

Chapter 110

BASIC KNITTED FABRICS

The first two stitches we all learn are knit and purl. Even if we never learn any other stitches, we can make some spectacular items just from knits and purls.

So let's start charting with good old knit and purl stitches, which will let us work through all the basic knitted fabrics.

In this book, knit stitches will be represented with



and purl stitches will be represented by



If you make the swatches (they're all very small), you'll soon learn to read your knitting and knitting charts.

The First Rules of Knitting Charts

Since this book will show charts constructed stitch by stitch and row by row, there are a few basic rules that we have to discuss immediately.

Charts show all rows as they will appear when looked at from the *public side* of the piece, the side that would show if you were wearing a sweater.¹

Each row of the chart represents one row of knitting. Each symbol represents one stitch.²

We read public-side chart rows from right to left, which is the way we also work the stitches.³

We'll see these rules applied in our very first swatch.

¹ *Public side* is a clearer term than *right side*, because *right side* could refer to the part of a sweater (especially a cardigan front) on the wearer's right. *Right side* could also refer to the right edge of a rectangular item or a chart. The other side, including the inside of a sweater, is therefore the *private side*. Maggie Righetti uses these terms in her knitting books. This book will use *public side* and *private side* to avoid confusion.

² This is a lie, but it will suffice for the time being.

³ If you are a mirror-image knitter, you're already used to having to switch right and left. To avoid confusion, the book is written for knitters who form new stitches on the right needle from existing stitches on the left needle.

Stockinette Stitch

Stockinette stitch is made by knitting across the public-side row, then purling back. Typical instructions for a small swatch of stockinette stitch might be

CO 10.
 Row 1 (RS): K.
 Row 2 (WS): P.
 Rpt rows 1–2 once more (4 rows total).
 BO.



The Public-Side Row

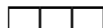
Remember that in ordinary instructions, *RS* is “right side” (which we’re calling the “public side”) and *WS* is “wrong side” (which we’re calling the “private side”). The pattern tells us to knit across the first row. Since the knit symbol is just an empty rectangle, the first stitch looks like this:



Let’s add the second knit stitch to its left, which is exactly where it would wind up on the right-hand needle as we work across the row. Remember the charting rule that public-side rows are read from right to left. That’s why the second stitch gets added to the left of the first stitch.



In the same way, here is the chart adding the third knit stitch.



As we add each stitch symbol to the chart on a public-side row, it goes to the left of the previous symbols, exactly in the same order as they are positioned on the right-hand needle after we work them. So we wind up with ten knit symbols for the first row of the chart.

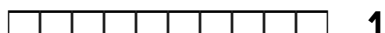


The Row Number

Now we need to add the row number to the chart. The charting rule for row numbers is that

Row numbers are placed *next to the first stitch worked in the row*, for both public-side and private-side rows.

This means public-side row numbers are put on the right edge of the chart, and private-side row numbers are put on the left edge of the chart.⁴ Remember that the chart shows what the work looks like from the public side. For public-side rows, the first stitch worked is at the right, so that's where the row number goes on the chart.



The Private-Side Row

Two more charting rules now come into the mix.

The chart shows row one at the bottom, with successive rows above the previous ones, exactly in the order we would actually work them.

Private-side rows can be read right to left if we **turn the chart upside-down**.⁵ Otherwise, we read private-side rows from left to right.

For row two, we have to purl back. Remember that row numbers are put next to the first stitch of the row, so the private-side row number will be to the left of the stitch symbols.

2

We're using  for purl stitches, so row two would start with

2 

Or would it? Remember the first rule of charting: the chart shows what the work looks like from the **public** side of the piece.

Since a purl stitch worked on a private-side row looks like a knit stitch from the public side, then the **correct** row two would actually start like this:

2 


Adding the next private-side purl stitch to the right of the first stitch, but showing it as what it looks like from the public side, gives us

⁴ If you work in the round, where *all* rows are public-side rows, all the row numbers on the chart would be to the right of the symbols.

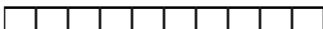
⁵ If you are a mirror-image knitter, then leave the chart right-side up and read it from left to right.

2 

The third purl stitch gets added to the right of the second, because we add the symbols in the same order as we work the stitches.

2 

The entire row two just keeps adding more of the same symbol.

2 



The Chart for Stockinette Stitch

Since rows three and four just repeat rows one and two, the final chart for four rows of stockinette stitch would simply look like

4		3
		
2		1
		

The Symbol Key

The reversal of purl to knit on the stockinette chart's private-side rows explains why charts always have symbol keys with wording like this:

	K on RS, P on WS
	P on RS, K on WS

The symbols are thus matched up with the stitch we have to work depending on whether we're working on the public side or the private side. That means that when we chart a private-side row from written-out directions, we have to change the purls to knits and the knits to purls.

The symbol key is also part of the charting rules:

A symbol key will show what each symbol means on both public- and private-side rows.

Reverse Stockinette

Since we can simply look at the wrong side of the stockinette swatch, there's really no need to make a swatch in reverse stockinette. Let's make the chart, though, just for practice.

For a ten-stitch, four-row swatch of reverse stockinette, the instructions would be

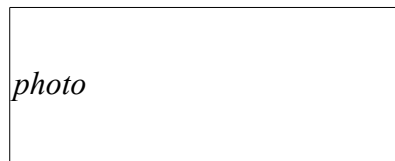
CO 10.

Row 1 (RS): P.

Row 2 (WS): K.

Rpt rows 1–2 once more (4 rows total).

BO.



Let's apply the rules we already have as we make the reverse-stockinette chart.

The Public-Side Row

Row one is just purls. Since it's a public-side row, the row number is to the right of the stitch symbols. Here are the row number and the first stitch.

◻ 1

Let's add the second purl stitch to the chart.

◻◻ 1

Now add the third purl stitch.

◻◻◻ 1

And finally, here's the complete row one.

◻◻◻◻◻◻◻◻◻◻ 1

The Private-Side Row

Row two is all knits, but since it is a private-side row, we actually need to use the purl symbol, since when we finish the row and turn back to the public side of the swatch, all the stitches we just **worked** as knits will **look** like purl stitches.

Here is the first stitch of row two, along with its row number.

2 ◻

Here are the second

2 ◻◻

and third stitches of row two, both of which go to the right of the existing stitches.

2 ◻◻◻

The complete line for row two is

2 

The Chart for Reverse Stockinette

When we put these two rows together and duplicate them for rows three and four, the entire chart for our small swatch of reverse stockinette looks like this:

4	●●●●●●●●●●	
	●●●●●●●●●●	3
2	●●●●●●●●●●	
	●●●●●●●●●●	1

Compare the Charts to the Swatches

If you haven't actually made the stockinette swatch, think about how a piece of stockinette stitch looks. It's all smooth on the front. It's kind of plain and clean and classic. Flip that piece of stockinette over, and it's all bumps. There's not any smoothness at all on the reverse-stockinette side.

Now, mentally—and preferably physically as well—compare the stockinette knitting to the stockinette chart: all plain, smooth, clean. And the reverse-stockinette chart is all bumps, no smoothness anywhere, just like reverse-stockinette fabric.

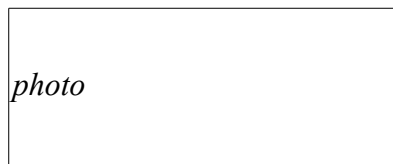
1x1 Ribbing

Has it ever occurred to you that ribbing can be summed up as nothing more than alternating columns of stockinette and reverse stockinette?

Think about it. In 1x1 ribbing, there's a column of what looks like stockinette, next to a column of what looks like reverse stockinette, next to a column of stockinette, next to a column of reverse stockinette, and so on across the piece.

Let's make a four-row piece of 1x1 ribbing on ten stitches, whose instructions might be written out as

CO 10.
 Row 1 (RS): * K1, P1 *, rpt betw * across.
 Rpt row 1 three more times (4 rows total).
 BO.



The Public-Side Row

The pattern tells us to alternate knit and purl stitches across the first row. So, working from

right to left for a public-side row, we start with the row number and the first stitch, which is a knit:

□ 1

The next stitch is a purl.

•□ 1

Here are stitches three

□•□ 1

and four.

•□•□ 1

The complete row one is

•□•□•□•□ 1

The Private-Side Row

Row two, a private-side row, is charted from left to right, and the row number comes first. But we have to remember to switch our knits to purls and our purls to knits, so that we show each stitch as it will look on the public side of the work. The instructions start with a knit stitch, but since a private-side knit is a public-side purl, the first stitch (remember to put it to the left, next to the row number) on row two needs to be a purl.

2 □•

The second stitch we work is a purl. But since we're working a private-side row, that means the second stitch is a public-side knit, so we add a knit to the right of the first stitch.

2 □•□

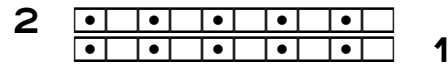
The third stitch we work is a knit, but we need to use the opposite on our chart's private-side rows.

2 □•□•

So as we keep working across, alternating knits and purls (which from the public side are purls and knits), our complete row two looks like this:

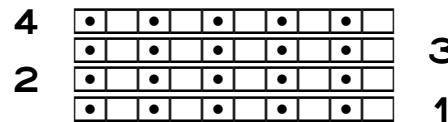
2 □•□•□•□•

Let's combine rows one and two.



The Chart for 1x1 Ribbing

Since all public-side rows are the same as row one and all private-side rows are the same as row two, that means our four-row chart of 1x1 ribbing is



If we stretch a piece of 1x1 ribbing slightly side to side, we'll see columns of purl bumps in between the columns of the knit Vs. (If we look at the private side, we'll see that the public side's purl bumps are the knit Vs and the public side's knit Vs are the purl bumps.)



2x2 Ribbing

As with 1x1 ribbing, 2x2 ribbing is also alternating columns of stockinette and reverse stockinette, except that each column is two stitches wide.

Written-out instructions for a piece of 2x2 ribbing on twenty stitches would be

CO 20.

Row 1 (RS): * K2, P2 *, rpt betw * across.

Rpt row 1 three more times (4 rows total).

BO.

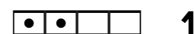


The Public-Side Row

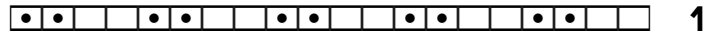
For row one, we work right to left as usual, starting with the row number and a pair of knit stitches.



Then we add a pair of purl stitches.



The rest of row one repeats these four stitches.

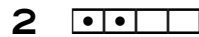


The Private-Side Row

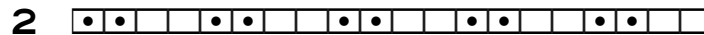
For the private-side row two, we again start with a pair of knit stitches, but we must remember to swap them with purl stitches and place them at the left of the chart row, next to the private-side row number.



Then two purls follow, which must be charted as knits, since that's what they look like from the public side.

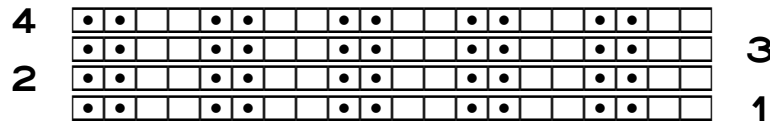


The rest of row two continues to alternate pairs of stitches as already established.



The Chart for 2x2 Ribbing

Since the remaining rows are just repeats of rows one and two, copying them and changing the numbers gives us this chart:



As with the 1x1 ribbing, if we give this swatch a slight side-to-side stretch, we'll see the two purl columns hiding between the knit columns.



Seed Stitch

This knitted fabric, called *moss stitch* in the running text on page 158 of *Donna Kooler's Encyclopedia of Knitting*, is highly textured and looks the same on both sides. It does not curl, so it makes it great border for a flat project worked in stockinette stitch (or any knitted fabric that's basically stockinette).

If we wanted a ten-stitch, ten-row piece of seed stitch, the directions might be

CO 10.

Row 1 (RS): * K1, P1 *, rpt betw * across.

Row 2 (WS): * P1, K1 *, rpt betw * across.

Rpt rows 1–2 four more times (10 rows total).

BO.



The Public-Side Row

Since seed stitch's row one starts with a knit, the chart starts

□ 1

The second stitch is purl, and it goes to the left of the first stitch.

• □ 1

Then we have a knit

□ • □ 1

and a purl.

• □ • □ 1

The entire first row continues to alternate knit and purl, so the complete row is

• □ • □ • □ • □ • □ 1

The Private-Side Row

Row two is similar in that it alternates knits and purls, but the stitches are moved over one stitch compared to 1x1 ribbing. The first stitch is worked purl, but from the public side, that's a knit stitch.

2 □

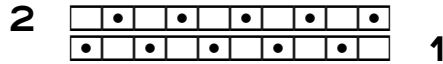
The second stitch is a knit stitch, which looks like a purl from the public side.

2 □ •

As we work across the second row, we continue to alternate purl and knit, which we have to represent (on the public side) with knit and purl.

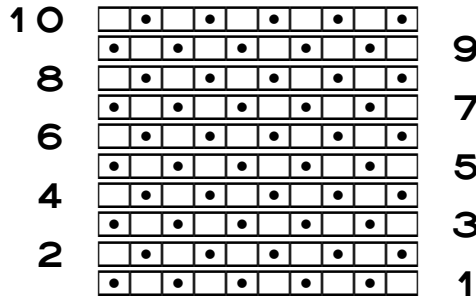
2 □ • □ • □ • □ • □ • □

When we combine rows one and two, we get



The Chart for Seed Stitch

Since rows three through ten simply repeat rows one and two, our ten-by-ten chart of seed stitch is



If we compare the chart to the seed-stitch swatch, we can see that on the knitting, we have a checkerboard effect of the purl bumps. The chart also looks like a checkerboard of purl bumps.

Seed Stitch Is “Broken” 1x1 Ribbing

Seed stitch is what results if we get off by a stitch in 1x1 ribbing (which also means that 1x1 ribbing is what results if we get off by a stitch in seed stitch). Compare the first two rows of 1x1 ribbing to the first two rows of seed stitch:



In row two, the seed-stitch stitches are moved over one stitch compared to 1x1 ribbing. That’s what “breaks” the ribbing so that we get seed stitch instead. Seed stitch, like 1x1 ribbing, alternates knits and purls, but 1x1 ribbing keeps the knits on top of the knits from row to row (when considered from the public side). Seed stitch, though, alternates knit and purl as we travel up and down through the column of a single stitch.

So 1x1 ribbing alternates knits and purls from left to right, but seed stitch alternates knits and purls from left to right **and** from bottom to top.

Moss Stitch

Moss stitch, which Maggie Righetti calls *Irish moss stitch* in *Knitting in Plain English* (page 135) and *Sweater Design in Plain English* (page 89), is worked similarly to seed stitch, except that we work **two** rows of 1x1 ribbing before we “break” the ribbing by moving the stitches over one stitch. Like its cousin seed stitch, it’s reversible and lies flat, so it also makes a good border for stockinette-based fabrics.

If we wanted a ten-stitch by twelve-row swatch of moss stitch, the directions might be

CO 10.

Row 1 (RS): * K1, P1 *, rpt betw * across.

Row 2 (WS): Rpt row 1.

Row 3: * P1, K1 *, rpt betw * across.

Row 4: Rpt row 3.

Rpt rows 1–4 two more times (12 rows total).

photo



The First Public-Side Row

Since the first stitch of moss stitch’s row one is a knit, the chart starts off

□ 1

We add the purl stitch,

◻ 1

and the complete row one is

◻ ◻ ◻ ◻ ◻ ◻ ◻ ◻ 1

The First Private-Side Row

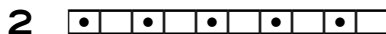
Row two starts with a knit, but from the public side, which is how we make the chart, that’s a purl stitch.

2 ◻

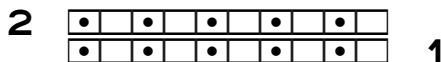
The second stitch we work is a purl stitch, which looks like a knit from the public side.

2 ◻

As we work across the second row, we continue to alternate purl and knit, which we have to represent with knit and purl.



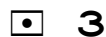
When we combine rows one and two, we get



So far, moss stitch looks exactly like 1x1 ribbing.

The Second Public-Side Row

Row three, a public-side row, breaks the 1x1 ribbing pattern. It starts with a purl,



then it adds a knit stitch



and a purl stitch,

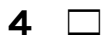


and continues to alternate them across the row. The entire row three is

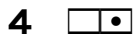


The Second Private-Side Row

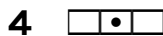
Row four starts with a purl, but since it's a private-side row, we have to switch it to a knit to chart it.



Then next stitch is a knit, which we must show as a purl,



then the purl stitch get flipped to a knit.



We continue alternating knits and purls to the end of the row. The complete row four is



The Chart for Moss Stitch

When we combine the charted versions of the four written-out instruction lines, we have

4	•	•	•	•	•	•	•	3
	•	•	•	•	•	•	•	
2	•	•	•	•	•	•	•	1
	•	•	•	•	•	•	•	

When we duplicate these four rows twice more and fix the row numbers, the final chart for the swatch is

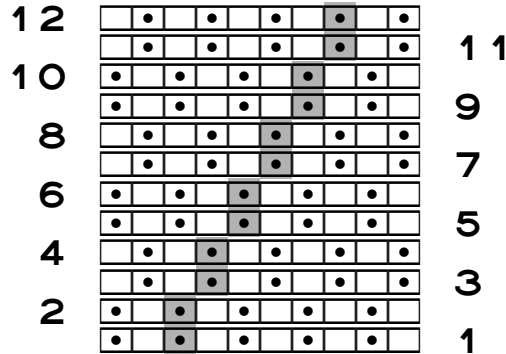
12	•	•	•	•	•	•	•	11
	•	•	•	•	•	•	•	
10	•	•	•	•	•	•	•	9
	•	•	•	•	•	•	•	
8	•	•	•	•	•	•	•	7
	•	•	•	•	•	•	•	
6	•	•	•	•	•	•	•	5
	•	•	•	•	•	•	•	
4	•	•	•	•	•	•	•	3
	•	•	•	•	•	•	•	
2	•	•	•	•	•	•	•	1
	•	•	•	•	•	•	•	

Compare Moss Stitch to 1x1 Ribbing

If we look at just rows one and two, moss stitch is identical to 1x1 ribbing. Rows three and four are also identical to 1x1 ribbing, except that they're moved over one stitch compared to rows one and two, which is what "breaks" the ribbing.

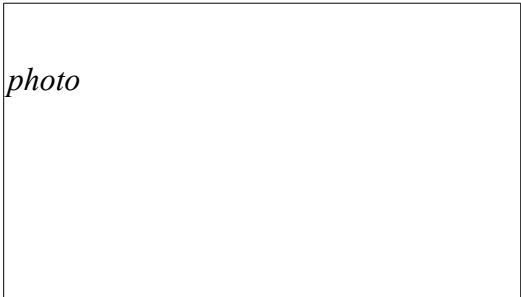
An Unusual Effect

Moss stitch actually has an interesting, and perhaps somewhat unexpected, diagonal appearance as a knitted fabric. If we follow a vertical pair of purl stitches up and across the chart, we can see the diagonal line that's formed.

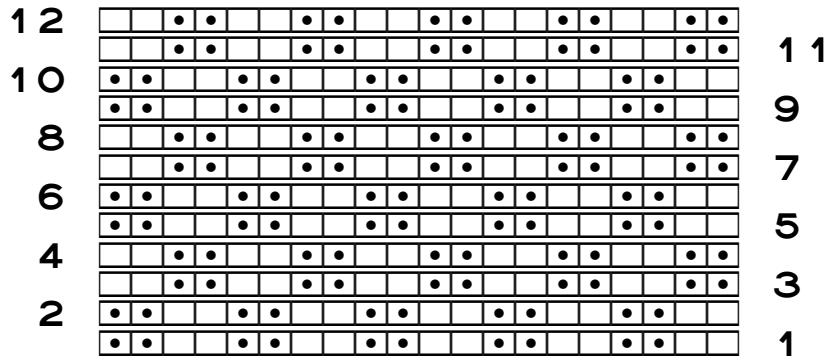


An Alternate Moss Stitch

Vogue Stitchionary Volume 1: Knit and Purl (pattern 6) and *Cowlgirls* (page 102) both use the name *moss stitch* for this pattern, while *Donna Kooler's Encyclopedia of Knitting* calls it *double moss stitch* (page 159), and the *Harmony Guides 450 Knitting Stitches: Volume 2* calls it *box stitch* (page 18). In this reversible, non-curling fabric, we start with two rows of 2x2 ribbing. For rows three and four, we “break” the 2x2 ribbing by moving the stitches over two stitches.



Here's a twelve-row chart (see if you can figure out the corresponding written directions, shown in the Answers):



Garter Stitch

Garter stitch is handled last, which might seem strange since it's usually the first fabric new knitters learn. Why?

It's handled last because it can easily be confused with reverse stockinette when we first start knitting, but more importantly, garter stitch seems to look nothing like its chart.

This small swatch will let us see quite clearly how different garter stitch and reverse stockinette really are. Even if you chose to not make the other swatches, please do make this one.

Garner stitch is knitting every row, public side and private side.⁶ Directions for a twenty-stitch, twenty-row piece of garter stitch might say

CO 20.
Row 1 (RS): K.
Rpt row 1 nineteen more times (20 rows total).
BO.

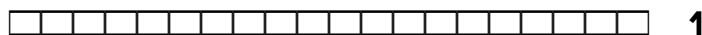
But let's split those twenty stitches into ten of garter and ten of stockinette, which will be instructive in several ways.

CO 20.
Row 1 (RS): K.
Row 2 (WS): P10, K10.
Rpt rows 1–2 nine more times (20 rows total).
BO.



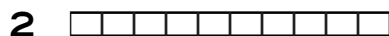
The Public-Side Row

Let's start with the twenty-stitch, public-side row one. It's all knit stitches, so it's easy.

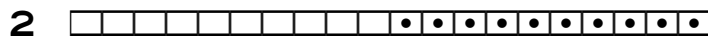


The Private-Side Row

Row two, a private-side row, is half purl, half knit. Since a knit stitch on the private side is a purl stitch on the public side, row two on the chart will start with ten knits

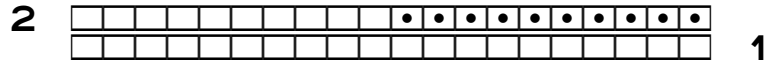


and finish with ten purls.



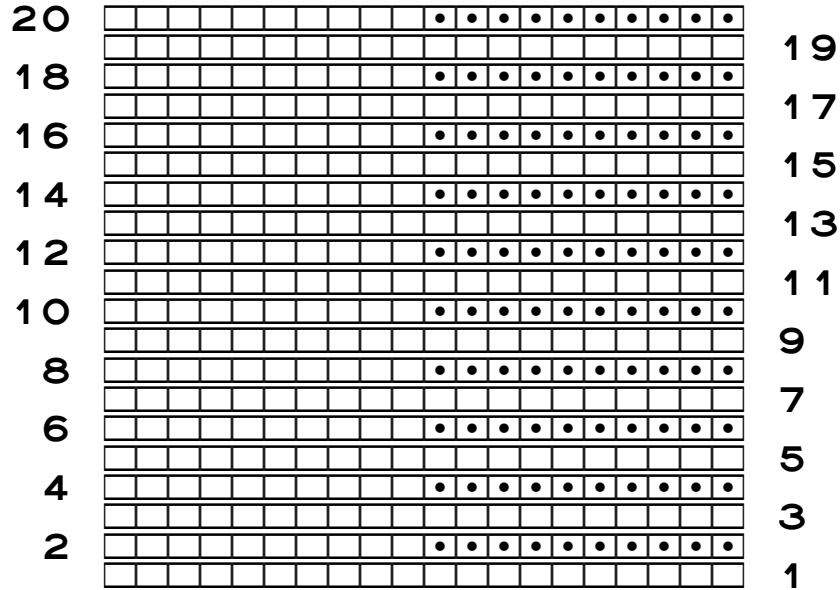
Let's put rows one and two together.

⁶ Did you know that you can make garter stitch by *purling* every row, public side and private side?



The Chart for the Half-Garter, Half-Stockinette Swatch

To get twenty rows total, we need nine more copies of rows one and two with the copied row numbers fixed:

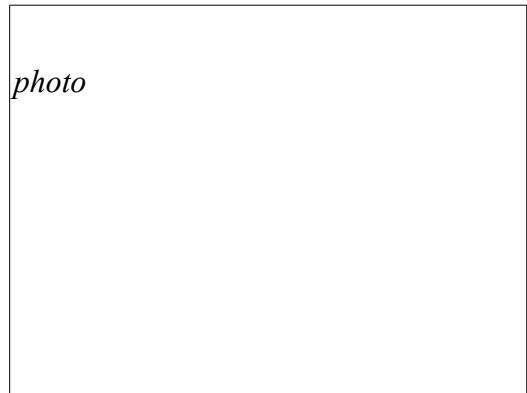


Comparing the Swatch and the Chart

We might think that the right half of this chart doesn't really look like the garter stitch we've just worked. Let's see if we can make the swatch look like the chart.

Grab the top and bottom edges of the garter-stitch portion, and stretch it slightly. We are now able to see the rows of smooth knit Vs between the rows of purl bumps.

But unstretched garter stitch does bear a superficial resemblance to reverse stockinette. In fact, we might have had trouble distinguishing between garter stitch and reverse stockinette when we first started knitting. The easiest way to tell the difference is by turning the work over and looking at the other side. Garter stitch looks the same on both sides while stockinette most definitely does not.



Row Gauges of Garter and Stockinette Are Different

There's one other characteristic of garter stitch that is obvious even on this small piece: garter stitch's row gauge is different from stockinette's (and, of course, reverse stockinette's). It takes more rows of garter stitch to make one vertical inch than it takes to make one vertical inch of stockinette (regular or reverse).

If we choose to border stockinette-based fabrics with garter stitch, we must be aware that the vertical edges will be shorter than the central part of the work.⁷

Garter Stitch Usually Makes Nearly Square Fabric

Garter-stitch projects often count by *ridges* instead of rows. A ridge is two rows of garter stitch, working across and back.

The interesting thing is that for most knitters, if we make a piece of garter stitch the same number of ridges tall as it is stitches wide, the piece will be as nearly square as a hand-knit item ever can be.

For example, for a small hot pad we might cast on thirty stitches. If we work thirty ridges, which is sixty rows, the hot pad will basically be square.

This interesting equality of stitch and ridge gauge also means that if we want to put garter-stitch borders on a project, then the left and right borders should have the same number of stitches as the top and bottom borders have of ridges. We'll come back to garter-stitch borders in later chapters.

Charting Rules So Far

We have now learned several rules of charting.

The chart shows all stitches as they look from the public side.

Each row of the chart shows one row of knitting. Each symbol on the row shows one stitch.⁸

The row number goes next to the first stitch that will be worked on that row. Since public-side rows are worked starting at the right edge (when we look at the public side), their

⁷ To fix this problem, we can do short rows in the garter stitch on the project's left and right edges, which we'll look at in the appendix dealing with borders.

⁸ Remember that, at this point, this statement is a lie.

row numbers go to the right of the stitches. Private-side rows start at what is the left edge when we look at the public side of the work, so on the chart, private-side row numbers are to the left of the stitches.

We read public-side chart rows from right to left, the exact same way we work the stitches. For private-side rows, we read from right to left *if* we turn the chart upside-down. We then have to remember to turn the chart right-side up for the next public-side row.⁹ If we don't want to turn the chart, we read private-side rows from left to right.

On private-side rows, the chart has to swap knits for purls and purls for knits, because the chart shows what the work looks like from the public side.

A symbol key will explain what each symbol means depending on whether it is worked on a public- or private-side row.

Row one is at the bottom of the chart. Subsequent rows go above existing rows, in exactly the same order as we would work them.¹⁰ So we read a knitting chart starting with the bottom row of the chart, which represents the first row we work, and read upwards to the top row of the chart, which represents the last row we work.

⁹ Mirror-image knitters leave the chart right-side up and read private-side rows from left to right.

¹⁰ If we're working a sweater or its pieces from the top down, we still put row one at the bottom of the chart and subsequent rows above it. It's just that the bottom of the chart happens to represent the neckline, shoulder, or top of the sleeve instead of the sweater's or sleeve's bottom edge.