



Hat Designer

Your own yarn, size and style

Step 1: YARN. Pick your yarn. Any yarn will work.

A large, heavy hat with a color pattern usually weighs 6 ounces (150 grams) or less; smaller hats with finer yarn and a plain design can weigh as little as 2 or 3 ounces (less than 100 gms).

Hats are a good way to use up small amounts of leftover yarn; several strands of different yarns can be knitted together to make a heavier yarn (a great way to create unique colors). If you use different yarns to make stripes, on the other hand, just be sure that all the yarns you use in one hat are of a similar weight (several strands of thinner yarns can be knitted together to combine with thicker yarns).

Step 2: NEEDLES. Decide what size needles are appropriate for your yarn. There are often suggested needle sizes on yarn labels. If there are not, or if you are combining multiple strands of yarn, you will have to guess about needle size, and possibly do several gauge swatches (See Step 4 below) to get a fabric you like.

For the hat you will need a 16" long circular needle (20" for heavier yarns and larger sizes) and a set of double-pointed needles in your chosen size. For the cuff, you will need a 16" or 20" circular needle two sizes smaller (this isn't ABSOLUTELY required, but hats fit better if the cuff is a little snugger).

Step 3: PICK A DESIGN. Hats may be knitted plain, or with an infinite number of stitch and color patterns. A number of simple knit-and-purl stitch patterns, and slip-stitch color patterns, are shown on pages 3 and 4. These are just to get you started being creative! There are many other stitch and color patterns available. Barbara Walker's four books of knitting patterns, published by Schoolhouse Press and Harmony Guides Knitting Stitches, published by Collins and Brown, are wonderful sources. Your local library can also be a rich resource for pattern books. Fair Isle and intarsia patterns may also be used.

Whichever pattern you choose, use it to knit your gauge swatch, and take the stitch pattern multiple into consideration when planning your hat.

For the directions below, plain stockinette is used for the top decreases. The stitch patterns included are fairly small pattern repeats and written for knitting in the round; if you choose a pattern from another source, note that most are written for knitting back and forth and will need to be adapted (since in circular knitting you are never on the "wrong" side). Also be aware that



Back Row: Plain Stockinette with rolled cuff; SlipStitch Color Band Pattern with 2X2 rib cuff.

Front Row: All-over Knit-Purl pattern with rolled cuff; Knit-Purl Band Pattern with 1X1 rib cuff; All-over Slip Stitch Color pattern with folded 2X2 rib cuff.

the larger the pattern repeat, the harder it may be to adapt the pattern to a certain gauge and hat size, unless it happens to be just the right multiple.

Step 4: GAUGE SWATCH. Do not skip this step - this is the key to designing your own garments! With your chosen yarn and needles, cast on enough stitches to give you about 5 inches (13cm). If you have no idea what the approximate gauge for your yarn is, guess - the bigger the swatch the better. You want to be able to measure at least 4 inches (10 cm) in the center of the swatch (not right to the edges, so you need 5 or 6 inches). **If you choose to use a stitch pattern or color pattern, you must do your swatch in your chosen pattern, as different patterns can have different gauges for the same number of stitches.** Knit about 5-6 inches (13-15cm) then bind off. Wash your swatch or steam it lightly to relax the yarn and lay the swatch flat. Lay a ruler or tape measure across the center and count the stitches in 4 inches (10cm). If the stitches are very hard to count because of the yarn or stitch pattern, put pins vertically in the knitting at the zero and 4-inch marks; then you can move and stretch the knitting to count stitches while still having the 4 inches marked. Count half-stitches and even quarter-stitches if your yarn is heavy. Divide this number by 4. This is your GAUGE and will be used to find the number of stitches to cast on for your hat.

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Step 5: HAT SIZE: Head sizes vary enormously and some adults can have heads smaller than some children, since children's heads have mostly stopped growing by about 6 years old. IF POSSIBLE, measure the head you are knitting for! If you can't, figure roughly as follows: XLarge adult 24 - 26", Large adult 23 - 24", Medium adult 22 - 23", Small adult / Large child 20 - 22", Medium child 18 - 20", Small child 16 - 18", Infant 14 - 16".

Step 6: FIGURING THE NUMBER OF STITCHES TO CAST ON. Multiply your gauge by the head size, and round this number **down** to the nearest whole number. This is your Basic Number.

Decide if you want a rolled brim or a ribbed brim; if ribbed, decide if you want Knit 1, Purl 1 ribbing or Knit 2, Purl 2 ribbing.

If you are knitting a plain stockinette hat, cast on with the smaller needle:

- ▶ For a rolled brim, use your Basic Number.
- ▶ For a K1, P1 cuff, round the Basic Number **down** to the nearest even number.
- ▶ For a K2, P2 cuff, round **down** to the nearest multiple of four.

These stitches will be added back in at the end of the cuff.

If you are using a pattern, round your basic number to the nearest multiple for your chosen pattern. This is your Body Number. Using the smaller needle, cast on:

- ▶ For a rolled brim, cast on the Body Number.
- ▶ For a K1, P1 cuff, round the Body Number **down** to the nearest even number.
- ▶ For a K2, P2 cuff, round the Body Number **down** to the nearest multiple of four.

These stitches will be added back in at the end of the cuff.

Step 7: BODY OF HAT: Cast on number calculated above. Before you join the work into a circle, MAKE SURE that the cast on row does not twist or spiral around the needle. If you have a lot of stitches, it may help to lay the knitting down on a table and straighten out the cast-on row. Mark the beginning and ending of the round by placing a marker next to the last stitch cast on. Hold this needle tip in your right hand and the other tip with the first stitch cast on in your left hand. Knit this first stitch by carrying the working yarn across the gap from the right-hand needle and pulling the stitch snugly, thus closing the circle. When you come back to the marker, you have completed one row or round; slip the marker from one needle to the other to continue to mark the place.

For a rolled cuff, knit every round for about 2" (the cuff will roll up naturally; unroll it to measure).

For a 1 x 1 rib: *Knit 1, Purl 1*; repeat from * to * around.

For a 2 x 2 rib: *Knit 2, Purl 2*; repeat from * to * around.

Repeat this round until cuff is desired length. For a folded cuff, double the length.

Change to larger needle on the next round.

If you rounded your Basic (for plain stockinette) or Body Number down for ribbing: Work one plain knit round, increasing whatever number of stitches you need to get your Basic or Body number. Do this by working a M1 increase (see Abbreviations, next page) fairly evenly spaced around. For example, if your Basic / Body Number is 95, and you cast on 92 sts for a Knit 2, Purl 2 rib, add three stitches on this row spaced about 30 stitch apart.

Begin your pattern, and continue until the hat is the desired length. This will range from about 5" for the smallest hat to 8 or 9" for the largest hat. Try on the hat if possible to judge length, or use the guideline below. If you are doing the rolled or folded brim, measure with the cuff rolled or folded up. XLarge adult 8½ - 9", Large adult 8 - 8½", Medium adult 7½ - 8", Small adult / Large child 7 - 7½", Medium child 6½ - 7", Small child 6 - 6½", Infant 5½ - 6". At this point, discontinue pattern if you are using one, and knit one round plain.

STEP 8: TOP DECREASES: Work top in stockinette (knit every round). You will now probably have to "fudge" to get the correct number of stitches to make the top decreases come out even. Look at the chart below; left column shows gauge in sts per inch, top row shows hat size in inches. Find the row with the gauge closest to the one at which you have been knitting. Look across that row and find the column with the nearest hat size. From that cell, find the next lower number to the number you now have on your needle in one of the 8 cells surrounding it. This is the number of stitches you need to start your top decreases. For example, your gauge is 3 ½ sts/inch, and you have 75 stitches on your needle for a hat of about 21 ½ inches. The junction of Row 3.5 and Column 22 is 77, which is higher than your stitch count. The closest lower number in the surrounding 8 cells is 72, in Row 3. Follow this row all the way to the right; the number in the last column is the Round Number where you will start your top decreases (for our example, you would start your decreases at Round 21, next page).

	14	16	18	20	22	24	26	
1.5	21	24	27	30	33	36	39	27
2	28	32	36	40	44	48	52	25
2.5	35	40	45	50	55	60	65	23
3	42	48	54	60	66	72	78	21
3.5	49	56	63	70	77	84	91	19
4	56	64	72	80	88	96	104	17
4.5	63	72	81	90	99	108	117	15
5	70	80	90	100	110	120	130	13
5.5	77	88	99	110	121	132	143	11
6	84	96	108	120	132	144	156	9
6.5	91	104	117	130	143	156	169	7
7	98	112	126	140	154	168	182	5
7.5	105	120	135	150	165	180	195	3
8	112	128	144	160	176	192	208	1

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Next Round: Knit, decreasing to the number chosen above. Do this by working SSK (see Abbreviations below) evenly spaced around. For the example above, you would have to take 3 stitches out by working SSK 3 times about 23 stitches apart. Knit one round plain.

Now begin the top decreases. Begin at the Round you figured previously and ignore the rows above it; they do not apply to your gauge and size.

Round 1: *K 14, K2Tog*; repeat from * to * around.
Round 2: Knit.
Round 3: *K 13, K2Tog*; repeat from * to * around.
Round 4: Knit.
Round 5: *K 12, K2Tog*; repeat from * to * around.
Round 6: Knit.
Round 7: *K 11, K2Tog*; repeat from * to * around.
Round 8: Knit.
Round 9: *K 10, K2Tog*; repeat from * to * around.
Round 10: Knit.
Round 11: *K 9, K2Tog*; repeat from * to * around.
Round 12: Knit.
Round 13: *K 8, K2Tog*; repeat from * to * around.
Round 14: Knit.
Round 15: *K 7, K2Tog*; repeat from * to * around.
Round 16: Knit.
Round 17: *K 6, K2Tog*; repeat from * to * around.
Round 18: Knit.
Round 19: *K 5, K2Tog*; repeat from * to * around.
Round 20: Knit.
Round 21: *K 4, K2Tog*; repeat from * to * around.
Round 22: Knit.
Round 23: *K3, K2Tog*; repeat from * to * around.
Round 24: Knit.
Round 25: *K2, K2Tog*; repeat from * to * around.
Round 26: Knit.

Round 27: *K1, K2Tog*; repeat from * to * around.

Round 28: Knit.

Round 29: *K2Tog*; repeat around.

If you have more than 7 stitches for heavier yarns, or 9 stitches for finer yarns, work Round 30.

Round 30: Repeat Round 29. If you ended up with an odd number of stitches on Round 29, knit the last stitch.

Break yarn and thread through remaining stitches. Pull circle of stitches closed and weave the end in on the inside of the hat. Weave in all other ends. Block hat by washing it or steaming it lightly.

Abbreviations:

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 makes a decrease that slants to the right.

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

M1 = Make 1 stitch: Insert the point of the left needle, from the back, under the running thread between the last stitch worked and the next stitch. Knit it as you would a normal stitch, putting a twist in the loop.

Stitch Patterns

Knit - Purl Band Patterns



Purled welts - any number of stitches

Purled welts are simply one or more rows of purling spaced apart by at least three rows of knitting. Here is a sample:

Row 1: Purl.	Rows 11, 12 & 13: Knit.
Rows 2, 3 & 4: Knit.	Rows 14 & 15: Purl.
Rows 5 & 6: Purl.	Rows 16, 17 & 18: Knit.
Rows 7, 8 & 9: Knit.	Row 19: Purl.
Row 10: Purl.	

Chevron - multiple of 6 sts

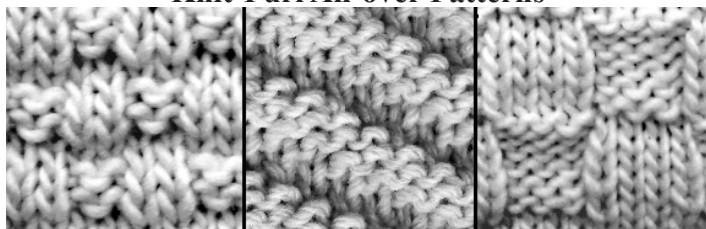
Row 1: Purl.
Row 2: Knit.
Row 3: *K5, P1*; rep from * to * around.
Row 4: P1, *K3, P3*; rep from * to * around, end last rep P2.
Row 5: *P2, K1*; rep from * to * around.

Row 6: K1, *P3, K3*; rep from * to * around, end last rep K2.
Row 7: K2, *P1, K5*; rep from * to * around, end last rep K3.
Rows 8 - 12: Rep Rows 3 - 7.
Row 13: Knit.
Row 14: Purl.

Welled Leaf - Multiple of 8 stitches

Row 1: Purl.
Row 2: Knit.
Row 3: *P4, K4*; rep from * to * around.
Row 4: P3, *K4, P4*; rep from * to * around, end last rep P1.
Row 5: P2, *K4, P4*; rep from * to * around, end last rep P1.
Row 6: P1, *K4, P4*; rep from * to * around, end last rep P3.
Row 7: *K4, P4*; rep from * to * around.
Row 8: *P4, K4*; rep from * to * around.
Row 9: K1, *P4, K4*; rep from * to * around, end last rep K3.
Row 10: K2, *P4, K4*; rep from * to * around, end last rep K2.
Row 11: K3, *P4, K4*; rep from * to * around, end last rep K1.
Row 12: *K4, P4*; rep from * to * around.
Row 13: Knit.
Row 14: Purl.

Knit-Purl All-over Patterns



Woven St - Multiple of 4 stitches

Rows 1 & 2: Knit.
 Rows 3 & 4: *K2, P2*; rep from * to * around.
 Rows 5 & 6: Knit.
 Rows 7 & 8: *P2, K2*; rep from * to * around.
 Repeat these 8 rows for desired length of hat.

Diagonal - Multiple of 6 stitches minus 1

Row 1: *P3, K3*; rep from * to * around, end last rep K2.
 Row 2: K1, *P3, K3*; rep from * to * around, end last rep K1.
 Row 3: K2, P3, *K3, P3*; rep from * to * around.
 Row 4: *K3, P3*; rep from * to * around, end last rep P2.
 Row 5: P1, *K3, P3*; rep from * to * around, end last rep P1.
 Row 6: P2, *K3, P3*; rep from * to * around.
 Repeat these 6 rows for desired length of hat.

Checkerboard - Multiple of 8 stitches

Rows 1 - 6: *K4, P4*; rep from * to * around.
 Rows 7 - 12: *P4, K4*; rep from * to * around.

Slip-Stitch Band Patterns

The following patterns are worked with two colors, which alternate every other row; designated as Color A and Color B.



Dotted Stripes - even number of stitches

(Note: this pattern may also be used for an all-over pattern.)

With A: Rows 1 & 2: Knit.
 With B: Row 3: *Sl 1, K1*; rep from * to * around.
 Row 4: *Sl 1, P1*; rep from * to * around.
 With A: Rows 5 & 6: Knit.
 With B: Rows 7 & 8: Knit.
 With A: Row 9: *Sl 1, K1*; rep from * to * around.
 Row 10: *Sl 1, P1*; rep from * to * around.
 With B: Rows 11 & 12: Knit.

For a band, work Rows 1 - 12, then Rows 1-6 again. For an all-over pattern, repeat Rows 1 - 12 for desired length.

Key Pattern - multiple of 6 stitches

With A: Rows 1 & 2: Knit.
 With B: Rows 3 & 4: *Sl 1, K5*; rep from * to * around.

With A: Rows 5 & 6: *K1, Sl 1, K3, Sl 1*; rep from * to *.
 With B: Rows 7 & 8: *Sl 1, K1, Sl 1, K3*; rep from * to *.
 With A: Rows 9 & 10: K1, *Sl 1, K1, Sl 1, K3*; rep from * to *, end last rep K2.
 With B: Rows 11 & 12: K2, *Sl 1, K5*; rep from * to *, end last rep K3.
 With A: Rows 13 & 14: Knit.

Lollipops - Multiple of 8 stitches

With A: Rows 1 & 2: K1, *Sl 1, K1, Sl 1, K5*; rep from * to *, end last rep K4.
 With B: Rows 3 & 4: *Sl 1, K3*; rep from * to * around.
 With A: Rows 5 & 6: *K5, Sl 1, K1, Sl 1*; rep from * to *.
 With B: Rows 7 & 8: *Sl 1, K1, Sl 1, K1, Sl 1, K3*; rep from * to * around.
 With A: Rows 9 & 10: K1, *Sl 1, K1, Sl 1, K5*; rep from * to *, end last rep K4.
 With B: Rows 11 & 12: K2, *Sl 1, K3*; rep from * to *, end last rep K1.
 With A: Rows 13 & 14: *K5, Sl 1, K1, Sl 1*; rep from * to * around.
 With B: Rows 15 & 16: *Sl 1, K3, Sl 1, K1, Sl 1, K1*; rep from * to * around.
 With A: Rows 17 & 18: K1, *Sl 1, K1, Sl 1, K5*; rep from * to *, end last rep K4.
 With B: Rows 19 & 20: *Sl 1, K3*; rep from * to * around.
 With A: Rows 21 & 22: *K5, Sl 1, K1, Sl 1*; rep from * to *.

Slip-Stitch All-Over Patterns



Three-and-one Tweed - Multiple of 4 stitches

With A: Rows 1 & 2: *K3, Sl 1*; rep from * to * around.
 With B: Rows 3 & 4: K1, *Sl 1, K3*; rep from * to *, end last rep K2.
 Repeat these 4 rows for desired length.

Diagonal Boxes - Multiple of 8 stitches

With A: Rows 1 & 2: K2, *Sl 1, K1, Sl 1, K5*; rep from * to *, end last rep K3.
 With B: Rows 3 & 4: *K1, Sl 1, K5, Sl 1*; rep from * to *.
 With A: Rows 5 & 6: K4, *Sl 1, K1, Sl 1, K5*; rep from * to *, end last rep K1.
 With B: Rows 7 & 8: K1, *Sl 1, K1, Sl 1, K5*; rep from * to *, end last rep K4.
 With A: Rows 9 & 10: *Sl 1, K5, Sl 1, K1*; rep from * to *.
 With B: Rows 11 & 12: K3, *Sl 1, K1, Sl 1, K5*; rep from * to *, end last rep K2.
 With A: Rows 12 & 14: *Sl 1, K1, Sl 1, K5*; rep from * to *.
 With B: Rows 15 & 16: *K5, Sl 1, K1, Sl 1*; rep from * to *.