

# Chattahoochee

Designed by: Shuyi Wu



## Notes

The idea for this pattern came about over two years ago, when I was exploring bias knitting and looking for applications where bias knitting is the best approach. I don't like to make my knitting complicated for no good reason; if I'm doing something complicated, it has to either have a practical purpose, or achieve an effect that is hard to reproduce with easier techniques. It occurred to me that a chevron pattern on the bias makes a cool staircase design that is otherwise hard to do. Thus began a lot of swatching, sketching, and charting; many months later, I finally have something I'm happy with, and I hope you'll agree that it's worth the effort. The name comes from the Alan Jackson hit, because the way the pattern flows reminds me of a river.

For the main colour, I strongly recommend using a self-striping yarn, or even better, one of those awful self-patterning yarns with speckly "fair isle" sections that eat up all your pretty cables and lace. Some variegated yarns might work too. This design will get lost in a solid yarn.

There is only one size, approximately equivalent to a 70-stitch vanilla sock; however, the bias chevron fabric is very stretchy. See "Sizing" for more details. The pattern is charted where possible. It's a rather long pattern, not because it's difficult, but because the unusual construction doesn't lend itself well to repetition.

## Supplies

2 colours of sock yarn (fingering weight, wool/nylon mix)

- Main colour (MC): 50-70 g, self-striping or self-patterning strongly recommended
- Contrast colour (CC): 30-50 g
- It's fine to use the same yarn for both MC and CC
- The sample shows a self-striping MC with a solid CC

2.25 mm (US 1) needles, or size required to achieve gauge

- Circular needles with a 32" (80 cm) or longer cable recommended
- If making do with multiple shorter needles, tip protectors might help

Another long circular needle of roughly the same size

Stitch markers

Yarn needle

## Abbreviations

**st(s)** = stitch(es)

**RS** = right side

**WS** = wrong side

**LHN** = left-hand needle, or the needle holding the unworked stitches

**RHN** = right-hand needle, or the needle holding the just-worked stitches

**CO** = cast on

**BO** = bind off

**k** = knit

**p** = purl

**sl** = slip 1 stitch purlwise with yarn to WS

**k2tog** = knit 2 together

**p2tog** = purl 2 together

**ssk** = slip 2 stitches knitwise separately, knit slipped stitches together through back loops

**ssp** = slip 2 stitches knitwise separately, return slipped stitches to LHN and purl together through back loops

**kyok** = knit into next stitch, yarn over, knit into same stitch (1 to 3 increase)

**sk2p** = slip 1 stitch knitwise, k2tog, pass slipped stitch over (3 to 1 decrease)

**BOR** = beginning of round

## Gauge

7 sts and 14 rows (or 7 ridges) = 1 inch / 2.5 cm in garter stitch (worked flat), very lightly stretched. 8.5 sts and 11.5 rows = 1 inch / 2.5 cm in stockinette (worked flat).

## Sizing

### Sock width measurements

Leg circumference: 8.75 inches / 22.5 cm

- best fit: up to 10 inches / 25.5 cm
- stretches to 14 inches / 36 cm

Foot circumference (at ball of foot): 8.5 inches / 21.5 cm

- best fit: up to 9.5 inches / 24 cm
- stretches to 11 inches / 28 cm

### Sock length measurements

Leg length (top of cuff to top of heel flap): 5.75 inches / 14.5 cm

- each extra leg repeat adds approximately 2 inches / 5 cm

Foot length (back of heel flap to toe tip): 9 inches / 23 cm

- longer foot option adds approximately 2 inches / 5 cm

Be aware that as the fabric expands widthwise, it will shrink lengthwise. So if you expect the sock to stretch significantly to fit a wider leg/foot, consider adding some length to compensate.

## Instructions

Instructions are divided into 10 sections. Some sections have schematics that show which part of the sock is being constructed, and what the final shape looks like. These schematics show the left sock; the right sock is a mirror image.

The left sock and right sock sometimes have different instructions and charts. Written instructions are marked with **[LEFT]** and **[RIGHT]**, and charts are titled (for example) Chart 1L vs 1R.

**Charts show RS rows only.** Unless otherwise specified, knit across all sts on WS rows (i.e., garter stitch knitted flat).

## Useful Links

**Judy's Magic CO:** <https://youtu.be/1pmxRDZ-cwo?si=jIBz8NNjWiPZG1pM>

Stop at 8:30; the rest of the video doesn't apply as it is for working in the round.

**Judy's Magic CO (without needing to untwist the first row):**

<https://cocoknits.com/blogs/knit-tutorials/how-to-provisional-cast-on-with-judy-s-magic-co>

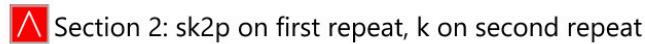
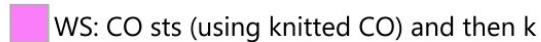
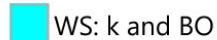
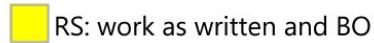
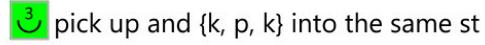
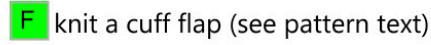
This is a better tutorial for using JMCO as a provisional CO, but it uses a different movement to avoid having to untwist the first row, which not everyone is familiar with. You can use this technique if you like.

**Knitted CO at the beginning of a row:** <https://youtu.be/elz8oQa-l7k?si=r-YV1V9nElTlMp5>

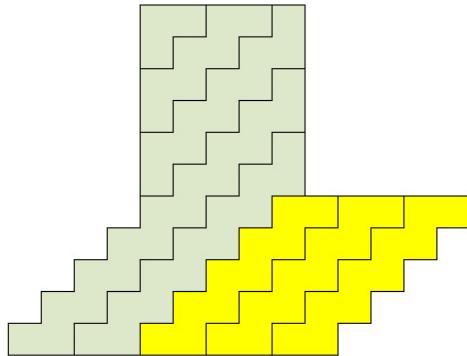
**Modified 3-needle BO:** [https://youtu.be/S2duhnjuVhg?si=lNhFFy\\_tYnVOjTaU](https://youtu.be/S2duhnjuVhg?si=lNhFFy_tYnVOjTaU)

## Key for charts

The key for all charts is shown below. The charts make extensive use of colour-coding. If your eyes or printer have trouble with colours, pay attention to the pattern text, which points out all instances of colour usage and explains them in more detail.



## Section 1: leg, first half

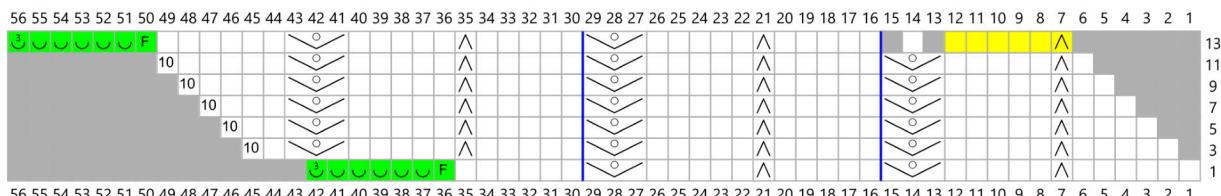


**[RIGHT]** For the right sock only: cut off a 60 inch (1.5 m) section of MC, and set it aside. You will need it in Section 3 for the 3-needle BO. No need to do this if you have access to both ends of the yarn.

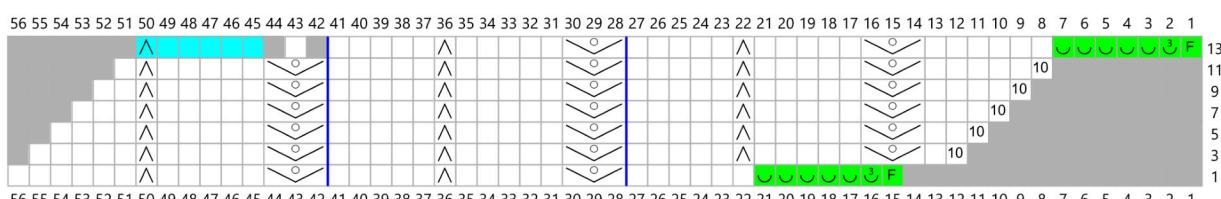
With MC, CO 73 sts per needle using Judy's Magic CO, with the working needle on top and a spare needle on the bottom. The sts on the spare needle will be on hold until the leg is complete; use markers or tip protectors to make sure you don't mix it up with the working needle. Meanwhile, the newly cast-on sts on the working needle are WS sts, so turn and prepare to work a RS row. (The sts may be twisted; if so, make sure to untwist them as you work the first row.)

For a longer leg, CO an additional 14 sts per repeat, and work additional repeats in Charts 1 and 2. Increase all relevant stitch counts by 14 per repeat in Sections 1-3.

### Chart 1L:



### Chart 1R:



Follow Chart 1, working the portion between the thick blue lines 3 times. **After completing rows 1-14, work rows 3-14 again, and then work rows 3-12 once more.** You should have 81 sts on the needles after every WS row.

To knit a cuff flap and pick up sts along the side:

**[LEFT]** When you get to the green squares (beginning with the one marked "F"), there should be 10 unworked sts remaining. Knit 14 rows of garter stitch (7 ridges) over these 10 sts to form a little flap, ending after a WS row (do not turn). This flap is part of the cuff. With WS facing you, using LHN, pick up 6 purl bumps along the edge of the flap; work {k, p, k} into the first purl bump, and k the remaining 5. There should now be 18 sts on RHN; knit across remaining sts on LHN to complete the WS row.

**[RIGHT]** Start the row by knitting 13 rows of garter stitch over the first 10 sts (6 garter ridges, plus another RS row). With RS facing you, using LHN, pick up 6 purl bumps along the edge of the flap; work {k, p, k} into the first purl bump, and k the remaining 5. Work the rest of the row as shown in the chart.

To bind off sts on row 13/14:

**[LEFT]** On row 13, BO the first 6 sts, treating the sk2p as 1 st, as follows: work sk2p, \*k1, pass the 2nd st on RHN over the first,\* repeat from \* to \* 5 more times.

**[RIGHT]** On row 14, BO the first 6 sts.

## Section 2: leg, second half

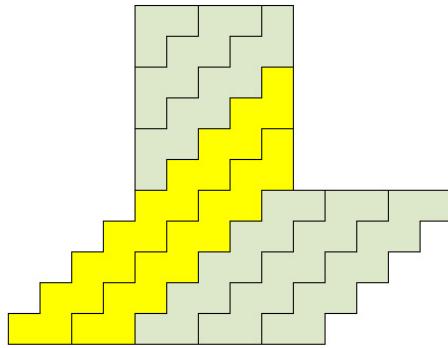


Chart 2L:

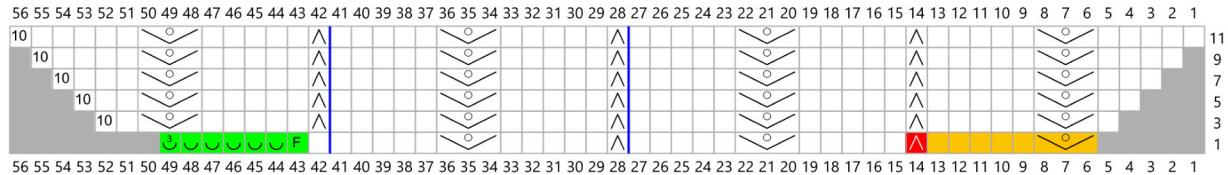
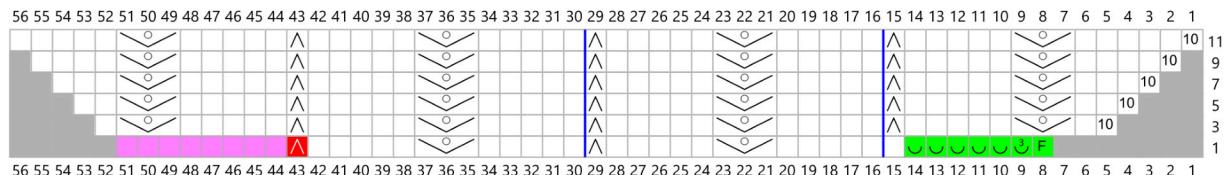


Chart 2R:



Work Chart 2 twice. The cuff flaps are worked as described in the previous section. On the first repeat, work the portion between the thick blue lines 4 times. There are 97 sts after row 2, and 107 sts after row 12. On the second repeat, work the portion between the thick blue lines 6 times, and **stop after row 11** (do not work the WS row yet). There are 125 sts after row 2, and 135 sts after row 11.

Note that in row 1, st 14 (in Chart 2L) or st 43 (in Chart 2R) is sk2p in the first repeat, and k in the second repeat.

**[LEFT]** CO 6 sts (using knitted CO) at the beginning of row 1.

**[RIGHT]** Row 1 ends after st 43 in the chart. Turn, and CO 8 sts (using knitted CO) at the beginning of row 2.

## Section 3: the join

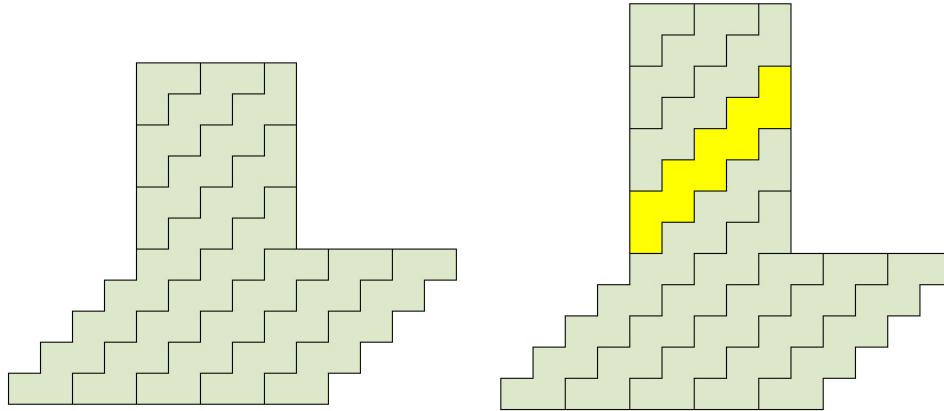
We will now turn the flat leg into a tube by joining live sts to the sts on hold with a 3-needle BO. The BO will be done on the WS, so that the chain is on the inside of the sock, and the seam blends in well on the RS. To make the chain flatter and more comfortable to wear, I recommend using the modified 3-needle BO in the “Useful Links” section above.

**[LEFT]** Turn your work so that WS is facing you. Optionally, place a locking stitch marker after 73 sts; this is where the 3-needle BO ends. Take the other edge of the leg (attached to the spare needle), and fold it upwards and away from you, so that the spare needle is behind the working needle, and WS is facing out on both sides. Use the 3-needle BO to join the two edges together until you have used up all the sts on the spare needle. At this point, you should have 1 st remaining on the RHN, 62 sts on the LHN, and the stitch marker in between. Remove marker, BO 1 st normally (this is the st left over from the 3-needle BO), and knit across. 62 sts remain.

**[RIGHT]** Turn so that WS is facing you. K 62 sts. Take the other edge of the leg and fold it upwards and away from you, so that the spare needle is behind the working needle. Drop the working yarn. With the piece of MC that you have set aside, use the 3-needle BO to join the sts on the spare needle to the remaining live sts in this row. When you get to the end, finish off the last st. In the next section, you will continue where you left off prior to the 3-needle BO.

You should now turn the leg inside out so that RS is on the outside, and try on the tube to make sure it fits.

## Section 4: longer foot (optional)



At this point, you may choose to add this extra section to get a longer foot. Otherwise, skip directly to Section 5.

Chart 3L:

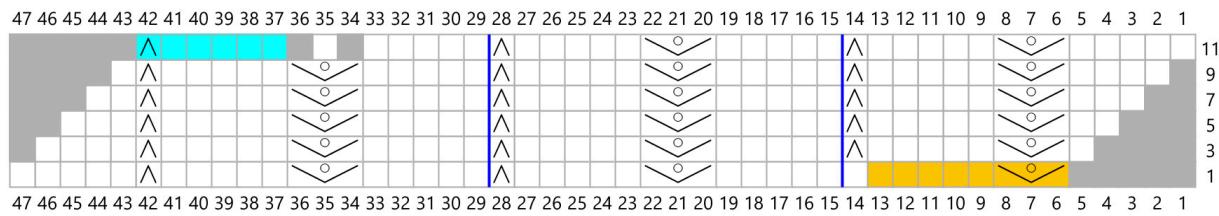
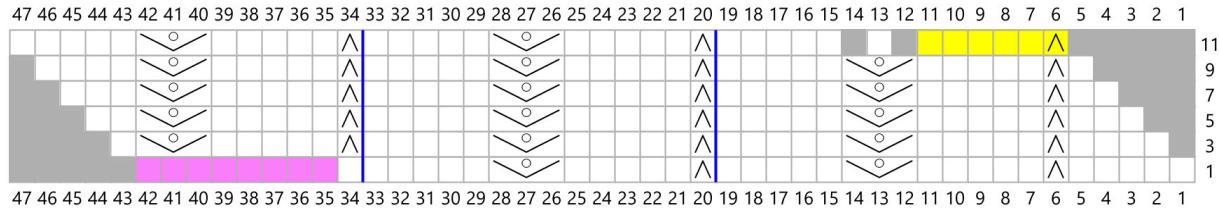


Chart 3R:



Work Chart 3 once, working the portion between the thick blue lines 3 times. There are 70 sts after each of rows 1-10. After row 12, 62 sts remain.

**[LEFT]** CO 6 sts (using knitted CO) at the beginning of row 1. On row 12, BO the first 6 sts.

**[RIGHT]** Row 1 ends after st 34 in the chart. Turn, and CO 8 sts (using knitted CO) at the beginning of row 2. On row 11, BO the first 6 sts, counting the sk2p as 1 st.

## Section 5: foot diagonal

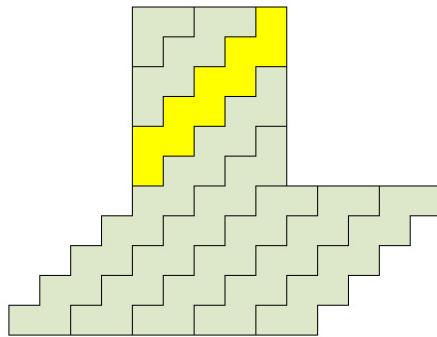


Chart 4L:

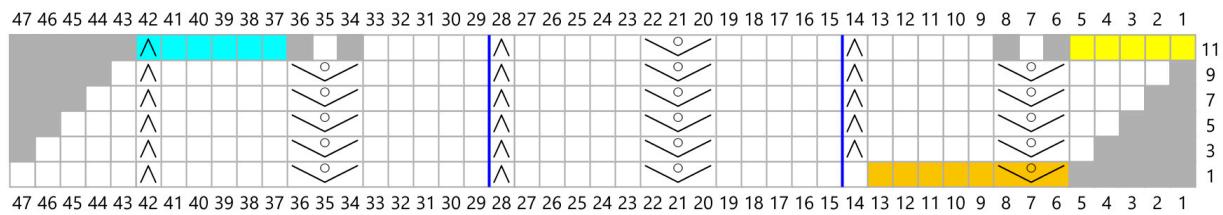
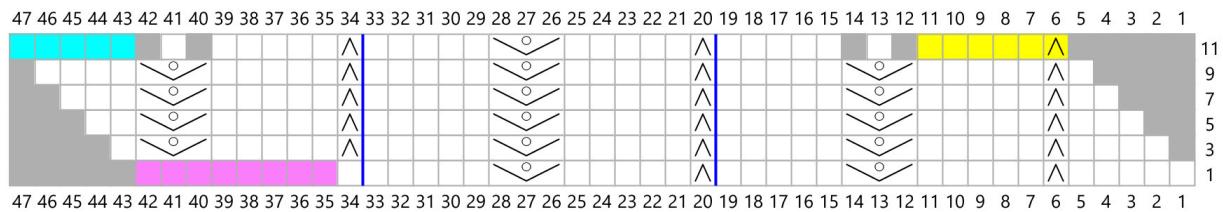


Chart 4R:

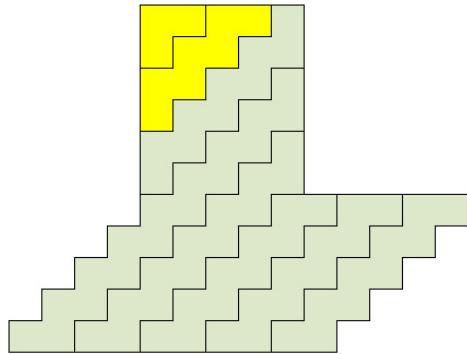


Work Chart 4 once, working the portion between the thick blue lines 3 times. There are 70 sts after each of rows 1-10. After row 12, 55 sts remain.

**[LEFT]** CO 6 sts (using knitted CO) at the beginning of row 1. On row 11, BO the first 5 sts. On row 12, BO the first 6 sts.

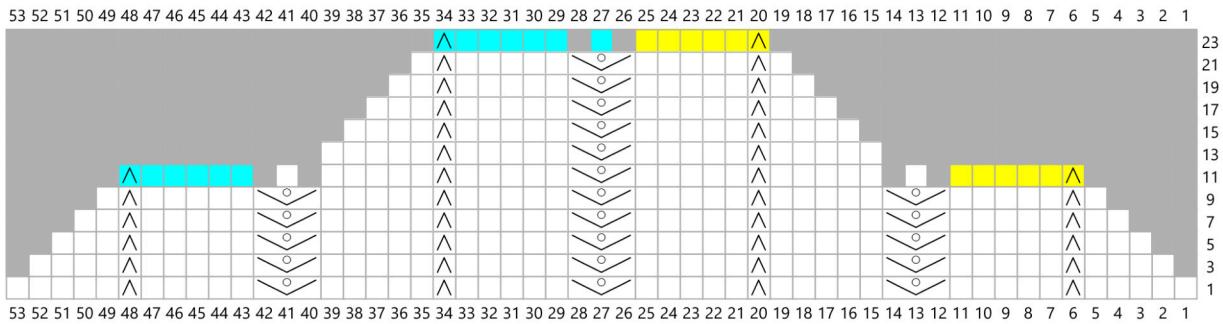
**[RIGHT]** Row 1 ends after st 34 in the chart. Turn, and CO 8 sts (using knitted CO) at the beginning of row 2. On row 11, BO the first 6 sts, counting the sk2p as 1 st. On row 12, BO the first 5 sts.

## Section 6: foot tip



From this point on, instructions are the same for both the left and the right sock.

Chart 5:



Work Chart 5. On row 11, BO the first 6 sts, counting the sk2p as 1 st. On row 12, BO the first 6 sts. On row 23, BO the first 6 sts, again counting the sk2p as 1 st. Finally, on row 24, BO all remaining sts, then cut yarn and finish off.

## Section 7: the pickup

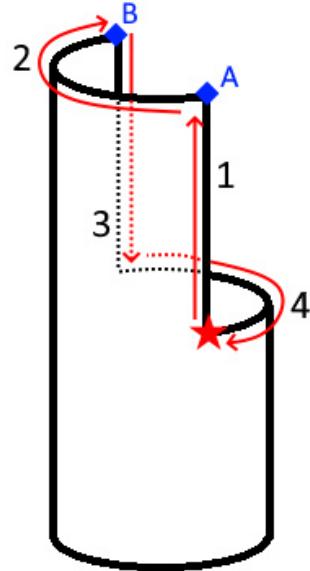
If you are opting to use a CC yarn for the heel/sole/toe, start using it now, and continue to use it for all subsequent sections.

Before you begin, double check that the RS of the tube is on the outside. The chain formed by the 3-needle BO, which is on the WS, should be on the inside.

The diagram on the right represents what your work looks like so far: a tube for the leg, and a flap for the instep. The red arrows show the sides along which we will now pick up sts. The red star is the starting point, and the blue diamonds indicate the locations of two markers that will be placed.

Starting from the right instep corner (red star), pick up and knit:

- 1 st from the corner
- 63\* sts from the right side of the instep (21 sts per 12-row repeat) (**arrow 1**)
- (place marker A here)
- 35 sts from the toe side of the instep (7 sts per 6-st “half repeat”) (**arrow 2**)
- (place marker B here)
- 63\* sts from the left side of the instep (21 sts per 12-row repeat) (**arrow 3**)
- 1 st from the corner
- 35 sts from the back of leg (7 sts per 6-st “half repeat”) (**arrow 4**)



\*If you did Section 4 to get a longer foot, instead of 63 sts from each side of the instep, you should pick up 85 sts (21 sts per 12-row repeat, plus an extra st to end up with an odd number).

Picking up sts is not an exact science, but here are some tips to make it easier.

First of all, there are 3 types of edges along which you will be picking up sts:

- knitted CO edge, which looks like **loops**
- BO edge, which looks like a row of **Vs**
- garter selvedge, which looks like purl **bumps**

The type of edge changes every 6 loops, Vs, or bumps. If you pick up every loop, V, and bump, you will get 12 sts per 12-row repeat. This is not enough!

When picking up from the instep toe edge or the back of leg (arrows 2 and 4), you need 7 sts per 6-st “half repeat”, which you can do by picking up an extra st from the transition between one type of edge and the next, and fudging the corners as needed.

When picking up along the sides of the instep (arrows 1 and 3), you need 21 sts per 12-row repeat. This is 1.75x more sts than just picking up every loop, V, and bump, and so you will need to get 2 sts out of most loops, Vs, and bumps. This is how I did it:

- knitted CO loops: pick up the loop, and then pick up the st between this loop and the next (from the row below)
- BO edge Vs: pick up through the back leg of the V only, and then pick up through both legs of the V
- garter selvedge bumps: pick up the bump, and then pick up the strand between this bump and the next

Don't worry if these two edges don't look great, because the process of joining the sole hides a lot of the messiness. Just aim for 10-11 sts per “half repeat”, and double check that you have the right st count at the end.

## Section 8: heel

Turn to WS. The heel flap is worked flat over the 35 sts from the back of leg, starting with a WS row. The remaining picked up sts won't be used until the next section.

Row 1 (WS): k across.

Row 2 (RS): \*k1, sl1,\* repeat from \* to \* until 1 st remains, k1.

Work rows 1-2 a total of 19 times (38 rows), or until desired length.

The heel turn begins on a WS row.

Row 1 (WS): sl1, p19, p2tog, p1, turn.

Row 2 (RS): sl1, k6, ssk, k1, turn.

Row 3 (WS): sl1, p until 1 st before gap, p2tog, p1, turn.

Row 4 (RS): sl1, k until 1 st before gap, ssk, k1, turn.

Repeat rows 3-4 until all stitches have been used, ending after row 4. Do not turn after the final row. 21 stitches remain.

## Section 9: sole

The sole will be knitted flat and joined to the instep as you go. Be aware that the join is done at **both the beginning and the end of each row** by working the first/last sole st together with a st from along the side of the instep (i.e., using a decrease). Whenever the instructions below say to “borrow from instep edge”, it means to move an instep st onto the working needle, before using that st and the first/last sole st to work the decrease. The st that results from this edge decrease remains the first/last sole st. (If instructed to knit until 3 sole sts remain, for example, you would knit until 2 regular sts and the previous edge decrease remain.)

Note: When working ssp, make an effort to keep everything tight, otherwise you might end up with some gaps.

### **Heel flap pickup:**

Pick up and knit 19 sts from the edge of the heel flap. Ssk (with the first 2 instep edge sts), turn. Ssp (working the first st together with a st from the instep edge), p to end of heel turn. Pick up and purl 19 sts from the other edge of the heel flap. P2tog (with the first 2 instep edge sts), turn.

### **Gusset decreases:**

Row 1 (RS): K2tog (borrow from instep edge), ssk (gusset decrease), k until 3 sts remain, k2tog (gusset decrease), ssk (borrow from instep edge), turn.

Row 2 (WS): Ssp (borrow from instep edge), p until 1 st remains, p2tog (borrow from instep edge), turn.

Repeat rows 1-2 until 35 sole sts remain.

### **Sole (no decreases):**

Row 1 (RS): K2tog (borrow from instep edge), k until 1 st remains, ssk (borrow from instep edge), turn.

Row 2 (WS): Ssp (borrow from instep edge), p until 1 st remains, p2tog (borrow from instep edge), turn.

Repeat rows 1-2 until, at the end of a WS row, you have 2 sts left between the sole sts and marker B, and 1 st left between the sole sts and marker A on the other side. To stay on track, I recommend periodically counting after WS rows to make sure that you have  $n$  sts to go before marker B (where  $n$  is an even number), and  $n-1$  sts before marker A.

## Section 10: toe

Now we will transition to working in the round. (This also provides a good opportunity to fudge, if you couldn't get the st count to work out at the end of the previous section, by picking up or decreasing away an extra st.)

Turn so RS is facing you. K2tog (borrow from instep edge), k until 1 st remains, ssk (borrow from instep edge - last st before marker A). Keep marker A here to indicate BOR. K across the 35 instep sts to marker B; keep marker B here to indicate end of instep. K2tog (this consumes the last instep edge st), k to BOR.

Try on the sock. The toe will add 23 rounds to the foot; knit a few rounds of stockinette now if you need additional length.

**Round 1:** K around.

**Round 2:** K around.

**Round 3 (decrease round):** K1, ssk, k to 3 sts before end of instep, k2tog, k1; k1, ssk, k to 3 sts before BOR, k2tog, k1.

Work rounds 1-3 twice. 31 sts remain per side.

Work rounds 2-3 only 7 times, until 17 sts remain per side.

Work round 3 only 3 times, until 11 sts remain per side.

Cut yarn, leaving a long tail (8 inches / 20 cm), and graft the toe using Kitchener stitch. You can eliminate "ears" by treating the 2nd and 3rd stitches from each end as a single stitch when grafting. (So when you "knit on" or "knit off", you pass the needle through both stitches as if working a k2tog, and when you "purl on" or "purl off", you pass the needle through both stitches as if working a p2tog.) This might be a little fiddly, but it has the effect of continuing the decrease pattern while grafting.