

Chapter 170

INCREASES

What kinds of project charts need to show increases? You'll need increases to work

- ☉ sleeves from cuff to underarm
- ☉ toe-up socks
- ☉ items started in the center on a few stitches and worked outward, such as hats or shawls
- ☉ square items worked from corner to corner
- ☉ triangular shawls worked from the point to the long edge
- ☉ sweaters worked top down

Charts can be used for all of these situations.

Types of Increases

There are many ways to do an increase, and we all did lots of the easiest one (although strictly inadvertently) when we were first learning how to make ribbing: a yarnover. If we forget to move the yarn to the front for a purl stitch or to the back for a knit stitch, we will find a yarnover at that spot on the next row.

The next easiest is Elizabeth Zimmermann's backward loop, which can be twisted in either direction if we want a symmetrical appearance on pairs of them along, for example, sleeve underarm seams.








Cat Bordhi has given the names *LRinc* and *LLinc* to what other books sometimes call *lifted increases*: stitches made in the top right or top left of the stitch on the previous row.

We can also knit into the front and back of a stitch (KFB), which leaves a purl bump at that spot. If we cast on fewer stitches for a sweater's bottom ribbing, we can do KFB in lots of evenly-spaced places on the last (or only) ribbing knit stitch before a ribbing purl stitch to get the stitch count up to what's needed for the body, which will hide the increases nicely.

The running thread before the next stitch to be worked can also be used as the foundation for a new stitch. This technique is sometimes called a *raised increase*.

Single-Increase Symbols

Here are symbols for various single increases, along with the keys we use to enter them into our charts:

y		Yarnover
+		Make one (by any method)
?		Knit into the front and back of the stitch
x		Cat Bordhi's LRinc
X		Cat Bordhi's LLinc
;		Pick up running thread from back
:		Pick up running thread from front

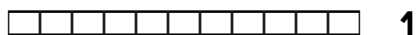
Increase Sampler: Toe-Up Sock

Toe-up socks start right at the tips of the toes with about half the total stitches that will be needed to go around the foot. That means we'll have to do increases to get up to the full number of foot stitches.

Let's say the foot of our sock will be forty-two stitches around, so we'll have twenty-one stitches on the sole side and twenty-one on the instep side. We are instructed to start, however, with eleven stitches on both the sole and the instep, then increase two stitches on both the sole and instep every other round. For each increase round, on both the sole and the instep, we work one stitch, do an increase, work across to the last stitch, do another increase, then work the final stitch.

We will therefore need five increase rounds with plain rounds in between them.

As with the mitten-fingertip shaping, we'll again just show what happens on either half of the sock, since you would do the same thing each round on both the instep and the sole. Here are the eleven stitches we start with for, say, the instep.



The First Increase Row

So here's the first stitch, along with the row number.



Hey! Wait a minute! Why is the row number on the **right** end of the row?

Remember, we're making a sock. A sock is the last place we want a seam, so we're working in the round. That means every row (technically, every round) is a public-side row (round!), so every row (*round!!*) in this chart will have the row (*ROUND!!!*) number on the right.

Let's do all the increases as yarnovers. Here's the first one.



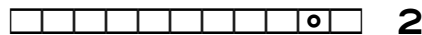
Now, how many stitches do we work before the next yarnover?

We started with eleven, and we work one stitch before the first yarnover and another stitch after the second yarnover. That leaves nine stitches between the yarnovers.

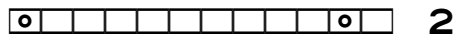
Don't get confused about how many stitches there are **between** the yarnovers.¹ Don't think that there are only seven stitches between the yarnovers, because that would mean we were counting the yarnovers themselves as part of the original eleven stitches.

We started with eleven stitches, so when we finish row (er, round) two on this half of the sock, we will have thirteen total stitches.

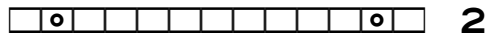
So let's add nine knit stitches,



the yarnover,

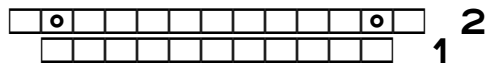


and the final knit.



The First Two Rows (Rounds!)

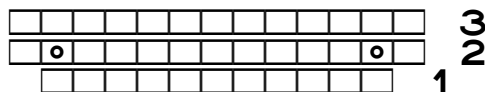
Let's put the first two rounds together.



If we want to do a different increase, or if we don't care exactly which increase is used, we can use different increase symbols.

The Plain Round

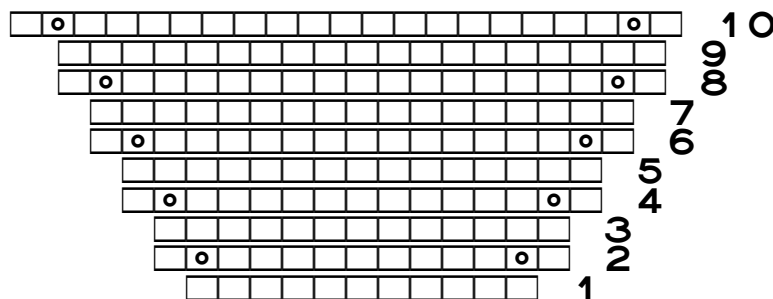
Since we do the increases every other round, we'll simply work even on round three.



¹ Since some increases are worked off an existing stitch, those increase symbols would need to be placed in the proper positions to get the new stitches in the correct spots.

The Rest of the Increases

We need to do four more increase rounds, up to a total of twenty-one stitches (remember that we have twenty-one on the sole *and* another twenty-one on the instep, even though our chart shows only one or the other).



What's wrong with the last round, round ten?

Should We Use Ordinary Lines or Tables?

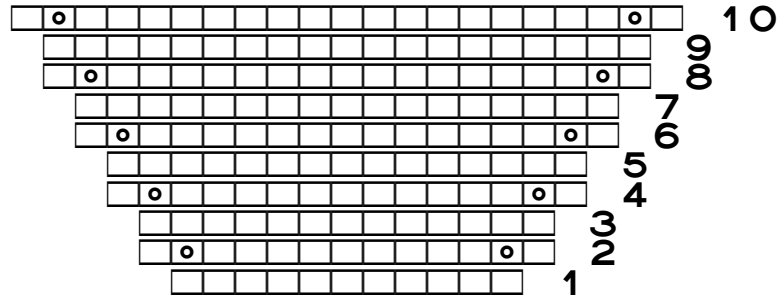
In this short example, the chart rounds have been on ordinary lines instead of my preferred multi-row tables.

The chart lines are centered on the page, and for rounds two through nine, each one was two symbols longer than the round below, because of adding the two yarnovers. Each half of the centered line thus grows by a single symbol.

But round ten needs **two** digits for its number, so it is **three** symbols longer than round nine, the two yarnovers plus the extra digit. That means each half of the line grows by a symbol **and a half**, and that's why row ten's stitch symbols don't align with round nine's.

In chapter 210, I mentioned that I prefer multi-row tables for charts and that a full discussion of why was provided in chapter 310. If you did not look at chapter 310 then, let me briefly say here that having misaligned symbols like this is the main reason I prefer to make charts in tables.

In this particular case, we only need to add a single space to the beginning of row ten. That means row ten is four symbols (the two yarnovers, the extra digit, and the space) longer than row nine, so each half of the chart grows by two full symbols, which lets it line up nicely.



Typing Up the Charts

As with charts showing decreases, I make charts with increases from the bottom to the top. I can't keep straight the increases and the plain rows in between if I try to type up the table from top to bottom.

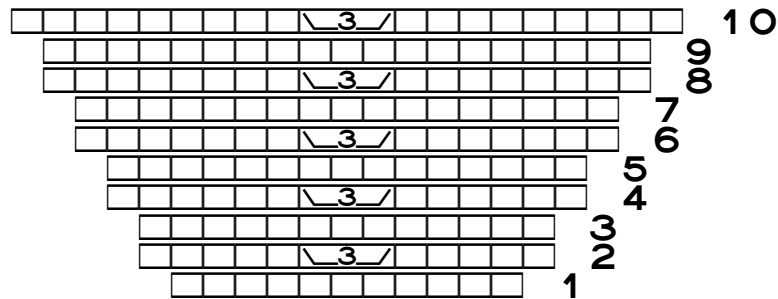
So I make a table with a couple of rows, click in the proper cells, and type whatever's needed in each cell, whether a row number or the stitch symbols. When I've entered the symbols in the top row of the short table I started with, whether it was one row or ten rows tall, I add some more rows to the top of the table and keep working my way upward.

In the same way as shown in chapter 160, I copy and paste rows, then add the increase symbols and fix the row numbers.

Multiple-Stitch Increases

Just as we can show double and higher-order decreases in charts, we can also use symbols to indicate that we have to increase by two or more stitches.

Suppose that we wanted to do a multiple increase just on the instep of our sock instead of a single increase near each end of the instep. One possibility is "knit one, yarnover, knit one" in the center stitch.



Because there are so many ways to do a double increase, the knitting font doesn't have

