Knitting Outside the Box
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Part I: Letting Loose

Knitting is one of the best, most multi-faceted art forms in the world. It is a tactile, elastic representation of theories of geometry, of centuries of history, of generations of people saying "what if?".

Exercise 1: The Mash-Up (with a hat tip to Brenda Dayne's "Cast On" podcast)

The phrase "there's nothing new under the sun" is particularly true in knitting. There are only so many ways you can manipulate yarn and two sticks! So one of the easiest ways to start thinking about knitting creatively is working off ideas that are already out there.

As an exercise, go on Ravelry or look through a knitting magazine, pick two or three random patterns, and consider how you might take aspects from each and combine them together. The stitch pattern and the direction of knitting from pattern A, the garment shape and styling from pattern B, the stitch pattern of pattern A inserted into the stitch pattern of pattern B in the shape of pattern C, etc.

Exercise 2: Mad Libs

One of the best ways to get a feel for your creative aesthetic and to know what works for you is to play Mad Libs with directions of knitting, garments, and stitch patterns. Put slips of paper with a bunch of each of these categories into a bowl, draw three slips, or use the automatic generator here: https://perchance.org/0wvzb1nkpp, and see how that combination starts turning gears in your mind. The catch here is that who knows what combo you'll get! You might get a tidy one of each: a direction of knitting, a garment type, and a stitch pattern. Or two directions of knitting and a garment type. Or you might even get three stitch patterns that you have to figure out how to make work together! From there, your job is to figure out how to make them work in combination. You can even take it further. What happens if you add another slip? What happens if you trade your least favorite slip with a friend? What happens if you use an adjective instead of one of the attributes (sleepy, timid, vivacious, ephemeral, etc)? All these options rely on your own interpretation of what these concepts look like, so you're not bound by other people's interpretations of an idea. This gets you in touch with the heart of your understanding of knitting: you have a unique understanding of what knitting means to you, and are the only one that views it exactly that way.

Exercise 3: Coloring Inside the Lines

One thing you might notice from the above exercises is that people approach the direction of their knitting very differently. Some will start at the bottom, some at the side, some will start at a corner and make chevrons or short rows across the fabric. The important thing to know about knitting is this: no matter the garment, you are making a shape. A circle, a rectangle, a tube, a triangle, a square. Even complex items like sweater are just combinations of multiple shapes put together.

As an exercise, start with the outline of a shape on paper: a rectangle, triangle, or circle. Draw a line within it: a straight line, a curved line, across part of the shape, across the whole shape, whatever you like. Pass it across the table to a friend and have them draw a line within the shape as well. Continue passing it back and forth a few more times. Once a few turns each have elapsed, take a look at the shape, and figure out how you might knit it. There are some rules to the game, though!

To delineate each of the shapes within your larger shape, you CAN use:

- increases
- decreases
- short rows
- joining techniques (joining as you go, as for a knitted-on edging, seaming, three-needle BO, etc)
- casting on
- binding off

To delineate each of the shapes within your larger shape, you CANNOT use:

- color changes
- stitch pattern changes

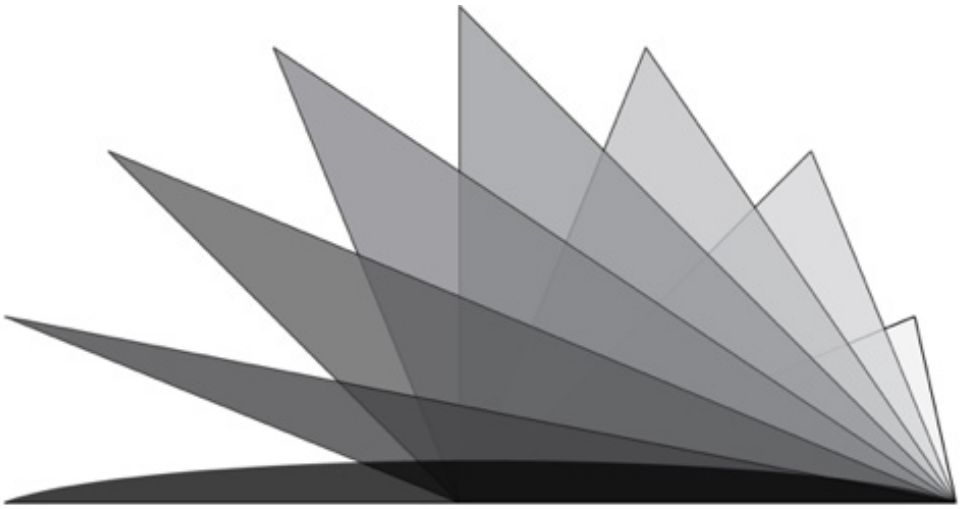
Instead, each line drawn within the shape must be clearly delineated as the edge of a piece of knitting. Think of this as a jigsaw puzzle: any piece of knitting is a composite of multiple smaller pieces. Knitting is a shape, and you can fill it from any direction you want to.

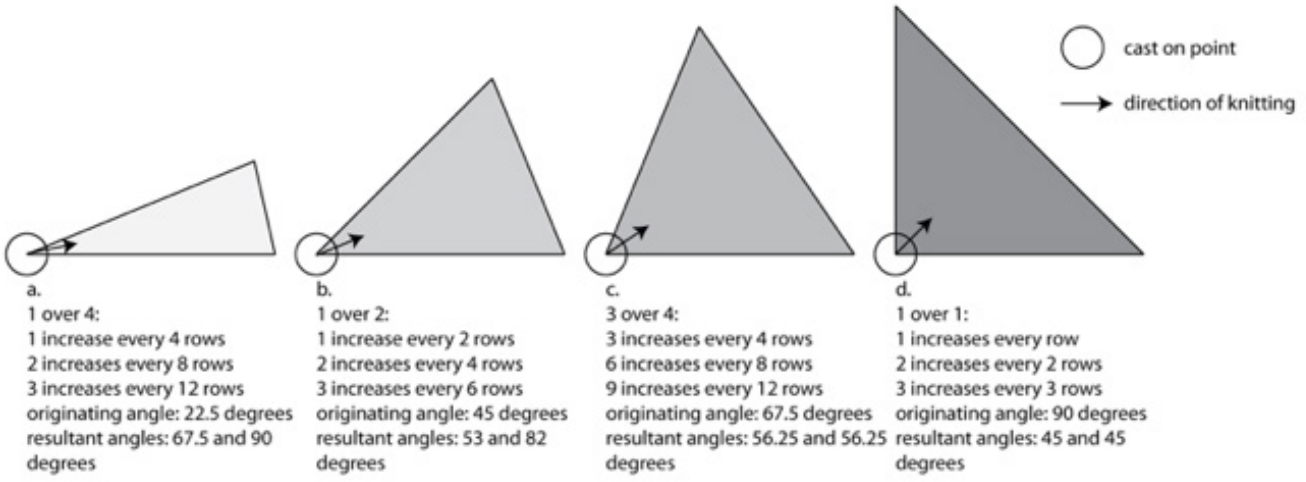
Part II: How the Heck Do We Do That?

There are three major ways to shape your fabric as you're knitting it, and therefore to achieve the ideas you've created with the exercises above: increases and decreases, short rows, and stitch patterns that manipulate your gauge. You can use each of these in combination or alone, or try each idea through the lens of each technique. There is no right or wrong in knitting, only that which gets you what you want!

Technique 1: Increases and Decreases

Knitting, in and of itself, is fundamentally linear. It is the intersection of columns and rows, with stitches lining up on each axis to form a grid. Increasing and decreasing manipulates that grid to create angles that are extensions of the grid themselves: if we were to chart out a set of increases at a regular rate, it would follow a stairstep pattern that adheres to the linear nature of the knitting we know. So, for example, if you increase one stitch every other row, you're following the natural rhythm of up 2 and over 1, up 2 and over 1, up 2 and over 1 . . . on and on until you reach the number of stitches or the size you want. This is true of any increase or decrease structure: it follows a natural path and stairstep on the grid of knitting that gives us the angles and the shapes we know and love in knitting. Thanks to this rhythm, this symbiosis with the grid structure, we've got a backstage pass to see how increases and decreases shape our fabric. They are regular, structured, and—what's most exciting—predictable across all gauges.



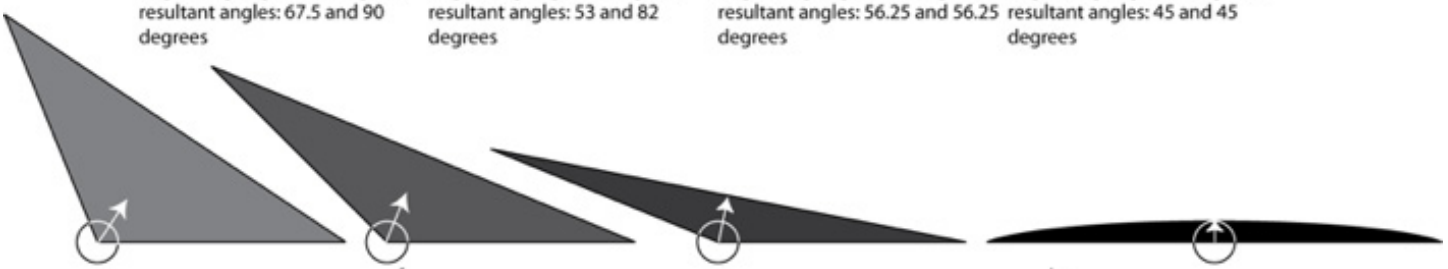


a.
1 over 4:
1 increase every 4 rows
2 increases every 8 rows
3 increases every 12 rows
originating angle: 22.5 degrees
resultant angles: 67.5 and 90 degrees

b.
1 over 2:
1 increase every 2 rows
2 increases every 4 rows
3 increases every 6 rows
originating angle: 45 degrees
resultant angles: 53 and 82 degrees

c.
3 over 4:
3 increases every 4 rows
6 increases every 8 rows
9 increases every 12 rows
originating angle: 67.5 degrees
resultant angles: 56.25 and 56.25 degrees

d.
1 over 1:
1 increases every row
2 increases every 2 rows
3 increases every 3 rows
originating angle: 90 degrees
resultant angles: 45 and 45 degrees



e.
5 over 4:
5 increases every 4 rows
10 increases every 8 rows
15 increases every 12 rows
originating angle: 112.5 degrees
resultant angles: 33.75 and 33.75 degrees

f.
3 over 2:
3 increases every 2 rows
6 increases every 4 rows
9 increases every 6 rows
originating angle: 135 degrees
resultant angles: 22.5 and 22.5 degrees

g.
7 over 4:
7 increases every 4 rows
14 increases every 8 rows
21 increases every 12 rows
originating angle: 157.5 degrees
resulltant angles: 11.25 and 11.25 degrees

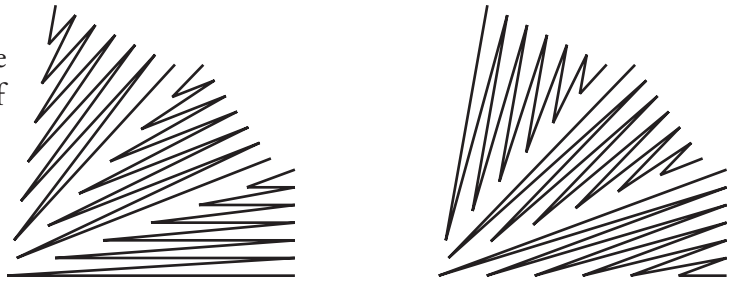
h.
2 over 1:
2 increases every row
4 increases every 2 rows
6 increases every 3 rows
originating angle: 180 degrees

Technique 2: Short Rows

While increasing and decreasing are fundamentally linear, short rows are fundamentally arc-based. Rather than creating angled edges, short rows work to turn your knitting on a curve. If you were to work short rows over the same stitches long enough, you'd eventually circle back to where you started and meet your cast-on edge. Because of this tendency towards organic, curving fabric, often the edges of a short row will meander from the linear path we're most used to with a straight piece of knitted fabric, and create an edge that ripples and curves to mimic the internal structural changes that are occurring. In addition, there are a few different ways that short rows can be added to your fabric. Three of them work on a flat plane, and the fourth works in 3D. One of them brings you back to your original plane and axis of work, and the other three do not. Two work while touching the edges of your fabric while the other two exist in the centre. They can be used alone, in tandem, symmetrically, asymmetrically—whatever you want to do in order to make your idea work.

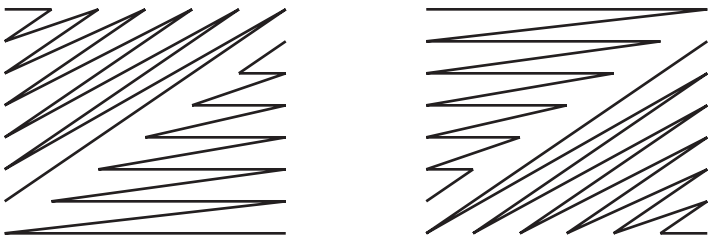
• Uncompensated Wedge

The simplest of all short rows, the uncompensated wedge is worked by creating a stack of short rows at one edge of your fabric.



• Compensated Wedge

A compensated wedge works on the same principle as an uncompensated. The difference with this one is that the short rows will be performed at opposing edges of the fabric, so that once both sets of short rows are complete, you are returned to your original linear knitting orientation.

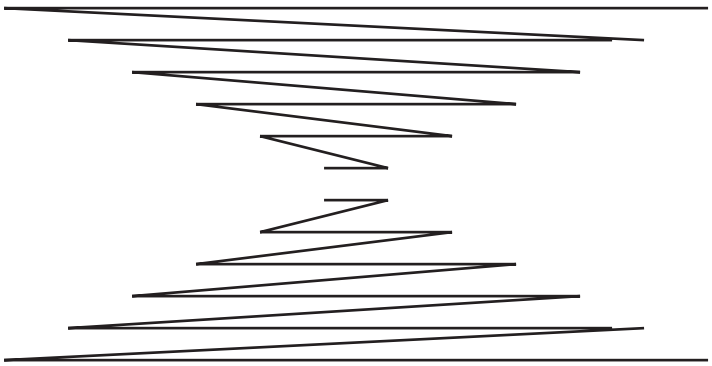


• Flat Insert

A flat insert is worked away from the edge, with the vast majority of the work happening internally within the fabric itself. Flat inserts can touch the edge at its widest point, but the edge isn't integral to the insert's structure as it is with the uncompensated and compensated wedges. Depending on the size of your flat insert, this can create a tiny blip of color (worked over just a few stitches and just a few rows before proceeding to a complete row), to huge sculptural shifts within your fabric (as with the swing knitting technique, where flat inserts are used to fill the fabric with flowing, organic shapes).

• 3D Insert

This is most commonly used to mould the 2D nature of knitted fabric into the 3D shapes of a human body: short row heels, short row bust shaping, and so on. It is also worked, as with the Flat Insert, internally within the fabric itself. In addition to shaping and moulding the fabric to fit a 3D form, the 3D Insert can be used for decorative effect within a flat fabric, creating peaks and valleys of texture and height on an otherwise homogeneous surface.



Technique 3: Stitch Patterns that Manipulate Your Gauge

Often in patterns the designer will signify a change in needle size when changing stitch pattern—say, going up a needle size between ribbing and stockinette, or going down a needle size between cables and garter stitch. This change in needle size is used to compensate for the fact that different stitch patterns have different gauges. They expand and contract our fabric stitch-wise and row-wise, and it can take a good amount of swatching to figure out how to get multiple stitch patterns to play nicely together in a single pattern. However, when thinking creatively about knitting, we can also take those gauge differences and use them to our advantage.