

# Susan's Sock Pattern



This basic pattern for knitting socks on a Circular Sock Machine (CSM) is designed to help even beginning crankers knit beautiful socks successfully. Specifically designed for knitting on a Dean and Bean's Sock Machine, the pattern would also work for any CSM where the cylinder moves to meet the yarn and could easily be interpreted for CSMs where the yarn is cranked around a stationary cylinder.

This is a toe-up sock with a three-wedge heel and hung hem that works on any size cylinder. When you take your knit off the machine, you will have a completely finished sock; it will not require any additional sewing or hand knitting (other than tucking the last tail into the gap in the hem.) If you use the ravel cord as we suggest, even the waste yarn will have been removed mid-knit so there won't be any final clean-up! The toe and heel methods don't leave any holes, and the wedge heel fits beautifully. We did considerable experimentation to develop a pattern that mitigates the risk of dropped stitches at critical moments so every sock will turn out successfully. It might just be the only sock pattern you ever need!

# SUPPLIES



## MATERIALS

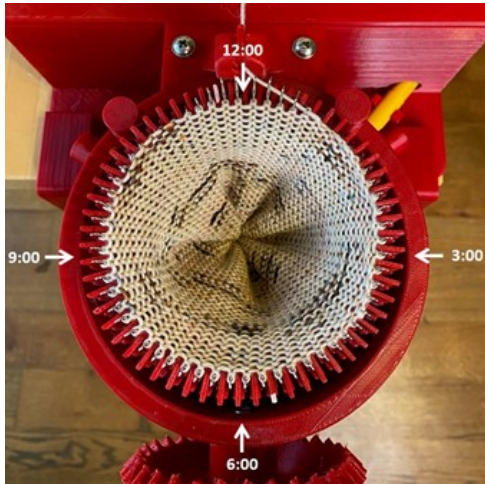
- 100g sock yarn - we typically use fingering-weight sock yarn but the pattern will also work with sport or DK
- Waste yarn
- Ravel cord, recommended in 2 pieces, 1 yard each
- 6 pieces of scrap yarn, approximately 6" each
- Darning Needle
- To determine gauge, 2 pins (stick or safety) and a ruler; you may also want a soft tape measure, pencil, and paper

FYI, we also use the following:

- Soft weights with a cable ring
- 3 heel forks
- Setup bonnet
- Loom, latch, and pick tools
- Weighted clips to attach to the end of your yarn or ravel cord when dropped into the cylinder

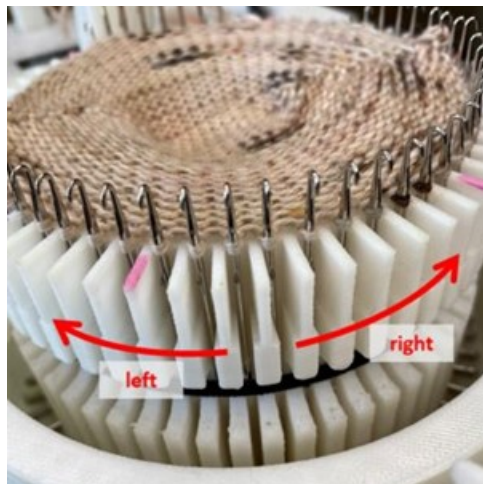


# REFERENCE



A CLOCK AS OUR COMPASS

Throughout the pattern, we will refer to reference points around the sock machine as if it's a clock with 12:00 located at the yarn feeder as shown in the picture. When the pattern says to stop when a mark is at 1:00, stop where the yarn is feeding into the needles.



LEFT AND RIGHT

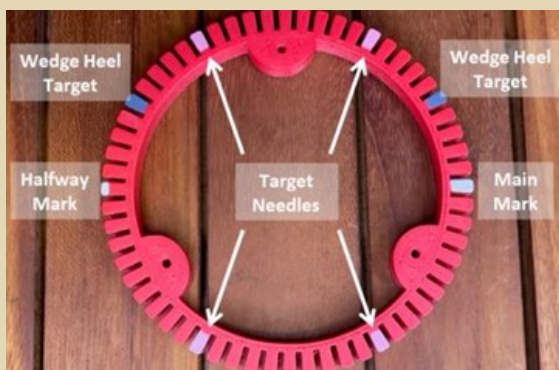
If we make reference to a needle that's left or right of a mark, that's always when looking from outside the cylinder in toward the middle.



ROW COUNTER

When cranking rows, the pattern assumes the row counter shows the row that is being cranked. If the pattern says to crank 53 rows, you would crank until the counter completed the 53rd and just turned over to row 54, then stop with the cylinder in the position noted in the pattern.

## CYLINDER MARKS



We will assume your cylinder is marked to identify the following target needles; the example in the photo is for a 60-needle cylinder:

- “Main mark” at 3:00 (white in the example photo, red in the photos below.)
- “Halfway mark” at 9:00, exactly opposite the main mark to divide the cylinder in half (white in the example photo, red in the photos below.)
- “Target needles” - four total (pink in both the example photo and the photos below.) Two marks are bracketing target needles centered between 11:00 and 1:00. On a 54-needle cylinder, there will be 8 needles between the marks; on a 60-needle cylinder, there will be 10 needles; on a 72-needle cylinder there will be 12 needles. There are another two marks bracketing the same number of target needles centered between 7:00 and 5:00.
- “Wedge heel target needles” (1/3 of the total needles of the cylinder centered between 10:00 and 2:00. On a 54-needle cylinder there will be 18 needles between the marks; on a 60-needle cylinder there will be 20 needles; on a 72-needle cylinder there will be 24 needles. (These are blue in both the example photo and upcoming photos.)

# A PERFECT FIT

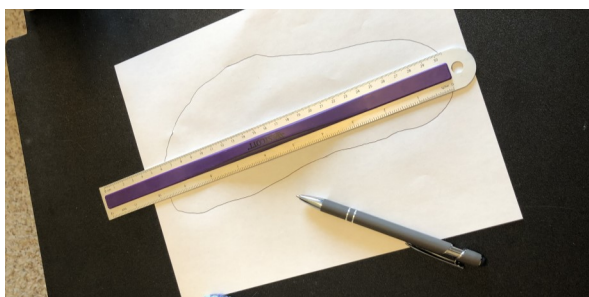


*The following methodology has been tested extensively for all different sizes of women's socks knit on a 60-needle cylinder. You can use the following method to complete the worksheet. Or you can use [this automated worksheet](#) that will do the calculations for you.*

## FOOT MEASUREMENTS

Start by determining the total foot length in inches. You can use a chart such as [this](#) to identify the average foot length based on shoe size. Alternatively, stand barefoot on a sheet of paper with your weight on the ball of your foot. Hold a pencil straight up and trace around your foot. Measure the longest part of your foot then subtract 1/4" to account for the width of the pencil to get the target length. Record the target length on the worksheet. Note: do not subtract for negative ease at this step.

To determine the target width, use a soft tape measure around the ball of the foot, divide by 2 then subtract half an inch. For example, if the result with the tape measure was 8", divide by 2 to get 4" then subtract half an inch to get 3.5". That's the target width for your tube. Alternatively, if you traced your foot onto a sheet of paper, measure the widest part of the foot and subtract half an inch.



# ADJUST FOR WIDTH, LENGTH & STRETCH

## SOCK WIDTH

The first step of making sure your sock will fit is to adjust your knitting tension so the width of your sock is the correct size. To do this, after cranking several rows of waste yarn, knit 50 rows of gauge swatch. Without cutting the yarn, remove the swatch from the machine.

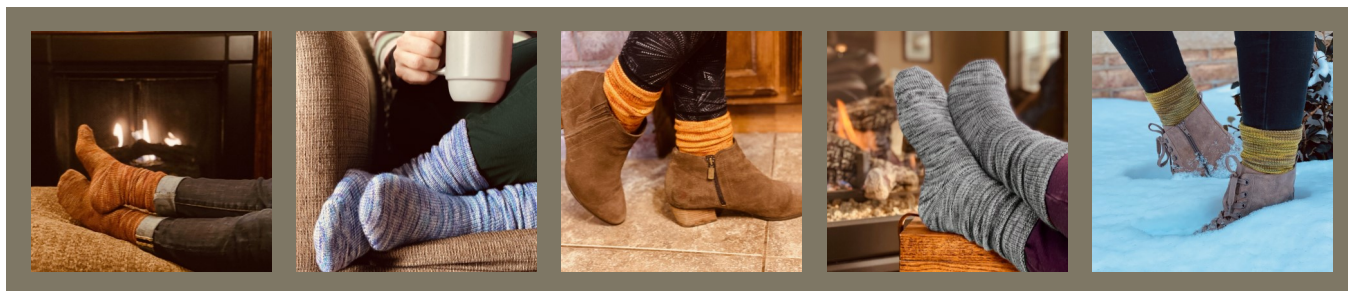
Lay the ruler across the sock to measure the width of the tube. If it's your target size, you're ready for the next step. If not, adjust your V-cams (up to make a narrower tube, down to make a wider tube) and knit another 50-row test swatch, repeating the steps to measure the width. If you're new to knitting on a CSM, it's easier if your tension is a little looser when you're learning (and therefore your tube is a little wider).



## TOE TO HEEL LENGTH

Once your tube is the width you want, you'll need to determine your number of rows per inch. Lay the ruler from the top of the tube to the bottom and use the two pins to mark 3" in the center of your swatch. Count the number of rows between the pins and divide by 3. In the example photo, there are 34 rows, divided by 3 is 11.33 rows per inch. Record that number as your rows per inch.

After you have the V-cam tension where you want it, make sure the other V-cam is at the same level. And make sure the knob on the side of the machine is tight for both V-cams so they don't slip while knitting.



## STRETCH



The size of your sock will also vary based on the amount of stretch in your fabric. To test the stretch, lay your ruler on the table in front of you horizontally. With the needles still in the swatch, hold the top and bottom of the tube one in each hand and pull horizontally. While stretching the fabric firmly, hold near the ruler to check how far apart your needles are. Use the following chart to find and record your target percentage:

- If 3" of gauge swatch stretches to less than 3.5" - use 100%
- If 3" of gauge swatch stretches to 3.5" to 3.75" - use 95%
- If 3" of gauge swatch stretches to 3.75" to 4" - use 90%
- If 3" of gauge swatch stretches to more than 4" - 4.25" - use 85%
- If 3" of gauge swatch stretches to more than 4.25" - 4.5" - use 80%

In the example in the photo, the swatch barely stretches to 4" so we would use 90%.

After you finish your measurements, remove the pins and rewind the sock yarn onto the cone.

## CALCULATE FOOT ROWS WORKSHEET

*Perform the calculation to determine how many rows to crank for the foot. Or you can use this [automated worksheet](#) that will do the calculations for you.*

Target length:	
Times Target Percentage:	x
	=
Times Number of Rows per Inch:	x
	=
Round to a Whole Number	=
Subtract 48	- 48
<b>TOTAL NUMBER OF ROWS TO CRANK FOR THE FOOT:</b>	=

## EXAMPLE

- Width 3.5"
- Length of the foot is 9.5"
- Stretch is between 3.5 and 3.75" - times 95%
- Gauge is 35 rows per 3" - 11.67 rows per inch
- Crank 57 rows for the foot.

Target length:	9.5
Times Target Percentage:	x 0.95
	= 9.025
Times Number of Rows per Inch:	x 11.67
	= 105.32
Round to a Whole Number	= 105
Subtract 48	-48
<b>TOTAL NUMBER OF ROWS TO CRANK FOR THE FOOT:</b>	= 57

# TOE



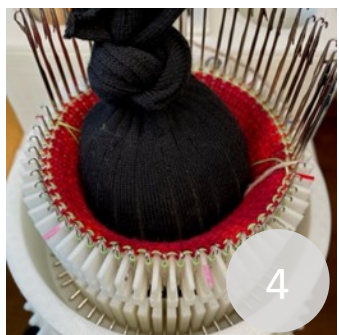
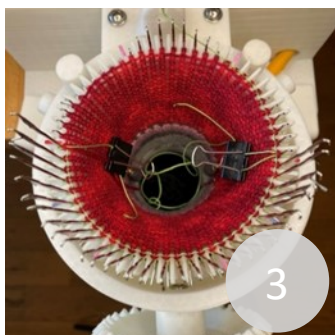
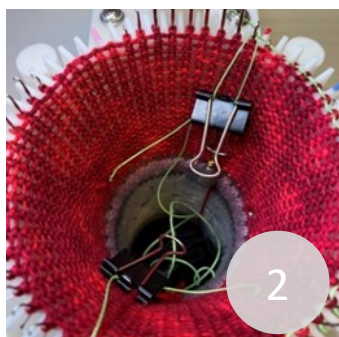
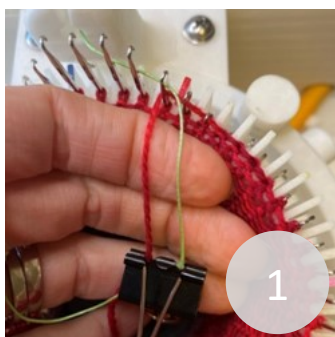
## SETTING YOU UP FOR SUCCESS

It's hard to either back up or undo a step when knitting with a Circular Sock Machine, so it's a good idea to read the instructions carefully and always know what the next step is before continuing. The photo shows how the stitches fall off the needles if you crank the other direction to back up. The only time you can safely crank the other direction is if you have needles raised like in the Setup step below.

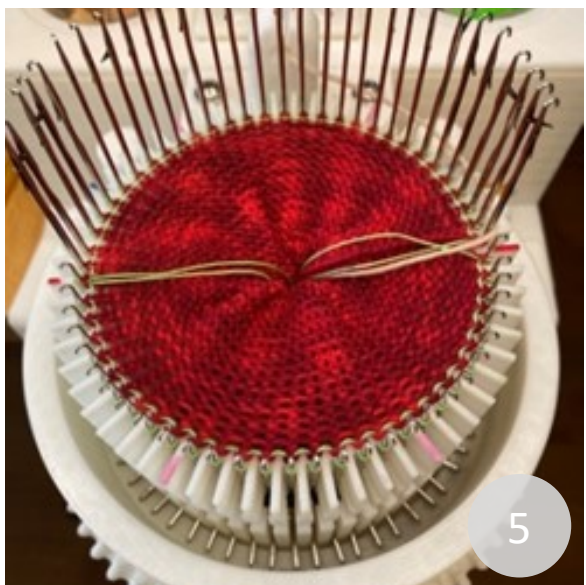
The sock starts with waste yarn and a ravel cord, which we will use to remove the waste yarn before closing the two sides of the toe. This helps create a neat line and means you don't have to remove the waste yarn at the end. We actually prefer two sections of ravel cord (one yarn each) because that makes it easier to remove after hanging the toe.

**Note:** Unless otherwise noted, an instruction to "crank around," "crank one row," or even simply to "crank" means to turn the cylinder one full revolution until the main mark returns to wherever it was before you cranked the row.

## SETUP



- 1 Cast on and crank several rows of waste yarn, cranking clockwise.  
Stop with the main mark at 1:00 and switch the waste yarn for the first ravel cord. You may want to catch both ends into a weighted clip. After cutting the end of the waste yarn, it should go past the needle after the main mark before dropping into the cylinder. The end of the ravel cord will drop into the cylinder directly over the main mark. As a result, the ravel cord and waste yarn are hugging the needle and both will be knit into that stitch.  
Crank halfway around until the halfway mark is at 1:00 and **STOP**. Tuck the end of the first ravel cord into the center of the cylinder and add the second ravel cord, again hugging the needle and attaching a weighted clip (optional.)
- 2 **READ CAREFULLY:** Crank just a few needles until the halfway mark is at 3:00 and **STOP**.
- 3 Raise all the needles along the bottom half of the cylinder between the main and 9:00 and halfway mark at 3:00. Twist the needles slightly so they stay up.
- 4 Crank halfway around until the main mark is at 3:00.



- 5 Remove the soft weight and clips. Tuck the end of the second ravel cord into the center of the cylinder and change to your sock yarn. Note you won't hug the needle when changing yarn this time - simply drop the tail of your sock yarn down into the cylinder and over the main mark in between the first lifted needle and the last lowered needle at 3:00.

From underneath the sock machine, add the cable ring to the top of the sock tube (centering it as much as possible.)

Replace the soft weight (we use 1.5 pounds at this point - not shown in the photo. Use the amount of weight needed to keep your stitches from rising up the needles. )

Note: in the example photos used throughout the pattern, the waste yarn is red, ravel cords are green, and sock yarn is off-white.

## STARTING THE TOE

### TIP



From here, you will be alternating between cranking counter-clockwise and clockwise, every other row. Not sure which direction to crank? When going back and forth, you start cranking in the direction that moves the needle where the yarn is attached toward 12:00. (When cranking in a continuous circle, you crank to move the needle with the yarn attached away from 12:00.) You'll need to pull the working yarn (coming from the cone) back with your non-cranking hand as you start to turn the cylinder. You will adjust the tension on the yarn by hand for the rows where you're alternating the direction you're cranking. You want to remove the slack from the yarn particularly for the first stitch so you don't create holes in your finished sock at the turns. Watch closely to make sure that first stitch always knits; the yarn must fall above the needle latch. For the rest of the row, you don't really want any tension on your yarn at all. In fact, you want to make sure the yarn is very loose; pull yarn off the cone so there is a lot of slack.



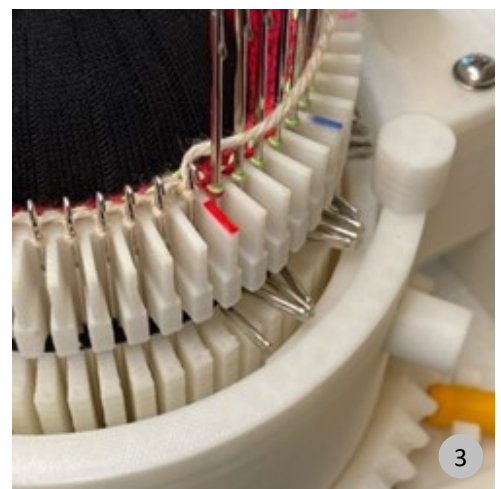


For the first row with sock yarn, start by cranking one full row counter-clockwise (until the main mark returns to 3:00.) The tension on this row is particularly important: you want moderate tension that's not too loose, not super tight.

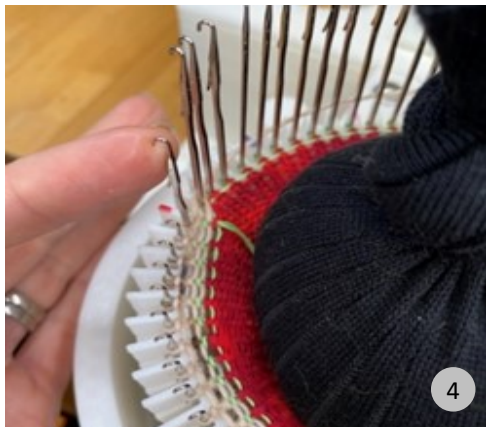
After cranking the first row, your yarn should be attached to the needle next to the halfway mark, which should be at 9:00 as shown in the photo.



Wrap the yarn around the back of the first out-of-work (raised) needle next to the halfway mark at 9:00. To wrap a needle means to take the yarn behind the needle (toward the inside of the cylinder). Crank around clockwise.



Repeat for the next row: with the yarn at 3:00, wrap the first out-of-work needle (next to the main mark) and crank around (counter-clockwise.)



With the yarn at 9:00, lift one needle and crank around. The needle you lift will always be the last needle worked - the one with the working yarn still attached.

Repeat for the next row: with the yarn at 3:00, lift one needle and crank around.

## TIP

Be careful on all of these back and forth rows - go slowly and watch closely because a dropped stitch can be hard to repair. In particular, make sure the first and last stitches always knit. If a stitch doesn't catch, you can knit it by hand. Start by picking up the bottom loop, which is the stitch from the previous row. Pull the top of the needle away from the cylinder to make it easier to pick up the stitch.

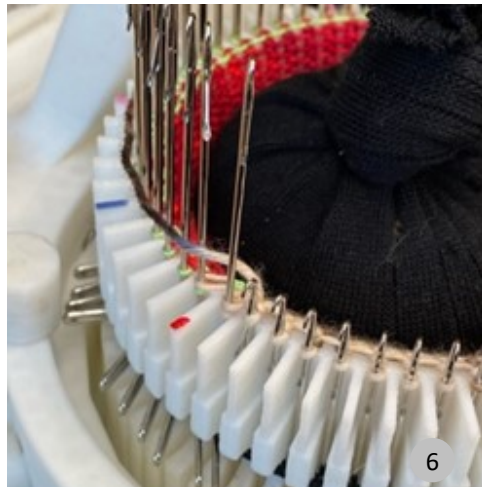
Lift the stitch up and over the yarn that should have knit and off the back of the needle.





Add heel forks (and then remember to add your soft weight on top).

One heel fork goes near 6:00 and the others go near where you're raising or lowering needles. Put the heel forks as high as you can. Tips go toward the center of the cylinder.



With the yarn at 9:00, wrap the first out-of-work needle and crank around.

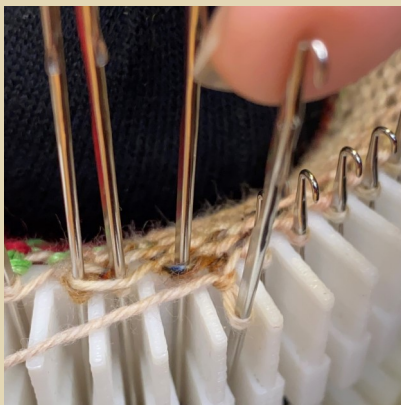
Repeat for the next row: with the yarn at 3:00, wrap the first out-of-work needle and crank around.



With the yarn at 9:00, lift one needle and crank around.

Repeat for the next row: with the yarn at 3:00, lift one needle and crank around.

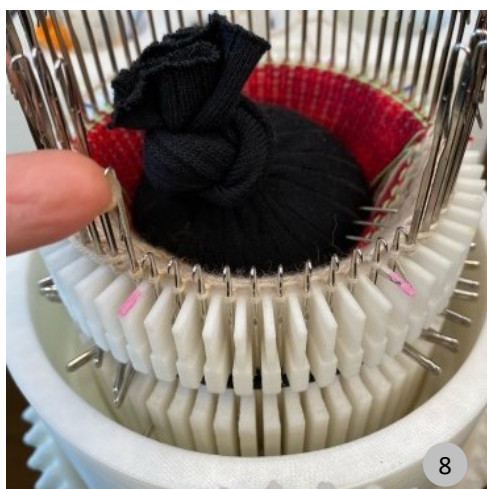
Note: continue to adjust the heel forks up and toward where you're lifting and lower needles as necessary. If your stitches fail to knit at the end of the row, that's a sign you need to adjust your heel forks



## TIP

Not sure if you've lifted a needle? Every time you lift a needle, it will be the last needle you knit. So look for the needle with the working yarn attached; it should be lifted before cranking in the other direction.

If the stitches aren't knitting, you may have too much tension or not enough weight (or both.) Try a combination of adding weight (or perhaps adjusting your heel forks more often) and making sure there is a lot of slack in your yarn (no tension at all.) To loosen the tension of stitches on your needles, for a few rows you may need to push down the stitches behind the needles at 12:00 and where they're knitting. It may take several rows to help loosen the tension in a tight section.



Continue lifting one needle on each side, stopping when you reach the last needle before the target at 7:00. Lift that needle and crank as usual.



**READ CAREFULLY:** Lift the last needle before the target at 5:00 AND push down the first two needles near the target at 7:00



For the two needles you pushed down, tuck in the latches using the pick tool. Unless otherwise noted, you will always tuck in the latches when you push down a needle.

Adjust your heel forks up. Crank around.



## TIP

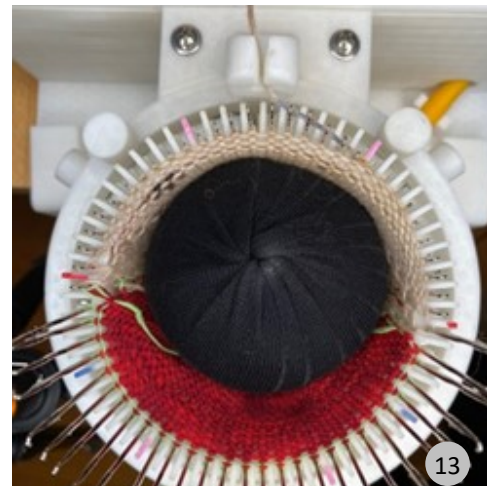
Not sure if you already pushed down the needles? The ones you knit on the last round will only have one stitch on the needle, like the ones to the right of the pink mark in the example photo. The ones that were raised and out-of-work during the last row will have two stitches, like the ones to the left of the pink mark in the example photo; those are the ones that need to be pushed down. So if the last needles that are down have single stitches, you haven't yet pushed the needles down on that side. The ones in the example photo have been pushed down and are ready to knit.



Lift one needle closest to the 7:00 target and push down the first two needles after the 5:00 target. Crank around.



Continue lifting one needle (the last one knit with the working yarn attached) and lowering two (on the other side) until you've lowered one needle past the halfway mark at 9:00. Crank that row. (The photo shows how this step will look before the row is cranked.)

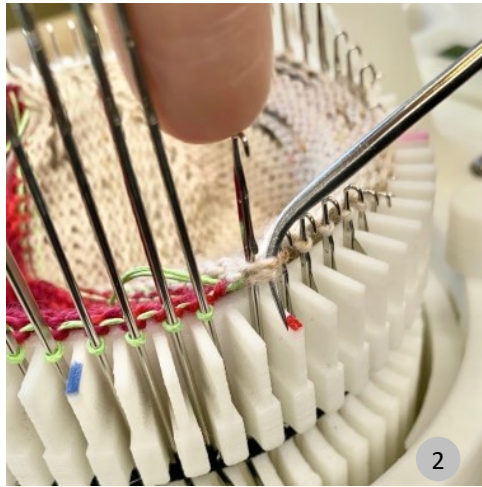


**READ CAREFULLY:** With the yarn at 9:00, lift the first needle past the halfway mark and push down two on the other side (including the first needle past the main mark) **BUT** only crank halfway. **STOP** when the halfway mark is at 3:00. (The example photo shows how this step will look after the row is cranked.)

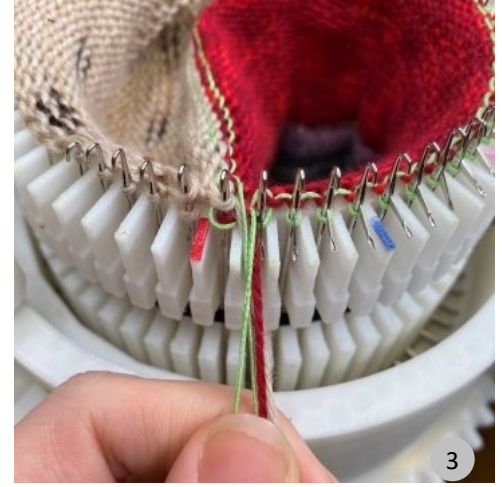
# HANGING THE TOE



Remove the soft weight, heel forks, and the cable ring. When removing a soft weight, pull down on the bottom of your sock or setup bonnet to prevent stitches from jumping off the needles.



Push down the last lifted needle (near 3:00 beside the halfway mark) that has two sock yarn stitches and tuck that latch.

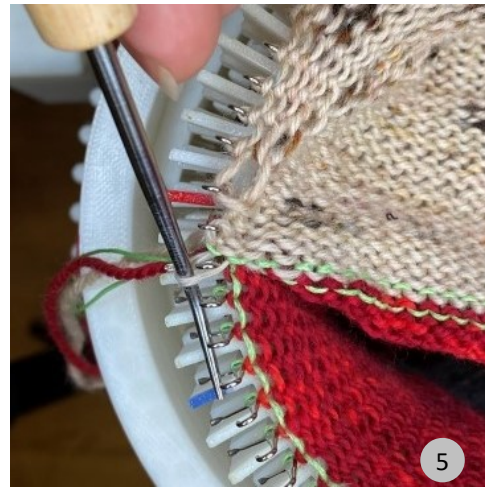


Push down all the rest of the needles (with ravel cord stitches) but you don't have to tuck in those latches. Move the sock yarn tail and ravel cord ends to the outside of the cylinder (on both sides).

Next you need to pick up the bars from the end of the first toe row you knit (attached to the ravel cord and currently hanging in the center of the cylinder) and place them over the needles at the bottom half of the cylinder.



**READ CAREFULLY:** Start near 9:00 and use the loom tool to pick up the first bar. The bar you want to pick up is the sock yarn stitch in between the 2 rows of ravel cord. Be very careful not to overlook the first actual bar that sometimes hides in the corner. A missed bar will create a sock with a run.



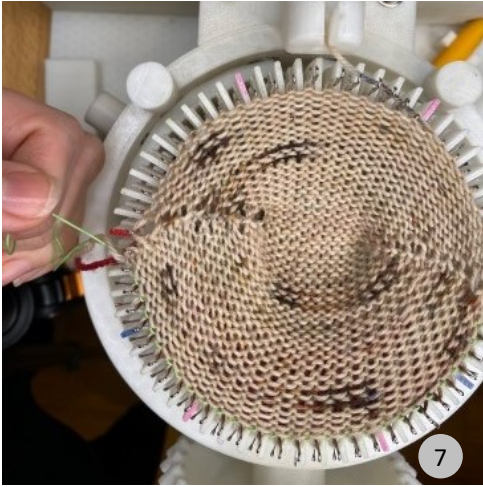
Hang the 1st bar on the 2nd needle to the right of the main mark.

Then pick up the 2nd bar and hang it on the same needle - the 2nd to the right of the main mark. Hold the fabric close to the needles as you're picking up the bars so you don't put tension on them. Pulling one bar stitch away from the fabric can make the next bar hard to find.



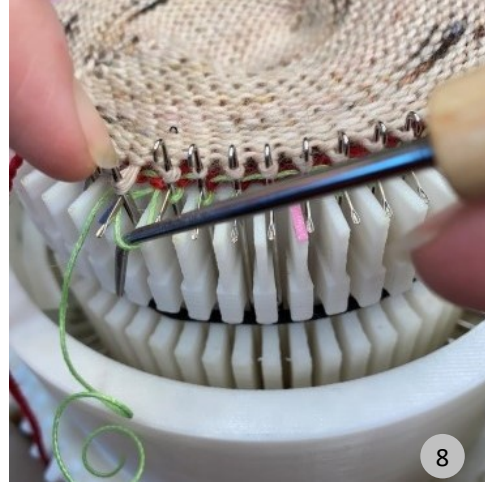
From here, hang one bar on each needle moving around the cylinder toward 6:00. When you hang each stitch, make sure the latch is down and open. Stop hanging bars when you reach the target needle at 7:00. Repeat the process starting at 3:00 and working left toward the target needle at 5:00.

Count to make sure the number of bars you have left to hang matches the number of needles you have left. If you need to double up, do so near one of the target marks.



Finish hanging the bars, making sure you didn't skip any.

Remove the top ravel cord by finding the cord on the 9:00 side with the longer end and pull to remove it from the sock machine. Use your other hand to apply counter pressure to the needles. The ravel cord should easily separate the sock toe from the waste yarn and setup bonnet.



The bottom ravel cord does not always pull free quite as easily. Therefore, start at 9:00 and use your loom tool to pull the cord free from each needle one at a time. This is very quick and easy to do. Remember that pulling the needle forward will make it easier to insert the tool into the ravel cord stitch.



Even with this extra step, this process is much faster and results in a neater sock than non-ravel cord methods, or having to Kitchener the toe closed on a cuff-down sock.

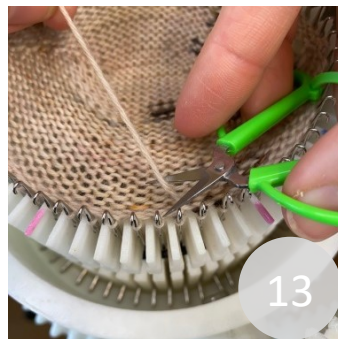
Remove the setup bonnet. Make sure all the stitches are above the latches and the latches are tucked into the stitches.



10 Take the tail of your sock yarn and weave it around the needles going counter-clockwise around the cylinder toward 6:00.

11 Lay any extra tail in the middle of the sock and place your heaviest weight on top (we use 2.5 - 3 pounds here.)

12 **READ CAREFULLY:** Crank around (clockwise) one time until the halfway mark returns to 3:00. Go very slowly and watch every stitch to make sure it knits. In particular, watch that the stitches fall below the needles when the needles rise up between the V-cams at 12:00; if the stitches are too tight they may stay above the latches and you'll need to push them down by hand before they reach 1:00 where the yarn feeds into the latch hooks. (You want the stitches to be at the base of the needles like they look in the photo.) Note the tension is very important for this row and should be managed by hand; think more about removing slack than maintaining tension because you don't want these stitches to be too tight. You do want the tension to match the very first toe row cranked.



13 After completing the first row, remove the soft weight and check that all stitches knit as they should have; repair any that were skipped. Trim the tail yarn.

Replace your soft weight (you may want to continue with the heavier weight here; we use 2.5 pounds.)

Turn on the row counter and reset it to zero.

# FOOT

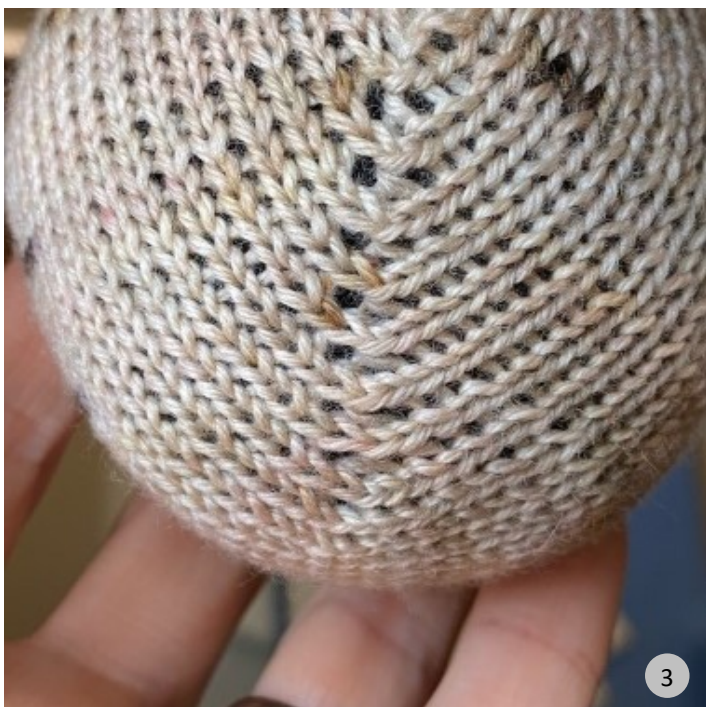


Crank the number of foot rows you calculated in the “A Perfect Fit” section on pages 3 - 6. If you didn’t calculate the number, crank 55 rows for a trial.



Complete the last row and then crank until the main mark is at 3:00.

Remove the weight from inside your sock. Attach the cable ring near the top of the tube; make sure it’s centered. Replace the soft weight. (We use 1.5 pounds here; sometimes the heavier weight creates loose stitches near the heels, which you don’t want.)



Note: You can peek here and make sure the toe looks good before continuing.

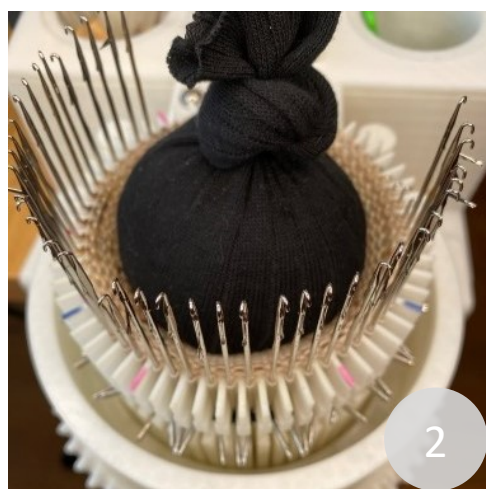
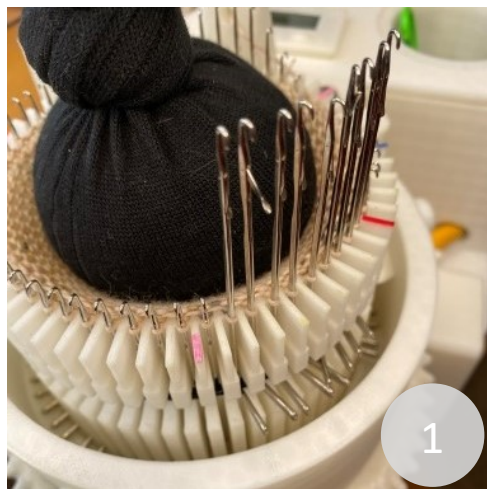
# WEDGE HEEL



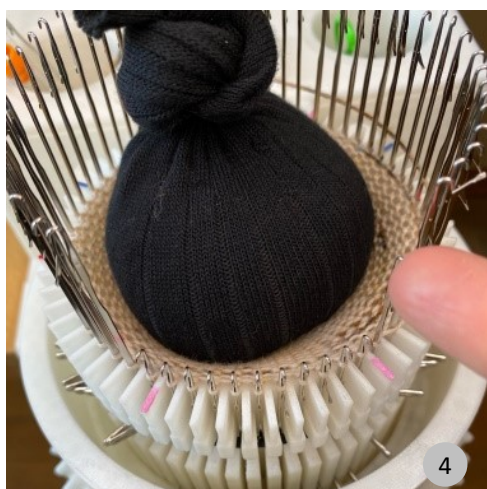
## SETTING YOU UP FOR SUCCESS

Next you will be knitting three wedge sections to make the heel. For all three, start with the next section of the pattern titled “Steps for All Three Wedges.” After that, for the first two wedges proceed to the “Final Steps for the First and Second Wedges” section. For the third wedge, after once again completing the “Steps for All Three Wedges”, proceed to the “Final Steps for the Third Wedge” section.

## FOR ALL THREE WEDGES



- 1 Start with second needle right of the target mark at 5:00. Raise that and all the needles until the main mark at 3:00.
- 2 Crank halfway around (until the main mark is at 9:00) and **STOP**. Raise all the needles along the bottom half of the cylinder between the last raised needle and the halfway mark at 3:00.
- 3 Crank the rest of the way around (until the main mark is at 3:00) and **STOP**. Raise the remaining needles between the halfway mark (at 9:00) through the second needle left of the target section at 7:00. At this point the yarn should be at 5:00. All the needles should be raised except those between the target marks between 7:00 and 5:00 plus one more on each side of those marks.

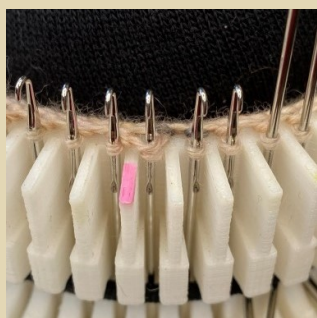


Lift the last needle worked (right beside the mark at 5:00) and crank one row counter-clockwise.

Note: From here, you will continue alternating between cranking counter-clockwise and clockwise, every other row. As with the toe, you'll need to remove the slack from the yarn and adjust the tension by hand.

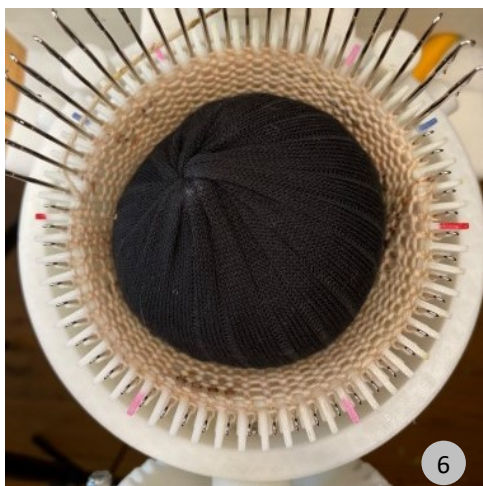


**READ CAREFULLY:** Lift one needle (immediately to the left of the mark at 7:00) AND push down the lifted three needles immediately to the right of the 5:00 mark, tucking in the latches. Crank around.

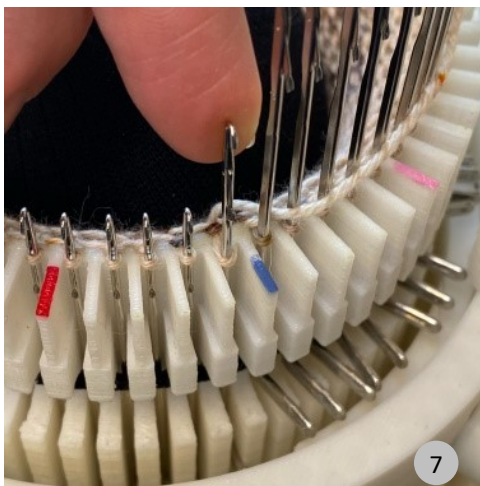


## TIP

Not sure if you pushed down the three needles? The needle you lifted on the last row will have two stitches; that's the needle immediately to the right of the pink mark in the example photo. There should be two pushed down needles (each with only a single stitch) in between the needle with two stitches and the next lifted needle. This example photo shows how it should look after you push down the needles and tuck the latches.



Add heel forks. Continue lifting one needle (the last needle worked with the working yarn attached) and lowering three (on the other side) until you reach the first wedge heel target; you will have just pushed down the last needles near the mark at 2:00. Push down fewer than three needles if necessary but do not go past the wedge heel target. Crank around. (The photo shows how it looks before cranking.)



**READ CAREFULLY:** Lift one needle (near the 2:00 wedge heel mark) AND wrap the first out-of-work needle beside it. Push down three needles on the other side (or fewer if necessary to not go past the wedge heel mark near 10:00) and crank around.



**READ CAREFULLY:** Lift one needle (near 10:00) and wrap the first out-of-work needle beside it. Crank halfway around (clockwise) until the halfway mark is at 3:00 and **STOP**. (The photo shows how it looks after cranking this row.)





Push down all raised needles, tucking in the latches. Where you did the wrap, the yarn will loop around two needles, which is correct even though it looks wrong. (Make sure the soft weight is in place before continuing.)



Crank one full row (clockwise) until the halfway mark is back at 3:00.

## FOR FIRST AND SECOND WEDGES



Crank another half row until the halfway mark is at 9:00 and **STOP**.

Adjust heel forks.

Repeat the “Steps for All Three Wedges” section above.

## FOR THE THIRD WEDGE



Crank another full row until the halfway mark returns to 3:00.

Remove heel forks.

Move cable ring up on the sock as close to the top as possible and replace the soft weight (we use 1.5 pounds here.)

Reset the row counter to zero.

# LEG



The next step is to crank the leg rows, typically 50 to 100 rows as you would like. (We prefer 100 rows for a mid-calf sock that can be worn up or bunched around the ankles.)



**OPTIONAL:** You can lower the V-cams to make the socks wider at the part that will be worn higher up on the calf. Be sure to note at which row you changed the height and by how many turns of the top knob. It will be very important to return your V-cam to the original height before starting the second sock of the pair, and also to adjust the tension on the leg of the second sock by the same amount as the first.



Finish the last row, then crank until the main mark is at 9:00. Reset the row counter to zero.



Note: You can peek here and make sure the heel looks good before continuing.

# CUFF

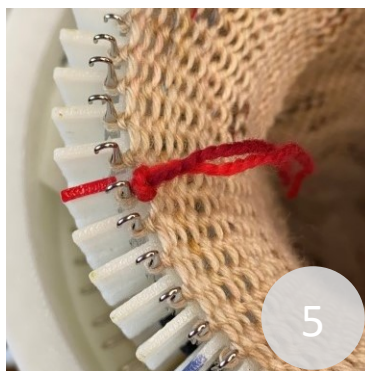
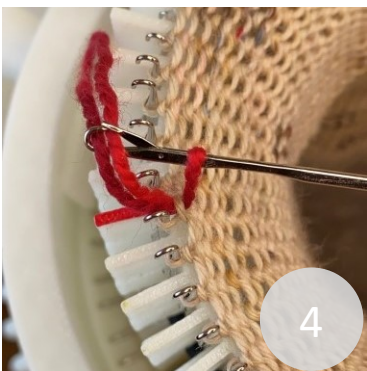
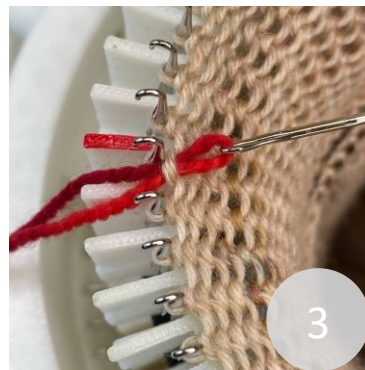
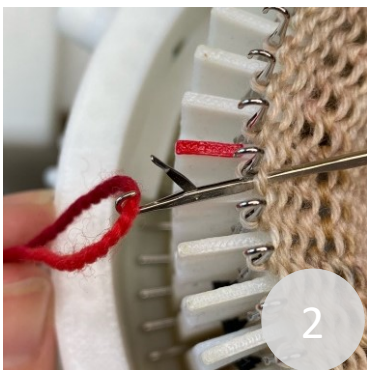
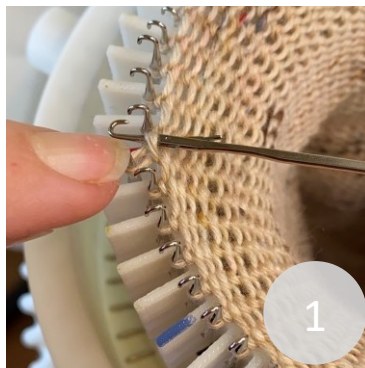


## TIP

Again, you may want to loosen your tension here depending on how tight you like the cuff at the top of the sock to be. Remember to make note of the number of turns of the top knob so you can do the same on the second sock of the pair. We do not adjust our V-cams here, but it's an option.

## ADD SCRAP YARN

Start by removing the soft weight and cable ring.



- 1 To make it easier to hang the hem, mark the stitch on the needle immediately to the right of each mark except the two wedge heel target marks; in total, you will be marking six stitches.

Start with the needle immediately to the right of the main mark at 9:00. Insert the latch tool into the bar at the back of the needle.

- 2 Push the tool forward until the bar is under the latch.

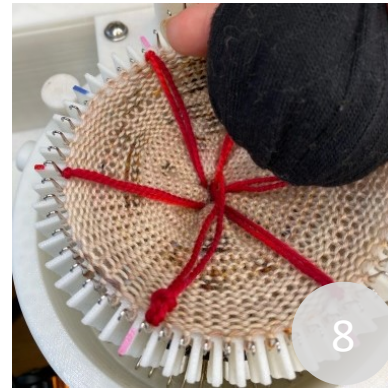
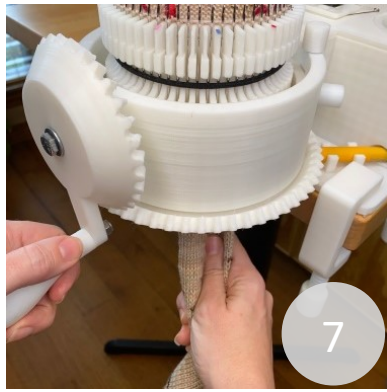
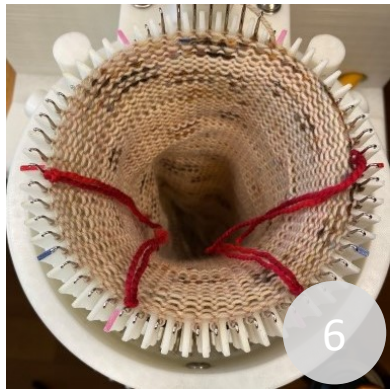
With the latch open, fold a piece of scrap yarn in half and lay the loop around the tip of the needle.

- 3 Pull the tool back and through the bar to pull up a loop.

- 4 Push the tool forward again until the scrap yarn loop is below the latch. Lay the ends of the scrap yarn over the tip of the tool and again pull through.

- 5 You will have made a slip knot around the bar.

**Note:** You may want to use a contrasting color for the scrap yarn by the main mark so it is easy to spot later.



- 6 Repeat for the needles immediately to the right of the targets at 7:00 and 5:00, and the halfway mark.
- 7 **READ CAREFULLY** : Turn the cylinder halfway until the halfway mark is at 9:00 and **STOP**. You will need to pull down on the bottom of the sock as you crank because the sock does not have a weight.
- 8 Mark the needles one to the right of the targets at 7:00 and 5:00. You should now have 6 pieces of scrap yarn marking your cylinder.
- 9 Add the cable ring and soft weight (we use 1.5 pounds.) Reset the row counter to zero and crank 30 rows. Stop with the main mark at 9:00. Remove the weight and cable ring. Turn off the row counter.

## HANG THE HEM

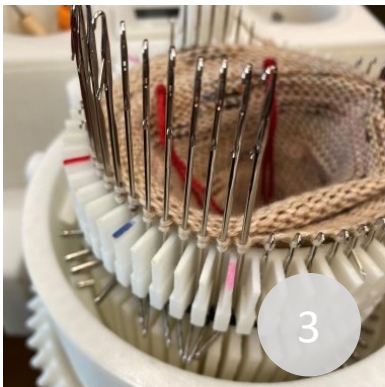


- 1 Pick up the end of the scrap loop you added for the needle to the right of the main mark at 9:00 and use it to hang that bar over the needle. The needle to the right of the main mark will now have 2 stitches.

Repeat the process to hang the loops for the next 3 marks, ending with the halfway mark at 3:00.



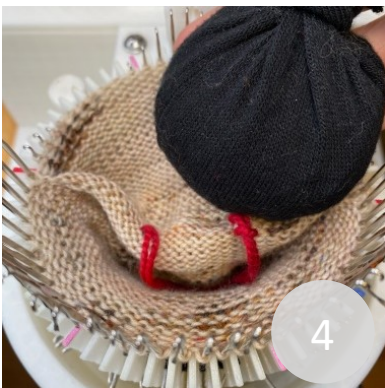
- 2 Return to the main mark at 9:00. Pick up the bar of the stitch to the right of the one that was hung over the needle; hang it on the next needle. Be careful when picking up the bar - sometimes as you pull on one to hang it over the needle, the one beside it disappears. And be careful to get them all from the same row; you should be able to tell if you stayed in a straight line when you get to the next hung stitch with the scrap yarn. The blue arrows in the photos point to the bars to be picked up.



- 3 Repeat hanging each bar needles along the bottom of the cylinder between the main mark and the target mark at 7:00. Once they have all been hung, remove the scrap yarn and lift each of those needles up and out of work, as shown in the photo.

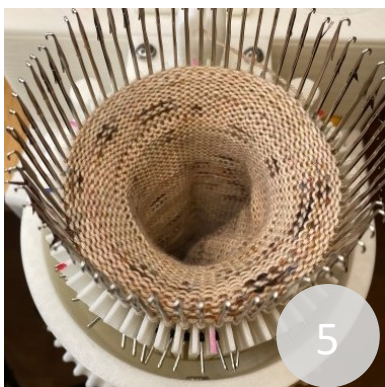
Repeat for the other sections until reaching the halfway mark at 3:00.

Make sure the needles between the main mark and halfway mark have two stitches, the needles are lifted, and the scrap yarn pieces have been removed.



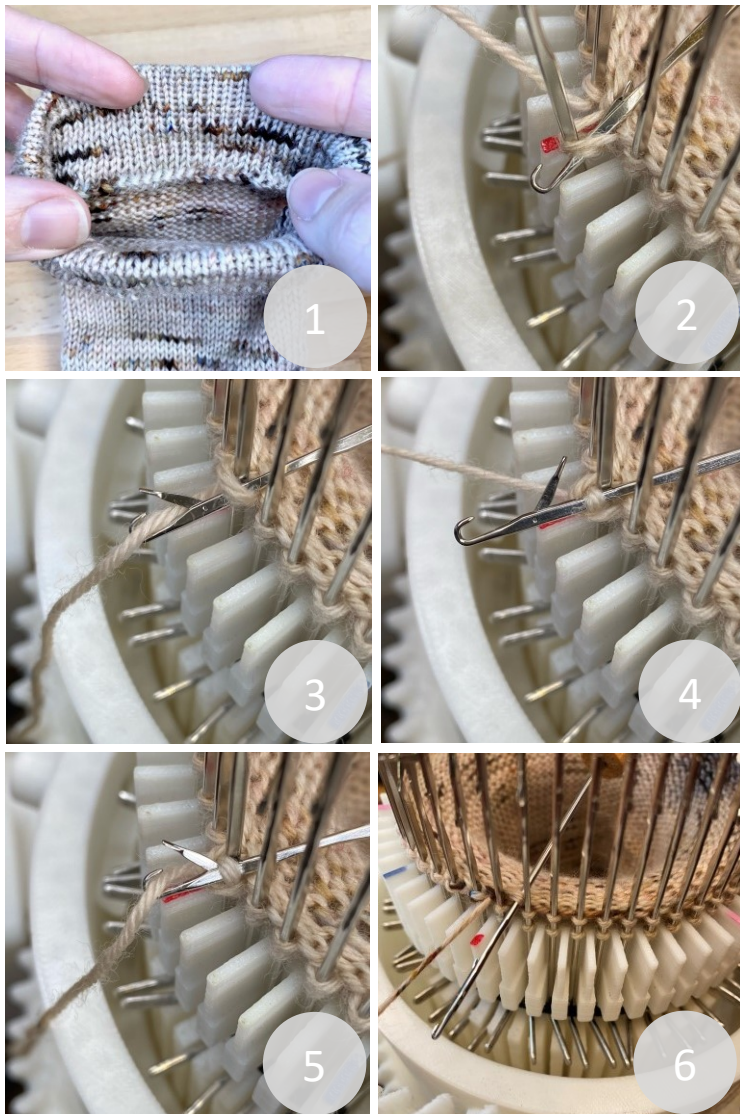
- 4 Return the weight to the sock (you won't need the cable ring.) Crank halfway around until the halfway mark is at 9:00 and **STOP**.

Remove the weight.



- 5 Hang the last of the bars and lift the last of the needles out of work. Make sure each needle between the main mark and halfway mark each have two stitches and the needles are lifted.

# BIND OFF



- 1 This photo shows the finished hem. To start, turn the cylinder until the needle with the yarn attached to it (near the main mark) is in a convenient location to do a latch tool bind off.
- 2 For the first needle to the right of the one with the yarn attached, insert the latch tool from the top down through both stitches on the needle. (Your hand holding the latch tool will be in the center of the cylinder.) Go in on the right side of the needle holding the stitches.
- 3 Push the tool forward until both stitches are below the latch. With the latch open, grab the working yarn in the top part of the hook and pull through both stitches to create a loop.
- 4 Push the latch tool forward until the new loop is below the latch. Pull the yarn gently to remove slack but not too tight.
- 5 Grab the working yarn in the top part of the hook and pull through the stitch to create another loop.

That completes the bind off for the first needle. You don't want to pull the stitches too tight because that will prevent the cuff from stretching but you also don't want the stitches to be so loose the yarn is gapping.

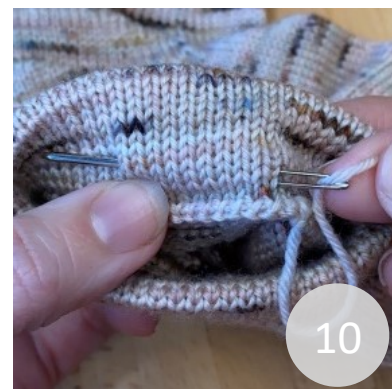
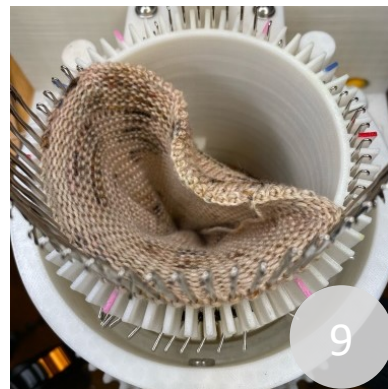
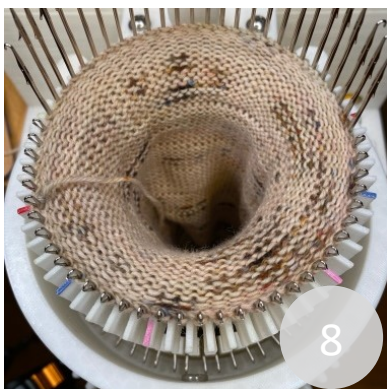
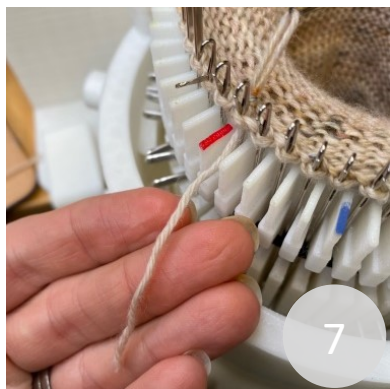
- 6 To start the next stitch, take the latch tool back behind and to the right side of the next needle to be bound off. The working yarn stays in front and left of the needle. By always starting each bind off to the right of the needle, your stitches will be even all around the cylinder.

Bind off the rest of the needles, turning the cylinder as necessary.



## TIP

Beginning with the second needle and for all the remaining needles, after you insert your latch tool into the two stitches, check that there are three stitches on the latch tool. On the first part of the bind off (step 3 above) you'll get yarn and pull through all three of those stitches. On the next part (step 5 above), you'll get yarn pull through just one stitch. Wait until you insert the latch tool into the stitches for the next needle before removing the slack from the second loop you pulled up.



- 7 Once all needles have been bound off, repeat all bind off steps for the stitches on the first needle (immediately right of the main mark,) and cut the yarn leaving 6" of tail. Grab the yarn with the latch tool and pull back with the tool until you've pulled the tail all the way through the last stitch.
- 8 Push down all the needles in the lower half of the cylinder; no need to tuck in the latches.
- 9 Pull firmly on the bottom of the sock to remove it from the needles while cranking halfway around. Push down the rest of the needles and finish cranking to remove the sock.
- 10 Use a darning needle to feed the tail yarn into the gap made by the hung hem. Cut off the extra yarn.

## REPEAT



### ON TO SOCK TWO

That's one sock completely finished! Repeat all the steps to make a second sock, remembering to reset the V-cams if you adjusted them for the leg and/or hem.

**Share Your Photos!** We would love to see photos of your finished socks and hope you'll share them with us on social media! We'll be sure to see them if you tag us (Dean and Bean's Sock Machines on Facebook or DeanandBeanCSM on Instagram.)

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