## Understanding Charts in Lace Knitting

A chart is a visual representation of the knitted piece in symbol form. In written row-by-row instructions there is no visual similarity at all to the actual knitted fabric. This is one of the main reasons why, once a person becomes familiar with charts, they usually prefer them.

Each square of the chart represents one stitch of knitting. Since each square represents one stitch of knitting, the symbols inside each square indicate what that particular stitch should be. There is usually an attempt to have the symbol mimic in graphic form the look or structure of the actual stitch. The chart should be accompanied by a table or legend which explains the symbols found in the chart. Symbols are not standardized, and while some are used frequently (a circle for a yarnover), others may be different depending on who has designed the chart. Checking the chart symbols table is important to make sure you are working the correct stitch according to that particular designer.

Generally speaking, the chart symbols should line up in the same way as your knitting. If you compare a chart to your finished knitting, you should see a visual similarity. This makes it much easier to track where you are in the knitting, as opposed to written out, row-by-row instructions, which can become overwhelmingly dense in a complicated pattern.

## Lace Chart Symbols

Some typical lace chart symbols are profiled in the table at right. These are just a few of the symbols you could encounter as you work a chart for lace, and when you read the descriptions you can see that there are already potential problems if you don't familiarize yourself with the designer's intentions first.

There have been various attempts to standardize the symbology of knitting charts, but individual designers in North America like the freedom of adapting or changing symbols to suit their taste. In Japan, knitting

| | |
|---|---|
| ☐ | A blank square often means to knit the stitch. |
| │ | A vertical line can also mean "knit." |
| • | A small dot often means to purl the stitch. |
| ─ | A horizontal line can also mean "purl." |
| O | A circle usually means "yarnover," "yarn over needle," or yarn forward." |
| / | A forward slash usually means to knit two stitches together (or in short form, k2tog), which creates a one-stitch decrease that leans to the right. |
| ⋀ | This symbol can also mean "k2tog," (two lines at the bottom converge to create one right-leaning slash at the top). Some designers (and I am one of them) use this symbol to mean "k3tog," a two-stitch decrease. That is why it is important to check the chart symbols table. |
| \ | A backward slash usually means to slip 1 stitch knitwise, knit 1 stitch, then pass the slipped stitch over the knit stitch (skp). Some people prefer to work "ssk," which means to slip 1 stitch knitwise, slip the next stitch knitwise, then insert the left needle into the two stitches from left to right and knit the two stitches together. Either method produces a one-stitch, left-leaning decrease. |
| ⋋ | As in the "k2tog" example above, this symbol can also mean skp or ssk. However, some designers use this symbol to mean slip 1 stitch knitwise, k2tog, pass the slipped stitch over the knitted stitches, or a two-stitch decrease rather than a one-stitch decrease. |

and crocheting symbols have been standardized by the Japanese Industrial Standard, and all published material adheres to this standard. Patterns are created as schematics and charts, with very little written instruction, so if you understand the "language" of the charts you don't need to understand Japanese in order to knit from them. Estonian chart symbols are different again, using black squares representing knit stitches.

Now on to the charts.

## Simple Chart

Charts are read by starting at the bottom right corner and "reading" the squares of the first row across to the left. Therefore, the first chart row usually starts with a number 1 at the bottom right corner. This would correspond with the first row of knitting, which also starts at the right side and works across to the left. In the very simple chart below, we can see that there is one row of seven stitches. Referring to the chart symbols table, we can see that the first stitch should be a knit stitch, followed by a "knit two stitches together" decrease, a yarnover, a knit stitch, a yarnover, then a "slip one stitch knitwise, knit one stitch, pass slipped stitch over knit stitch" decrease, ending with a knit stitch.

| | | | | | | | 1 |
|---|---|---|---|---|---|---|---|

|   | Knit (k) |
|---|---|
| ╱ | Knit 2 stitches together (k2tog) |
| O | Yarn over needle (yo) |
| ╲ | Slip 1 stitch knitwise, knit 1 stitch, pass slipped stitch over knit stitch (skp) |

If this was written out, it would probably look something like this. Note the abbreviations for the different types of stitches:

**Row 1:** k1; k2tog; yo; k1; yo; skp; k1.

It is much easier with the chart to instantly grasp the pattern, since it resembles the actual knitting.

## Multiple Rows

Most charts are more complex than the one above and use multiple rows. In the chart at right, there are four actual rows shown, but they are numbered 1 through 7. Only odd numbers are shown, and the even numbers are omitted. The odd-numbered rows represent the right side of the fabric. The even-numbered rows, which are not shown, represent the wrong side of the

|   |   |   |   |   |   | 7 |
|---|---|---|---|---|---|---|
|   |   | O | ╲ |   |   | 5 |
|   | ╲ | O |   | O | ╱ | 3 |
|   |   |   |   |   |   | 1 |

|   | Knit (k) |
|---|---|
| ╱ | K 2 together (k2tog) |
| O | Yarnover (yo) |
| ╲ | Sl1, k1, psso (skp) |

fabric. A chart such as this should have an accompanying instruction which indicates how to work the chart and how to work stitches on the wrong side. In this case, all wrong side rows should be purled.

Therefore, read the chart and knit your work as follows. Note in the chart symbols table that the descriptions of stitches are further abbreviated:

**Row 1:** Starting at the lower right corner square and reading across the first row to the end, knit 7 stitches.

**Row 2:** This is not shown on the chart, but the instructions indicate that you should purl all stitches.

**Row 3:** Starting at the right side, read the second tier of squares across to the left, following the chart symbols as you go, therefore: k1; k2tog; yo; k1; yo; skp; k1.

**Row 4:** Not shown, purl all stitches.

**Row 5:** Read the third tier of squares, therefore: k2; skp; yo; k3.

**Row 6:** Not shown, purl all stitches.
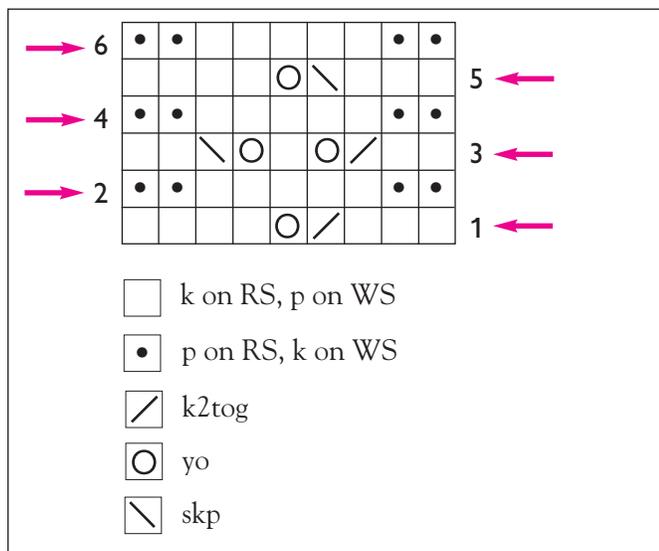
**Rows 7:** Knit all stitches.



Remember that even though the chart seems to only go to Row 7, you must finish it by purling Row 8. The knitted fabric looks like the photo—notice how the three holes correspond to the three yo symbols on the chart, something that is not obvious from the written row-by-row instructions.

## Right Side and Wrong Side Charts

Charts can also show both right side and wrong side rows. This usually occurs when the wrong side row has patterning that needs to be shown. In this case, right-side rows will be indicated by odd numbers on the right side of the chart, and wrong-side rows will be indicated by even numbers on the left side of the chart. The chart rows for odd numbers are read from right to left, as previously discussed, but the chart rows for even numbers are read from left to right. If you are unfamiliar

with it, this can be confusing at first, because you will be knitting from right to left regardless of whether you are working on the right or wrong side. Again, it is important to read the chart symbols table to understand how to read the symbols on the right or wrong side. A standard convention is to show what the stitch looks like from the right side of the fabric. So on the right side, a knit stitch is shown as a blank square. On the wrong side it is also shown as a blank square, but should be purled, so as to be a knit stitch when viewed from the right side of the fabric. Arrows show direction of chart reading. First row (RS) is read across the chart from right to left. Second row (WS) is read across the chart from left to right and so on.



Therefore, read and work the chart as follows, noting the following abbreviations:

k = knit
k2tog = knit 2 together
p = purl
RS = right side
skp = slip 1, knit 1, pass slipped st over
st = stitch
WS = wrong side
yo = yarn over needle

**Row 1 (RS):** k3; k2tog; yo; k4.

**Row 2 (WS):** k2; p5; k2. Note that even though the symbol at the beginning of the row appears to be a purl symbol (small dot), we are on the WS and it should be knit since it will appear to be purl on the RS. The same occurs for the square showing

a knit st—it should be purled on the WS to give a knit st on the RS.

**Row 3:** k2; k2tog; yo; k1; yo; skp; k2.

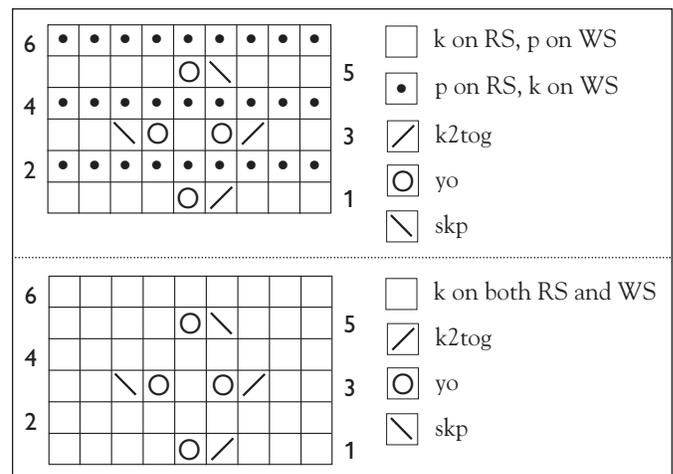**Row 4:** k2; p5; k2.

**Row 5:** k3; skp; yo; k4.

**Row 6:** k2; p5; k2.

This chart creates a 2-stitch garter edge at either end, with the lace motif in stocking stitch.

**Garter Stitch Charts**

Again, it is important to review what the designer intends, as charts can also be set up in a simplified way to avoid cluttering up the graph with too much information, such as in the example below, where the design is in garter stitch.



The top chart shows purl symbols on even-numbered rows to indicate that the knitted fabric is in garter stitch.

The bottom chart shows the same information without the busyness of the rows of purl dots. Note that the chart symbols table describes how to work the stitches for garter stitch on both RS and WS rows.
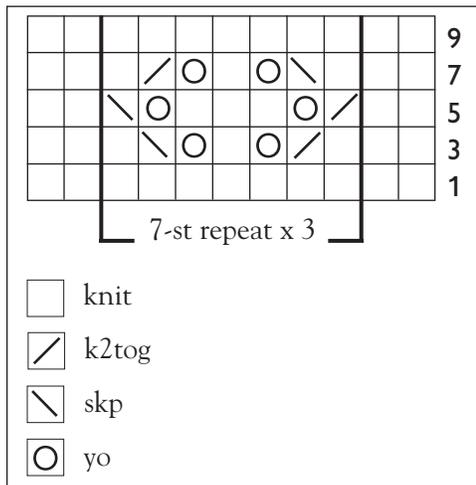
Lastly, while this does not occur often, a chart could show all symbols to be worked as they appear, regardless of RS or WS. This chart won't give the appearance of the knitted fabric from the front, but can make it easier to work complex designs without needing to translate symbols for RS and WS. Again, the designer's intentions should be made clear in the instructions or chart symbols table.

## Charts in the Round

When working in the round, all rows will be read from right to left and numbered on the right-hand side of the chart. Your knitting will take place on the right side of the fabric only. Make sure to place a marker to designate the beginning of the round.

## Pattern Repeats

Another level of complexity occurs when there are pattern repeat sections within the chart. These are usually indicated by being bracketed with heavier lines and a reference below to how many stitches are in the section, and how many times the stitches should be repeated before moving on to the next section of the chart. It is very useful to place markers at the points on your knitting that correspond to the heavy lines in order to help keep track of the pattern. You can do this as you work Row 1. The chart could be set up in any of the ways described previously. The example below shows only odd-numbered, RS rows. All even-numbered, WS rows should be purled. Therefore, read and work the chart as follows:



7-st repeat x 3

| | |
|---|---|
| ☐ | knit |
| ╱ | k2tog |
| ╲ | skp |
| ⊙ | yo |

Cast on 25 sts.

**Row 1:** k2; place a marker (pm); *k7; pm* repeat between asterisks x 3; end k2. You have now set up your knitting to easily keep track of the lace pattern in the 21 sts between the first and last marker. The 2 sts at either end are worked only once on each row, and this is not indicated on the chart—the designer assumes that this is obvious.

**Row 2:** purl all sts, slipping the markers as you come to them (it is assumed that on all subsequent rows the markers are slipped as you come to them—this is not an instruction you will find on most charts).

**Row 3:** k2; *k1; k2tog; yo; k1; yo; skp; k1* x 3; end k2.

**Row 4:** purl.

**Row 5:** k2; *k2tog; yo; k3; yo; skp* x 3; end k2.
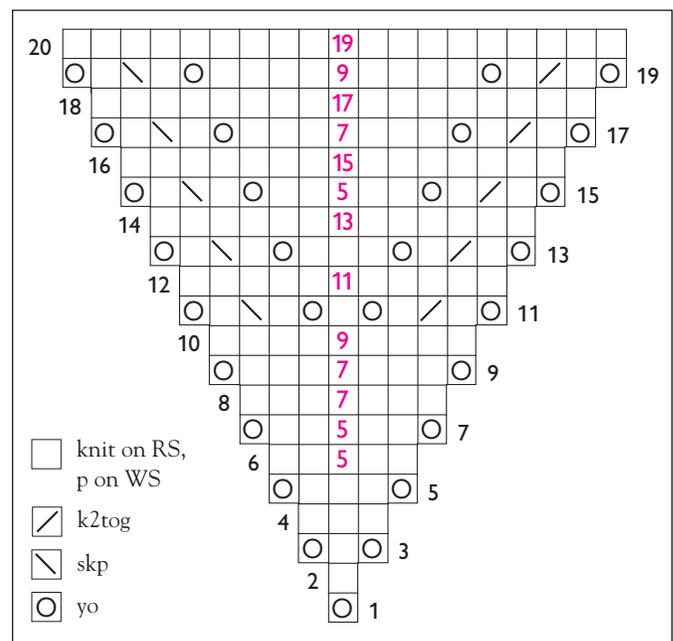
**Row 6:** purl.

**Row 7:** k2; *k1; skp; yo; k1; yo; k2tog; k1* x 3; end k2.

**Row 8:** purl.

**Row 9:** knit.

## Charts with Different Row Lengths

Many lace shawls and scarves are worked by increasing the number of stitches from row to row to create a triangular or other than straight-edged shape. This is the type of chart you will encounter. It shows how the number of stitches increases on every second row with yos at the beginning and end of the row. It is a good visual example of how your fabric will resemble the shape of the chart. This chart has a further refinement —numbers in pink tell you how many stitches to knit or purl plain between other symbols such as yos.



| | |
|---|---|
| ☐ | knit on RS, p on WS |
| ╱ | k2tog |
| ╲ | skp |
| ⊙ | yo |

**Tips to Make Chart Reading Easier**

1. Make sure your chart is large enough for easy viewing by photocopying it larger if necessary, or printing a pdf pattern at a larger size.

2. When chart rows become more complicated and longer, it is helpful to cover the rows above the one you are reading so as to help your eyes follow the correct row. This is also helpful as you will be able to see the rows below the one you are working on and have a sense of whether you are making a mistake or not. Generally speaking, symbols on the chart will line up with actual knitted stitches (although this is not a hard rule). A ruler, magnetic board or even post-it notes can be used to cover the rows above.

3. Place markers between pattern repeats, usually indicated on the chart with heavier lines, to help keep track of the pattern. Make the markers different colours to provide further visual aid. For instance, the markers might be one colour for pattern repeats, then a different colour to show the middle of a shawl or to separate the edging from the main body of a shawl or scarf.

4. When you put your knitting down, always mark where you are on the chart. Try to finish complete rows before putting the knitting down. You can tick off the rows that have been worked, or make a notation of which row is to be worked next. If only odd-numbered rows are shown on the chart, and you are about to work an even-numbered row next, make a notation to that effect rather than ticking the row. You may not remember that you have to work the even-numbered row next if only odd-numbered rows are ticked.

5. If the charts are complicated and some of the symbols are unfamiliar, make a copy of the chart symbols table to have alongside the chart to quickly view and remind yourself of the meaning of the symbol.

6. Colour certain symbols with a highlighter or pencil crayons to provide a visual cue, especially if the pattern seems very complicated to you.

**Bibliography**

Here are some books you might find useful—click on the title to take you to the Needle Arts Book Shop where you can learn more about the books:

**Mastering Lacework** by *Annie Maloney*

For those new to knitting lace, *Mastering Lacework* guides you through the basics of understanding lace structure and how to follow patterns, plus gives you ideas and patterns for novel ways of using lace with other stitch patterns.

**Creating Original Hand-knitted Lace** by *Margaret Stove*

The author has written this book to help aspiring designers (of any level) understand the structure and design possibilities of knitted lace. The intricacies of designing knitted lace are thoroughly described.

**Heirloom Knitting** by *Sharon Miller*

Sub-titled *A Shetland Lace Knitters' Pattern and Workbook*, this comprehensive book details lace knitting design and technique; dozens of charted traditional motifs plus the authors designs; patterns for traditional shawl construction and several heirloom items to knit. For those who want to develop their skill and understanding of Shetland Lace this is a must have!

**Knitting Lace** by *Susanna Lewis*

More than 90 patterns from a 19th century European lace sampler are charted and written, along with sections on understanding the structure of lace, and four lace projects to knit.

**Stahman's Shawls and Scarves** by *Myrna Stahman*

Includes instructions for knitting 14 Faroese-shaped shawls and 40 seamen's scarves. Learn about the characteristics of traditional Faroese shawls, the Stahman adaptation of these shawls and the history of the seamen's neck scarf.