

Knitting - Will it Compile?



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Knitting - Make Cool Things with Yarn



But How? Patterns

pattern:

Using smaller needles, cast on 76 (84, **96, 106**) sts, PM and join for working in the round. Work in 1x1 rib (*k1, p1*) for 1.5 (2, **2, 2.5**)”.

Next round, Adult S and L only: work in 1x1 rib to last 2 sts, k2tog [- (-, 95, 105) sts]

All sizes, change to larger needles and work set up round:

[k16, p3 (5, **3, 5**)] around

All Rounds: [work 16-st antler cable, p3 (5, **3, 5**)] around

(*Note: antler cable can be worked following chart or written instructions below.*)

Work rounds 1-6 of antler cable a total of 5 (6, **8, 9**) times, then proceed to decreases, switching to DPNs when necessary.

decreases:

Round 1: [k4, c4b, c4f, k4, p1 (3, **1, 3**), p2tog] around [72 (80, **90, 100**) sts]

Rounds 2, 4, 6: work as established (*knit the knits, purl the purls*)

Round 3: [k2, c4bdec, k2tog, ssk, c4fdec, k2, p2 (4, **2, 4**)] around [56 (64, **70, 80**) sts]

Round 5: [c4b, k4, c4f, p0 (2, **0, 2**), p2tog] around [52 (60, **65, 75**) sts]

Round 7: [k2tog, c4bdec, c4fdec, ssk, p1 (3, **1, 3**)] around [36 (44, **45, 55**) sts]

Round 8: [k2tog four times, p1 (3, **1, 3**)] around [20 (28, **25, 35**) sts]

Round 9: [k2tog twice, p1 (3, **1, 3**)] around [12 (20, **15, 25**) sts]

Child & Adult L only: [k2tog, p1, p2tog] around [- (12, -, **15**) sts]

Break yarn leaving an 8” tail. Thread tail through remaining sts, pull tight and secure end. Weave in ends and enjoy!

Patterns are a list of rows to knit with lists of stitches on each row

Free Pattern:
<https://www.ravelry.com/patterns/library/antler-hat>

Stitches.... An Overloaded word

The loop on the needle...

...can be called a stitch

The action you perform on these loops to create new loops...

...can be called a stitch

A collection of these loops with specific actions applied...

....can be called a stitch



Knitting Stitches

- Net Zero Stitches
 - Knit (k) - Takes in 1 outputs 1
 - Purl (p) - Takes in 1 outputs 1
- Increase Stitches
 - Yarn Over (yo) - Takes in 0 outputs 1
 - Cast On (co) - Takes in 0 outputs 1
 - Knit in Front and Back (kfb) - Takes in 1 outputs 2
- Decrease Stitches
 - Knit Two Together (k2tog) - Takes in 2 outputs 1



Pattern Validation

Each row has a number of stitches it needs to consume and a number of stitches it outputs

A row is valid if output of the last row equals the input of the new row

A pattern is valid if all rows within that pattern are valid

co 10 - 0 stitches in and 10 stitches out

k5, yo, k5 - 10 stitches in and 11 stitches out

k2, k2tog, k2, k2tog, k3 - 11 stitches in and 10 stitches out


Is it Valid?

0 -> co5 -> 5

VALID

5 -> k, p, k, p, k -> 5

VALID

 5 -> 6 -> k2, k2tog, k2 -> 5

INVALID

5 -> k, yo, k, yo, k, yo, k, yo, k -> 9

VALID

Someday... Maybe... Hopefully....

- Finish Pattern Validator
- Gather Patterns
- Test Patterns with Validator
- Generate new Patterns with Sequential Modeling Technique
- Validate Generated Patterns
-?
- Profit!



Thanks

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<If I had a Twitter it would go here>