



Classic Crew Socks

Any Size Foot, Any Size Yarn

Size: May be adapted to any size foot; see following directions.

Yarn: Any yarn may be used. Wool and wool-blends are recommended for socks. To knit a pair of M - L women's crew socks, you will need about 6 oz. of knitting worsted-weight yarn. Lighter yarn requires slightly less, heavier yarn a little more, depending on size of sock. Plan on 8 oz. for Lg men's; as little as 2-3 oz. for children.

Needles: Set of four double-pointed needles a size or two smaller than usual for you for the thickness of yarn you have chosen. Socks wear better if they are knitted tightly. Pattern is written for four DP needles; many other techniques exist today: 5 DP needles, two circular needles, or one long circular needle. Pattern may be adapted with experience. SUGGESTED needle sizes for different weights of yarn are listed in the gauge swatch instructions; these will vary depending on how tightly or loosely you knit. For tips on working with double-pointed needles, see next page.

Abbreviations and Special Stitches:

K = Knit

P = Purl

st or sts = stitch or stitches

rep = repeat

Sl = *Slip*: Insert the point of the right needle into the next stitch as if to purl and transfer it from the left needle to the right needle without working it.

K2tog = *Knit two together*: Knit the next two stitches together as if they were one. This decrease slants to the right.

SSK = *Slip, Slip, Knit*: Slip the next two stitches, ONE AT A TIME AS IF TO KNIT, then insert the point of the left-hand needle from left to right into the front loops and knit them together through the back loops. This decrease slants to the left.

P2tog = *Purl two together*: Purl the next two stitches together as if they were one.

Gauge Swatch

The most accurate way to knit a gauge swatch for circular knitting is by knitting it in the round, just like the sock (this gives you practice with DP needles too!). If you're REAL-ly sure about the yarn you're using, it may be possible to skip the circular swatch; but if you want your sock to fit well I recommend this step. The swatch will be washed, then cut open for easier measuring.

Below are minimum numbers of stitches for each yarn size; the larger the swatch, the more accurate the stitch and row gauge will be. CAUTION: some American and

Parts of a Sock



MM needle size equivalents vary depending on brand. Be sure you use the same needles for the swatch and the sock.

Bulky Yarn: #8 - #10 needles, 24 sts.

Heavy Knitting Worsted: #6 - #8 needles, 28 sts.

Knitting Worsted: #4 - #6 needles, 32 sts.

Sport Weight: #3 - #5 needles, 36 sts.

Fingering or Sock Weight: #0 - #2 needles, 40 sts.

Cast on 24-40 sts or more depending on yarn. Divide them onto three needles. Join, taking care not to let the cast-on row twist or spiral around the needles. The yarn tail will mark the beginning and end of the round.

Knit several rounds in Garter St (K 1 row, P 1 row in circular knitting) to help keep the edges from curling. Continue knitting every round until the stockinette portion measures 5". Knit several more rounds in Garter Stitch and bind off. Wash the swatch as you plan to wash the socks. Cut the swatch vertically where you have marked the beginning and end of the round.

Lay the swatch flat. In the center of the stockinette portion, measure 4" and count the number of stitches to the nearest half-stitch. Divide this number by 4 (use 2 decimal places) and write the number on line (A) on Pg.2.

Measure the stockinette portion vertically and count the number of rows to the nearest half-row. Note the numbers: _____ rows in _____ inches. Divide the first number by the second and note the result on line (B) on Pg. 2.

Tech Tip - Starting and using double-pointed needles

Double-pointed needles come in sets of four or five (which type you use is entirely a matter of personal preference) and are used to knit seamless tubes too small for circular needles, such as socks or sleeve cuffs. (NOTE: this pattern is written for 4 needles) The knitting is divided onto three (or four) needles, making a triangle (or square), and the knitting is done onto the fourth (or fifth) needle. You are still only knitting with two needles at a time, and you are always on the right side of the fabric.

It is easiest to cast all the stitches onto one needle and then slip some of them onto the other two (or three) needles. It is not necessary to have exactly the same number of stitches on each needle; often it is more convenient or necessary to divide them differently. Before you join the work into a circle, MAKE SURE that the cast on row does not twist or spiral around the needles. It may help to lay the knitting down on a table and straighten out the cast-on row.

To begin knitting, the needle with the working yarn is on the right-hand side; with the empty needle knit the first stitch cast on (which is on the needle in the left hand). The working yarn crosses the gap and closes the triangle (or square) of needles. The first stitch is awkward since you have to support both the needle on the right-hand side with the stitches and the empty needle you are knitting with; once you have knitted the first stitch, everything hangs together. Pull this first stitch snug. Keep knitting across the first needle to the left of the join, which is marked by the starting tail from the cast on. When all the stitches have been worked, transfer the now-empty needle from the left hand to the right hand, turn your work toward the right, and begin knitting off the next needle around the triangle (or square). One round or row is complete when you have come back around to the tail.

Be aware that you are knitting around a tube. Most people find it more comfortable to knit on the outside of the tube, but many seem naturally to knit on the inside. As you knit, notice which you are doing. At first it can be hard to visualize this, since you don't see a tube until you have knitted several rows. If you knit on the outside, the needles that are not being used will be pointing away from you, behind the working needles. If you knit on the inside, they will be in front between you and your hands, and the right side of the fabric will be on the inside of the tube. Following some written patterns may be trickier if you choose to knit this way, because you are knitting "inside-out".

Note that in circular knitting, Stockinette Stitch is made by knitting every row (as opposed to Knit 1 row, Purl 1 row in back-and-forth knitting) and Garter Stitch is Knit 1 row, Purl 1 row (in back-and-forth knitting, Knit every row).

Foot Measurements

Now measure the foot you are knitting for and insert these measurements into the list below:

Ankle Measurement: Measure around the narrowest part of the ankle (C).

Foot Length: Stand on a sheet of paper and draw a line at the back of the heel (slanting the pencil under the heel) and at the longest toe. The distance between the lines is the foot length (D).

Custom Sock Calculator

Note: You may photocopy this page to use for different yarns and different feet, leaving the pattern itself blank.

Fill in the rest of the blanks below (a calculator will help) and transfer them to corresponding lettered blanks in the pattern (some are in more than one place).

Stitches per inch = _____(A)

Rows per inch = _____(B)

Ankle Measurement = _____(C)

Foot Length = _____(D)

(A) x (C) rounded to the nearest multiple of four = _____(E)

The number of ankle sts. If the number is near the middle of the multiple, round down.

(E) + 4 = _____(F) The number to cast on.

(E) ÷ 2 = _____(G) The number of heel sts.

(G) ÷ 6 rounded to the nearest whole number = _____(H)

The heel shaping begins with the center third of the heel sts. (H) is the number of sts to knit past the center.

(G) ÷ 2, rounded to an even number = _____(I)

The toe is decreased down to half the width of the sock. If (I) is odd, round to an even number: up for shorter, wider toes; down for longer, narrower toes.

(I) ÷ (B) rounded to the nearest ¼ inch = _____(J)

Find the approximate toe length in inches by dividing the number of decrease rows (I) by the rows per inch (B).

Round this number to the nearest ¼ inch.

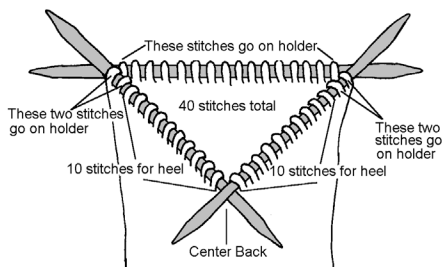
(D) - (J) = _____(L)

The approximate number of inches to knit from the back of the heel to the start of the toe shaping.

Cuff

Cast on (F) _____ sts. Divide onto 3 double-pointed needles with a multiple of 4 on each needle (not necessarily the same number on all 3 needles). The join is the center back of sock. K2, P2 rib on every round for desired cuff length. End at center back. **Decrease row:** Knit around, decreasing 4 sts (K2tog 4 times) evenly spaced around. You should now have a total of (E) _____ sts.

Divide for heel



Place a marker on the needle and knit past it for (G÷2) _____ sts (there will be an extra row on the sts past the marker). Place next (G) _____ sts at front of sock on a

holder without working them (a string pulled through sts and tied in a loop is easier to work with than a rigid holder). Transfer the rest of the sts to one needle: (G) _____ sts with the center back marker in the middle.

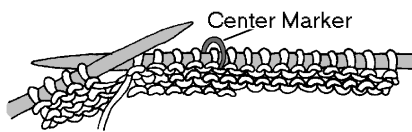
Working with 2 needles (a firmer heel can be made by switching to needles one size smaller), and **beginning with a purl row**, work heel back and forth:

Row 1: K 1, P to the last st, K 1.

Row 2: K across.

Repeat Rows 1 & 2 until heel flap reaches the point where the heel begins to curve under, usually about half the width of the flap (try on the sock to check). Stop at the end of a knit row.

Heel shaping



Row 1: K 1, P to the center marker, Purl (H) _____ sts past center marker, P2tog, P 1.

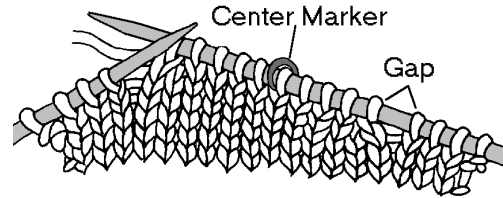
Turn. This will not be the end of the row - you are making "short rows". When you turn it will be just like starting a new row except there will be sts already on the right-hand needle (Figure shows first row BEFORE turning).

Row 2: Sl 1, knit to the center marker, K (H) _____ sts past center marker, SSK, K 1. Turn.

Row 3: Sl 1, P to the center marker, P (H)+1 _____ sts past marker, P2tog, P 1. Turn.

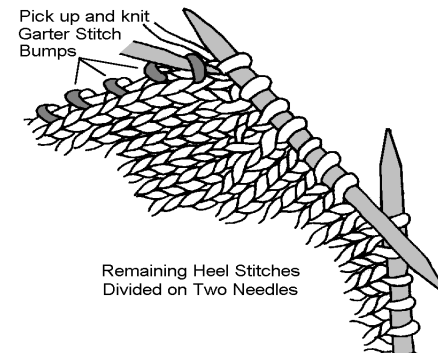
Row 4: Sl 1, K to the center marker, K (H)+1 _____ sts past marker, SSK, K 1. Turn.

If on Rows 3 & 4 you did not use up all the sts on the left-hand needle, repeat rows 3 & 4, working one stitch further past center on each pair of rows until all sts have been used up. Your last row (the knit row) may end with the SSK, or the K1, depending on how many sts you started with. If you forget how many sts past the center to go on a row, remember that the two sts you knit or purl together are on either side of the gap made when you turned before the end of the row



(See Fig). Stop at the end of the knit row on which all the sts on the left needle are knitted up.

Instep



Switch back to larger needles, if you used a smaller one for the heel. Divide the remaining heel sts onto two needles. **Note the number on each needle** _____. You will now be going back into circular knitting. With the

right side of the heel facing you, and beginning where the yarn strand you have been knitting with is, pick up and knit each garter stitch "bump" along the side of the heel (one stitch for every two rows of heel). Use an empty needle to pick up and knit onto the needle with half the heel sts. At the corner between the heel flap and instep sts, pick up an extra stitch to avoid a hole **Note the number of stitches picked up** _____. The total number on this needle will be the number you picked plus half the heel sts, noted earlier.

Pick up a new needle and knit the instep sts off of the holder.

With the fourth needle and using the needle with the other half of the heel sts for picking up, pick up and knit a stitch in the corner between the instep sts and the other side of the heel flap, then the same number of garter stitch bumps on the other side of heel; knit to center back (the center of the heel flap).

Stitches should be divided on three needles as follows: **Needle 1** holds half of the heel sts and picked up sts. **Needle 2** holds (G) _____ instep sts that were on holder. **Needle 3** holds picked up sts and half of the heel sts. Needles 1 and 3 should have the same number of sts.

Instep shaping

Row 1: Needle 1: K to last 3 sts, K 2 together, K 1.
Needle 2: K across.
Needle 3: K 1, SSK, K across.

Row 2: K around.

Repeat these two rows. The number of sts on needles 1 & 3 will decrease; the number on needle 2 will remain the same. Continue until there are a total of (E) _____ sts: (G) _____ on needle 2 and half that number on each of the other two.

Because it can be hard to remember whether you are on a decrease row or a plain row in circular knitting, it is helpful to note which row you just finished by checking the appropriate row below; you should have the same number of each:

Decrease Row

Plain Row

Foot

Knit even until the foot is (L) _____ inches. Measure when you have all four needles in the sock and can fold it flat (as in the photo on the first page). Measure along the side of the sock from the back of the heel. This measurement is very rough. If the foot is very wide or narrow you may need more or less length here. Try the sock on as you get near the toe and decide when you are about (J) _____ inches from the end.

Toe shaping

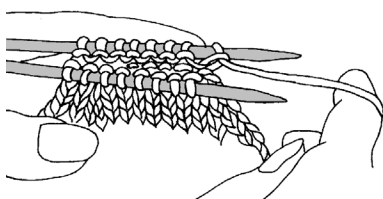
Row 1: Needle 1: K to last 3 sts, K2tog, K 1.
Needle 2: K 1, SSK, K to last 3 sts, K2tog, K 1.
Needle 3: K 1, SSK, K to end of needle.

Note: The decrease at the beginning of a needle is always SSK; the decrease at the end of a needle is always K2tog.

Row 2: K around.

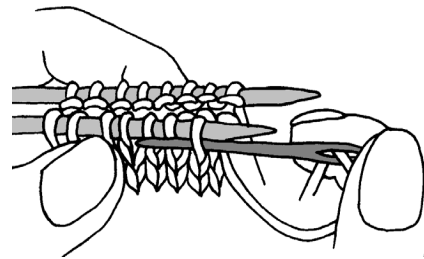
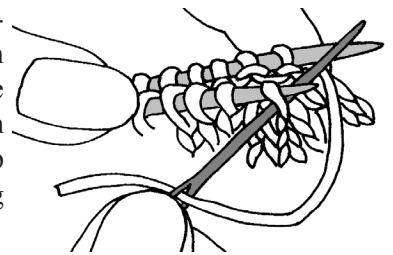
Repeat these two rows until there are (I) _____ sts on needle 2 and half this number on each of the other two needles, ending with Row 1. Knit the sts on Needle 1 onto Needle 3. You now have (I) _____ sts on each of two needles.

Graft the Toe



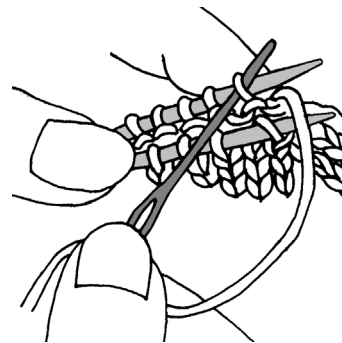
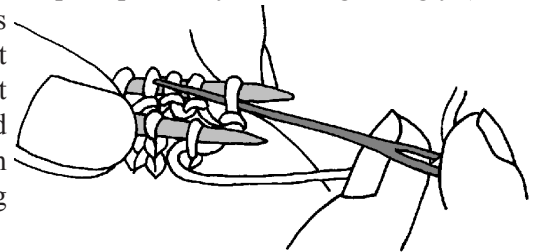
Break the yarn, leaving a 15" tail. Thread the tail into a blunt tapestry needle. Hold so that the tail is at the right end of the back knitting needle.

1. *Insert the tapestry needle into the first stitch on the front knitting needle as if to knit, pull the yarn through snugly, and drop the stitch off the knitting needle.



2. Insert the tapestry needle into the next stitch on the front knitting needle as if to purl, pull the yarn through as before, but leave the stitch on the knitting needle.

3. Insert tapestry needle into the first stitch on the back knitting needle as if to purl, pull the yarn through snugly (making sure it goes under the point of the front needle), and drop the stitch off the knitting needle.



4. Insert the tapestry needle into the next stitch on the back knitting needle as if to knit, pull the yarn through, but leave the stitch on the knitting needle.*

Repeat from * to * (Steps 1 to 4), pulling the sts snugly, until there is one stitch left on each needle. Insert the tapestry needle into the stitch on the front needle as if to knit, pull the yarn through and drop it off the needle. Insert the tapestry needle into the stitch on the remaining needle as if to purl, pull the yarn through and drop it off the needle.

Pass the needle to the inside of the sock and turn the sock inside out. Weave the end in on the bottom of the toe and cut it off. Weave in the tail at beginning of sock.