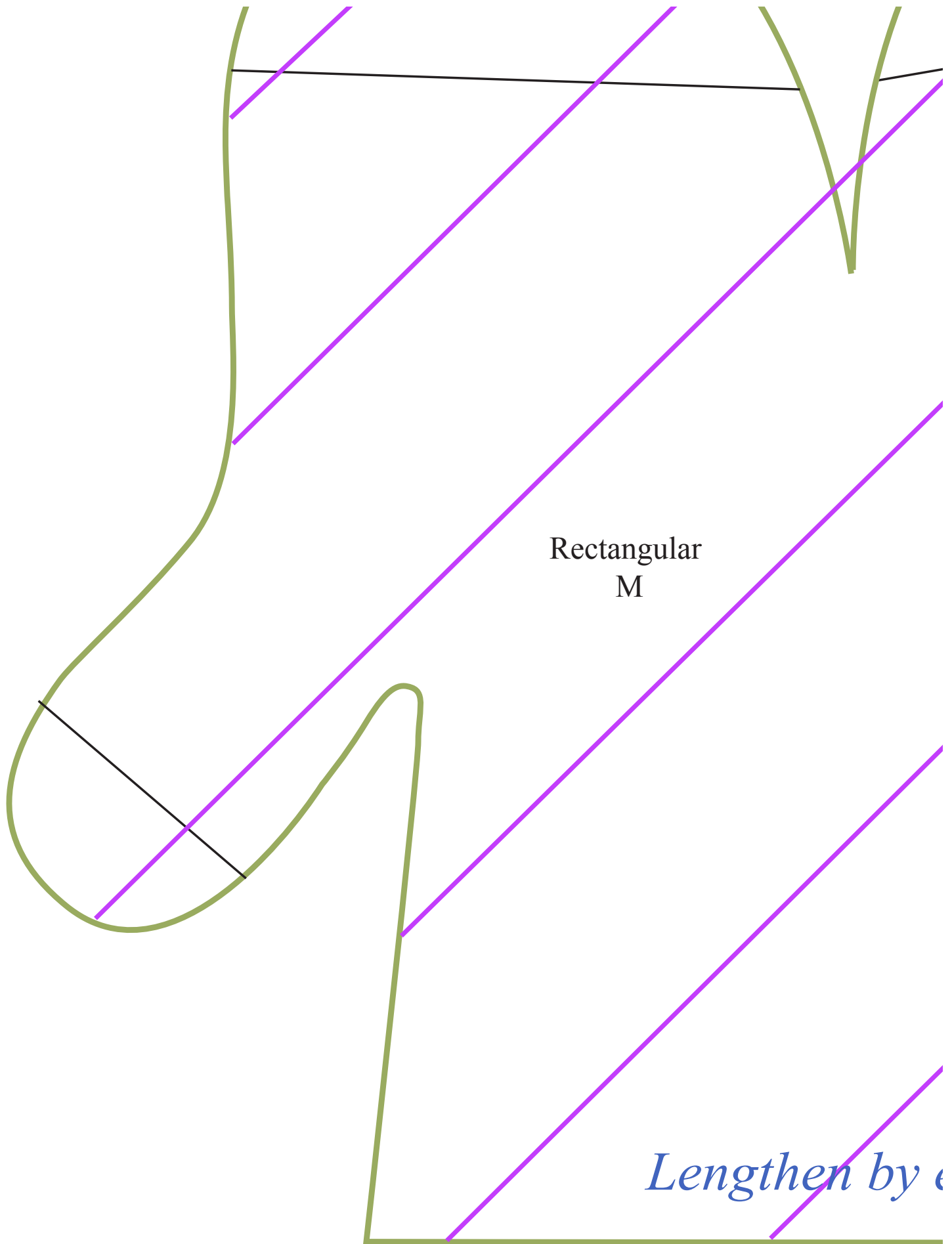
RIGHT

Carol
Kimball
© 2015

Rectangular
M

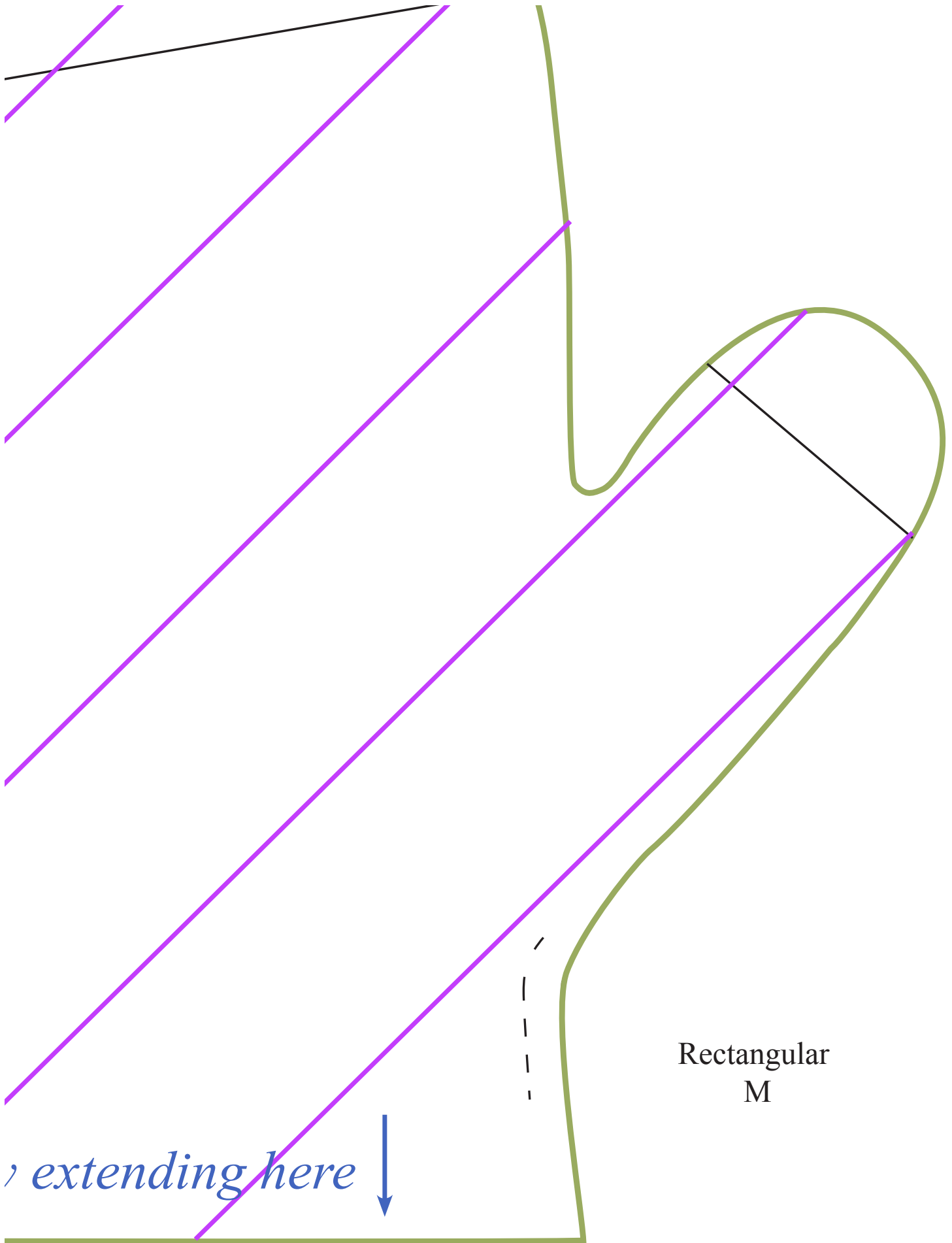


Rectangular
M

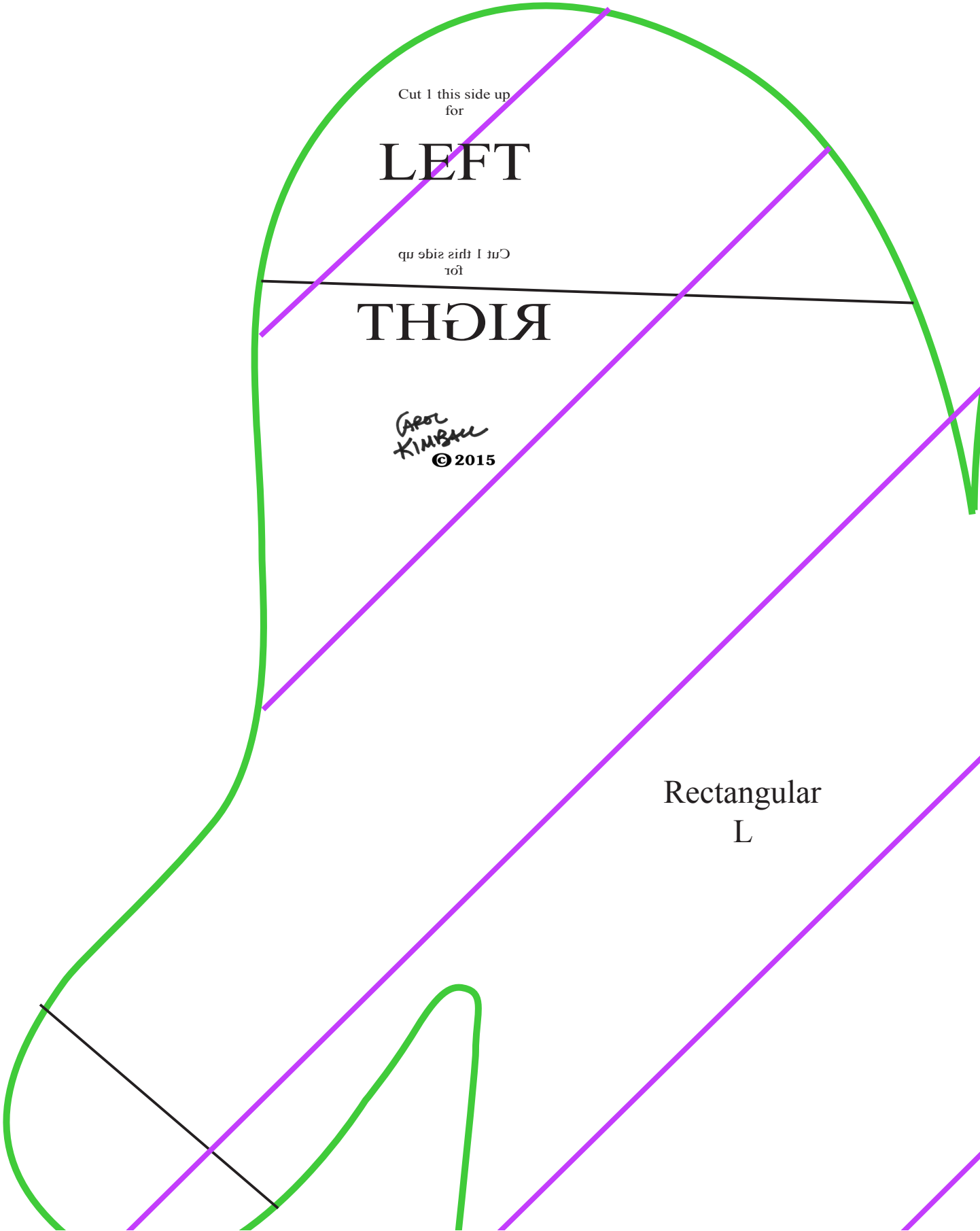


Rectangular
M

Lengthen by ϵ



Rectangular
M



Cut 1 this side up
for

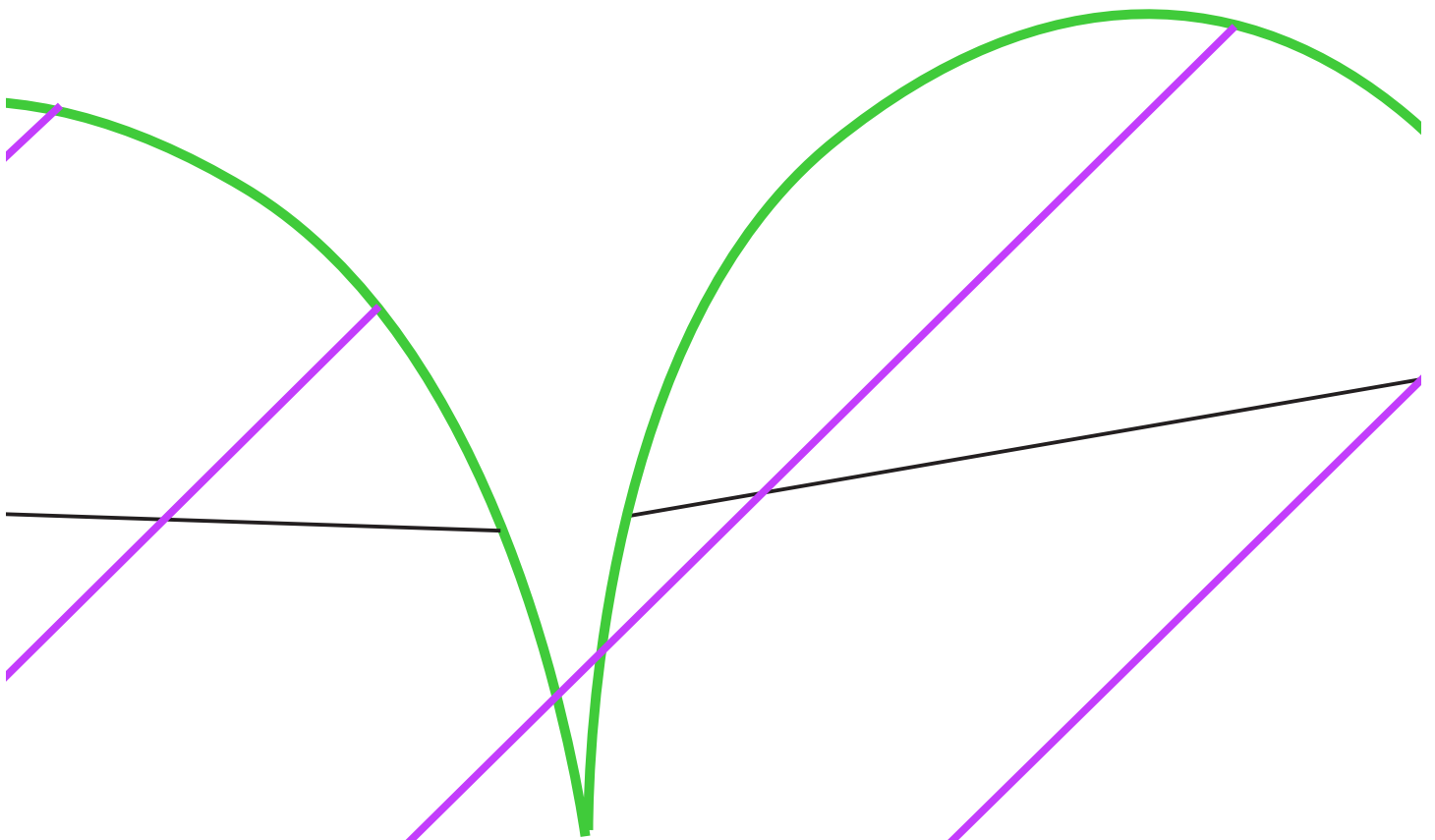
LEFT

Cut 1 this side up
for

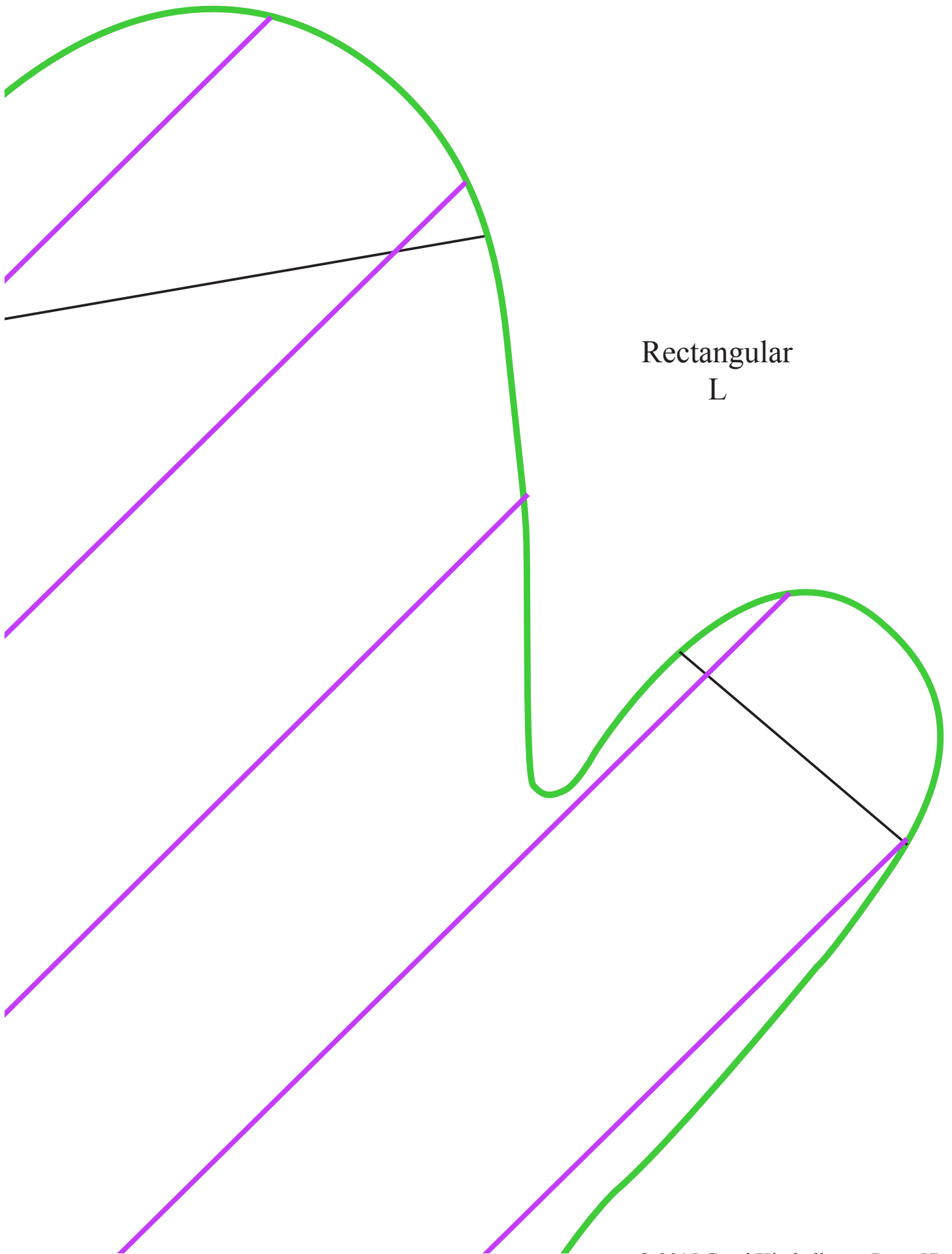
RIGHT

Carol
Kimball
© 2015

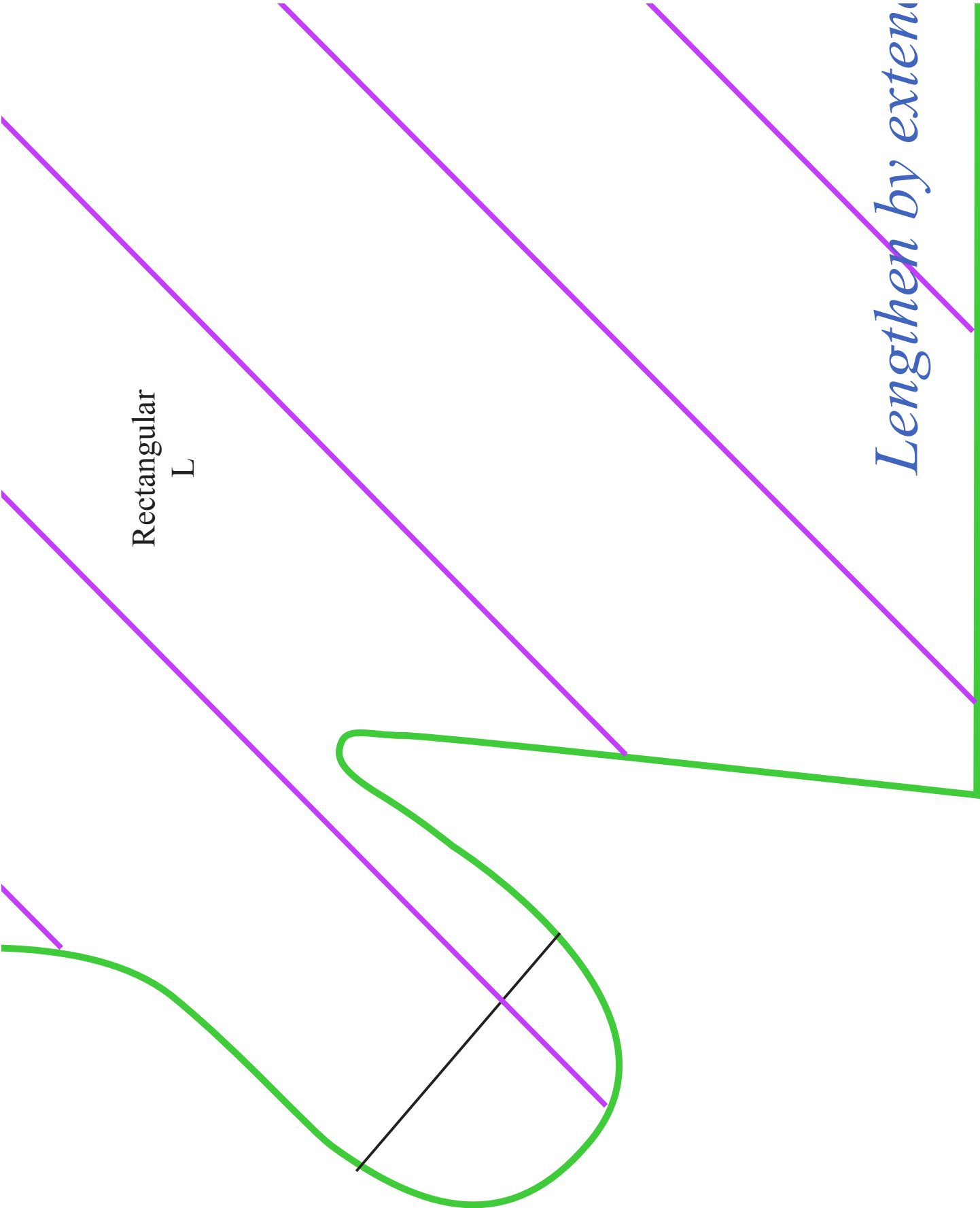
Rectangular
L



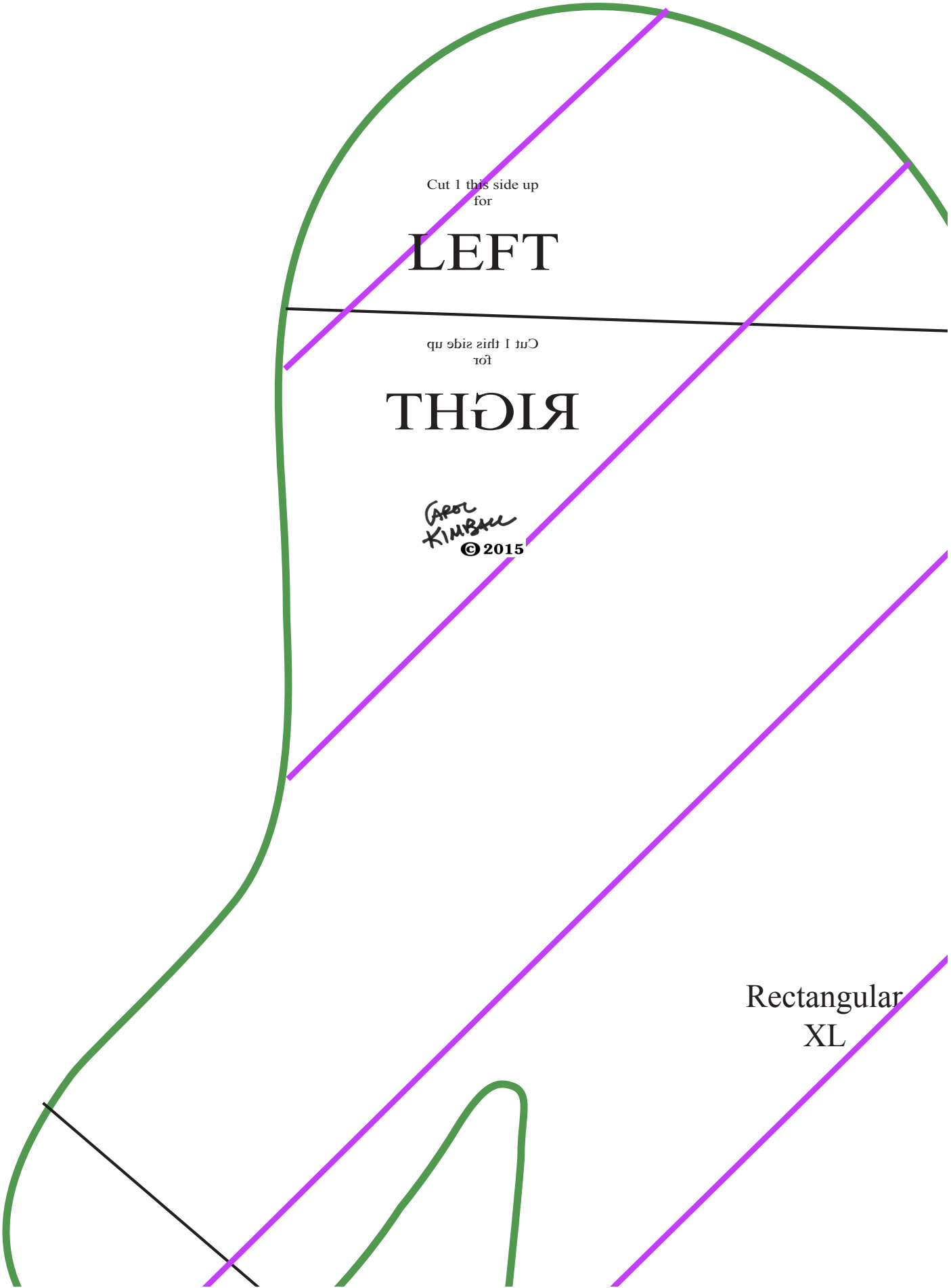
Rectangular
L



Rectangular
L







Cut 1 this side up
for

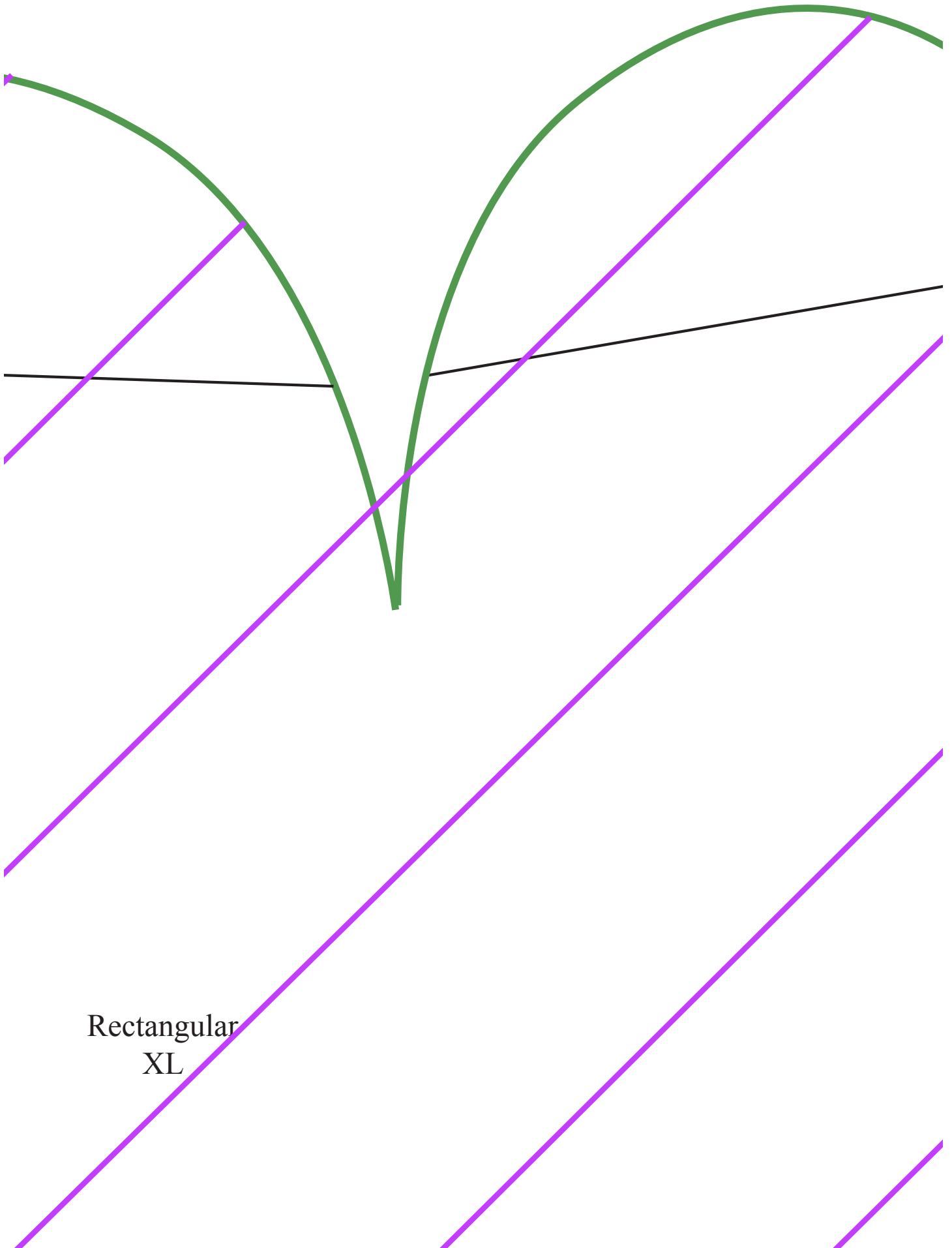
LEFT

Cut 1 this side up
for

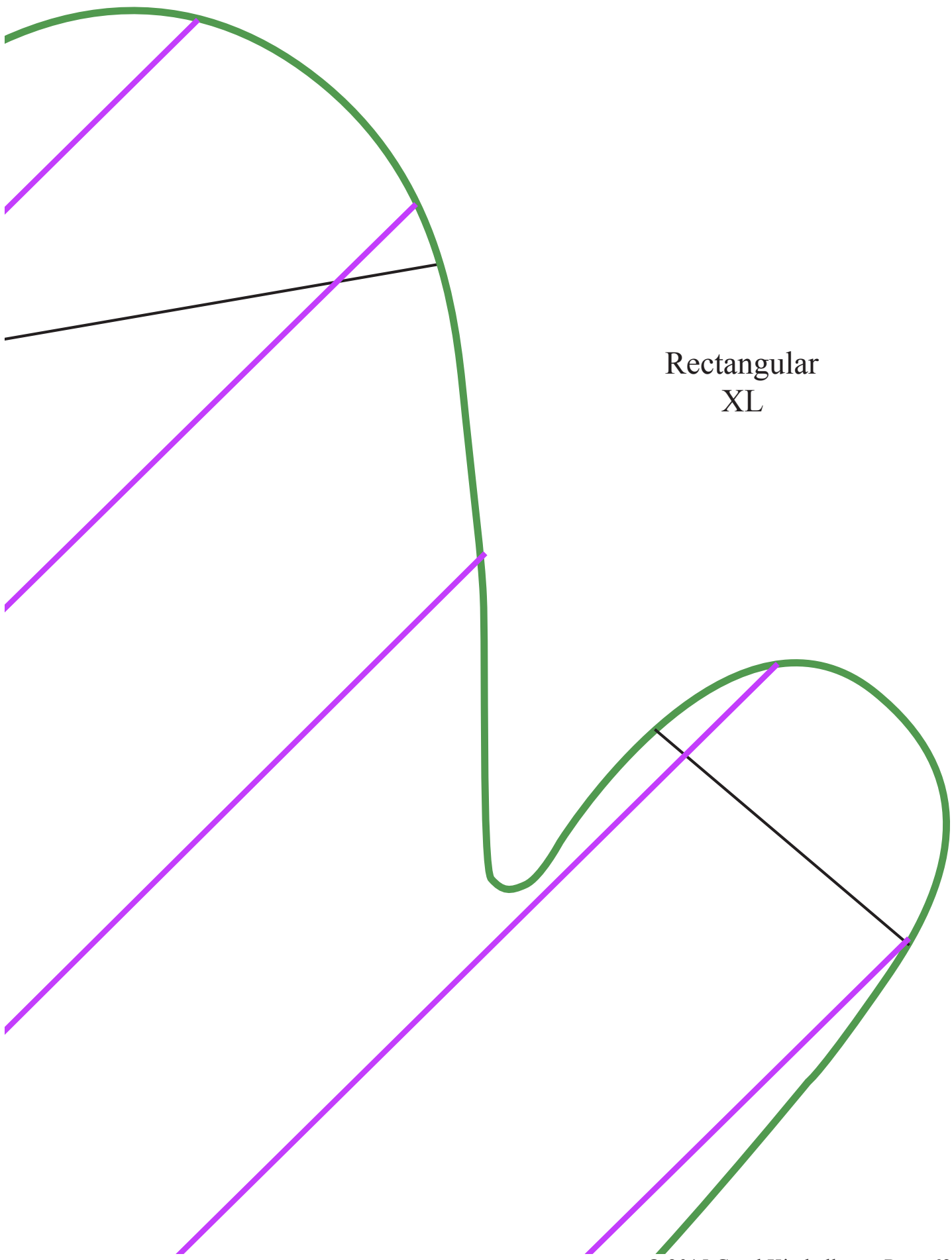
RIGHT

*CAROL
KIMBALL*
© 2015

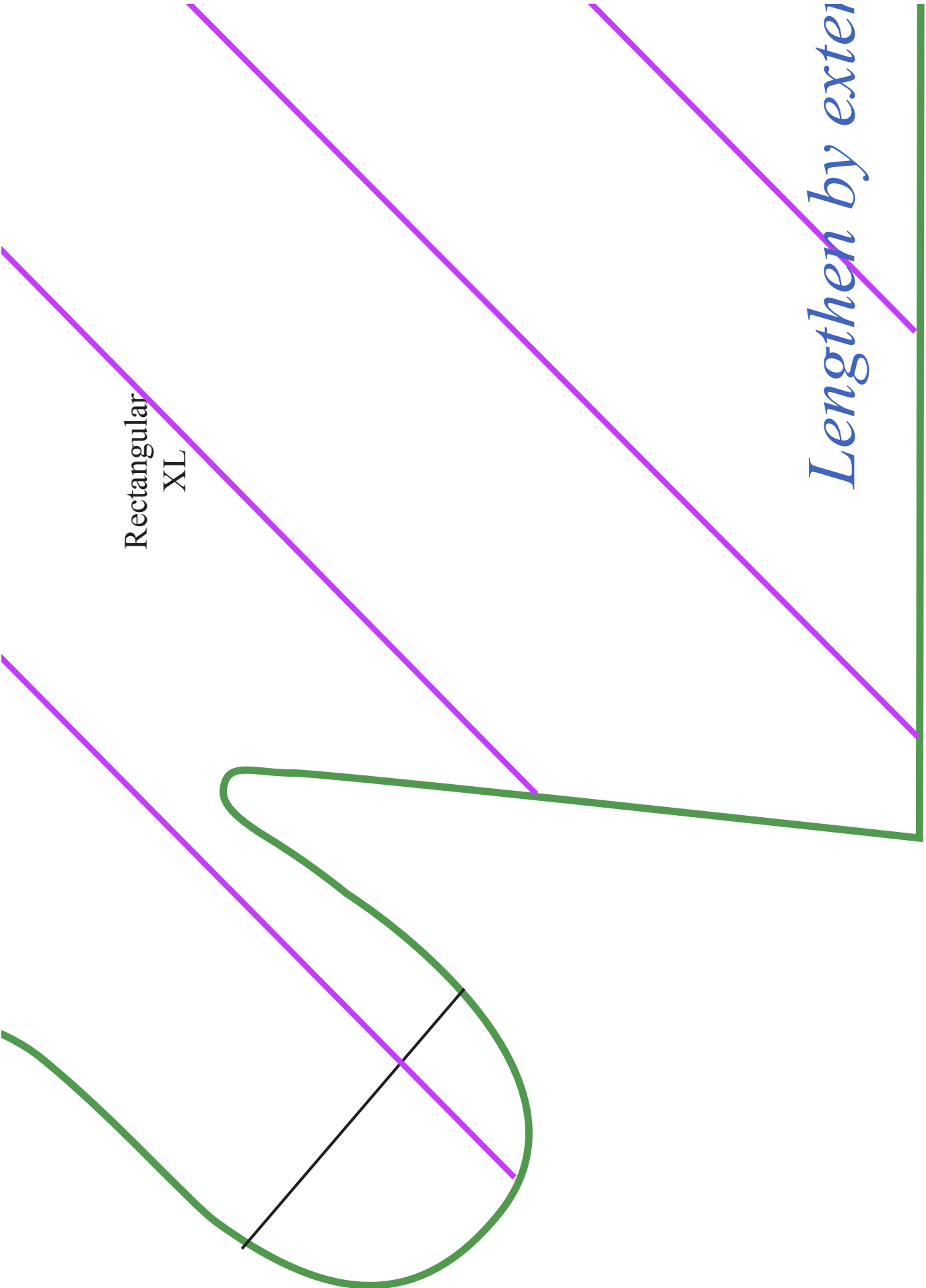
Rectangular
XL



Rectangular
XL

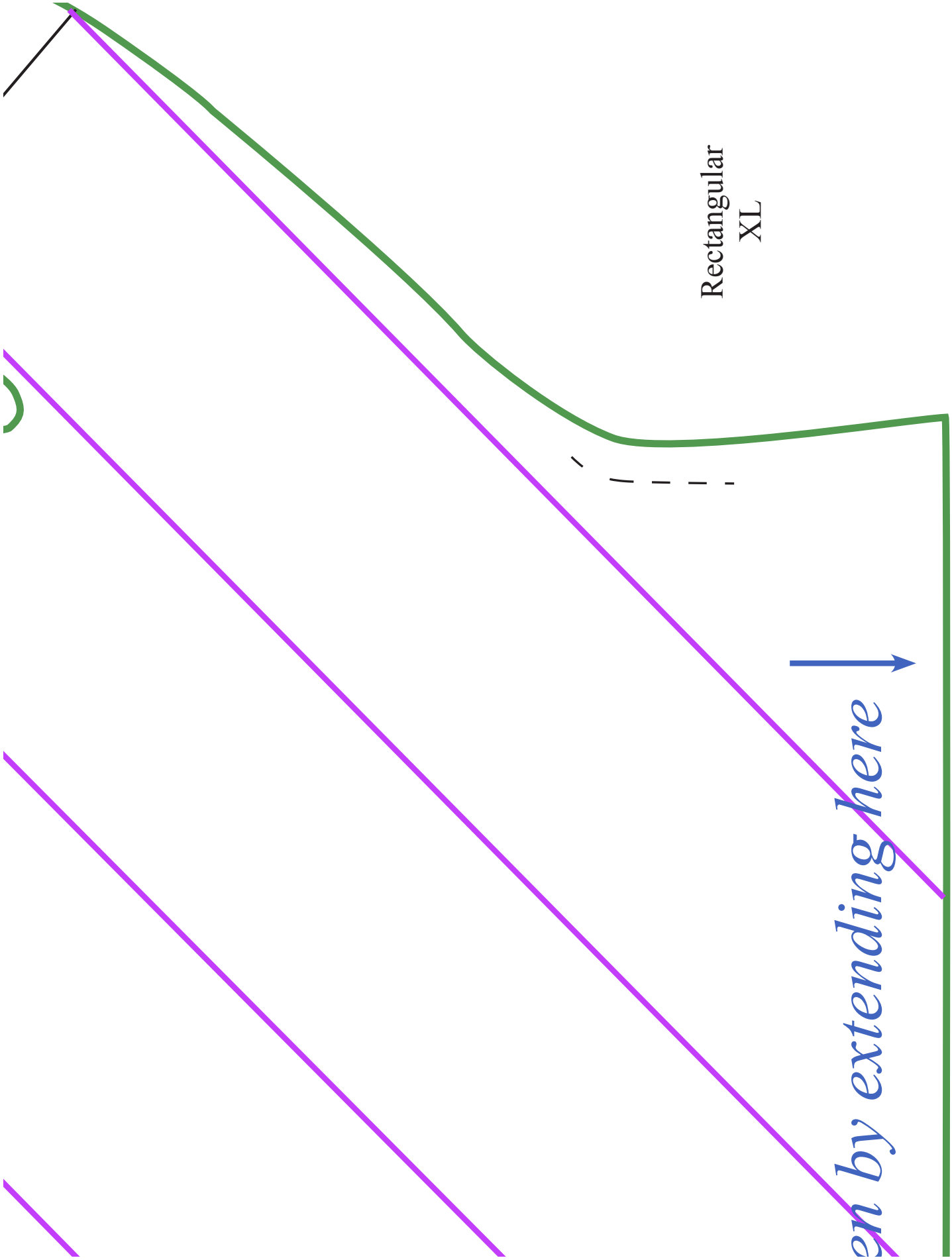


Rectangular
XL



Rectangular
XL

Lengthen by extension



Rectangular
XL

en by extending here

