



Helicase Scarf

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Helicase is the protein that “unzips” and re-zips DNA molecules, enabling life as we know it to function. Through the magic of stranded knitting, you too can unzip and re-zip strands of DNA!

Techniques

This pattern is written for an advanced knitter experienced with stranded colorwork and reading charts. You will have to work extensively from charts, and even read them upside-down (i.e. top-to-bottom rather than bottom-to-top).

You will also have to catch many long floats. Catch floats by twisting the two working yarns every 6 to 8 stitches, but don’t worry too much about long floats as they will all be inside the work once the scarf is complete. To minimize the number of floats you catch, you need to be comfortable leaving floats as long as 7 or 8 stitches.

Yarn Requirements

Fingering weight yarn in 2 highly contrasting colors, C1 & C2. Two 100g/400y skeins of each color.

Sample used Pancake and Lulu PLY Twist Fingering in “bone” as C1 and Sparkle Fingering in “charcoal”. 195g/780y of C1 and 140g/620y of C2.

Sizing/Gauge

41 sts x 31 rows = 4” in stockinette stitch. Sample measures 62” long and 7.5” wide.

Tools

- 16” circular needle in size US2/2.75mm (or size needed to obtain gauge) for colorwork
- Additional needle (circular or straight) in the same size for ribbing
- Two stitch markers in different colors

Pattern Key

Abbr.	Description
C1	Color 1
C2	Color 2
pm	place marker
sm	slip marker
CO	cast on
k	knit
p	purl

Cast On and Set Up

With the Long Tail Cast On, use C1 to CO 130 sts. Pm for beginning of round and join in the round. Work the following two rounds once.

Rnd 1: K 65 sts in C1, then pm (with different color marker) to mark halfway point of the round. K to end of round, sm.

Rnd 2: K one more round of stockinette in C1. At the end of the second round, sm, join C2, and begin working from the chart directions.

Chart Directions

In every chart, you will work each chart twice per round, with the markers separating each repeat.

1. Work Rnds 1-39 of Chart 1 once.
2. Work Rnds 1-60 of Chart 2 once.
3. Work Rnds 1-31 of Chart 3 once.
4. Work Rnds 1-16 of Chart 4 for 11 repeats. Work Rnds 1-5 once more to end the section.
5. Work Chart 3 from top to bottom (Rnds 31 to 1) once.
6. Work Chart 2 from top to bottom (Rnds 60 to 1) once.
7. Work Chart 1 from top to bottom (Rnds 39 to 1) once.
8. Break C2, work 1 round of stockinette in C1, then bind off in C1. Remove markers as you come to them when binding off. Weave in ends and lightly block, then proceed to ribbing directions.

Ribbing Directions

Your work should be a long tube with open ends. In this section, you will finish the scarf by closing the ends and working ribbed accents. You may want to divide your remaining C2 in half.

1. Starting at the old beginning of round and using C2, pick up and knit 130 sts. Do not join in the round.
2. Fold stitches in half and place two ends of circular needle side by side as if working a three-needle bind-off. In this step, you will be using your 3rd needle to k2a and p2a ("a" as in "across needles") as follows:
k2a - insert 3rd needle knitwise into both 1st st on needle 1 and 1st st on needle 2. K2tog.
p2a - insert 3rd needle purlwise into both 1st st on needle 1 and 1st st on needle 2. P2tog.
Repeat: ***[k2a × 2, p2a, k2a, p2a]*** to end of row. You should have 65 sts on the needle.
3. Work the following 2 rows until ribbing measures 5" or half of remaining C2 is used.
Row 1: ***[k1, p1, k1, p2]*** to end of row
Row 2: ***[k2, p1, k1, p1]*** to end of row
4. Bind off in pattern.

Repeat on other end of scarf. Weave in your ends and your scarf is ready to wear!

Modification Suggestions

- *To lengthen the scarf:* Either work additional repeats of Chart 2 or Chart 4 in Step 2, 4, or 6.
- *To shorten the scarf:* a) You can omit Chart 2 in Step 2 or 6 if you are sick of long floats. This is possible because the last round of Chart 1 can also flow straight into the first round of Chart 3. b) Work fewer repeats of Chart 4 in Step 4.
- *To use up all of your yarn:* the easiest way to maximize your yarn mileage is to modify the number of repeats of Chart 4 in Step 4. Work n repeats of Chart 4 until half of C1 is used up. Then work $n - 1$ repeats of Chart 4 to finish the section and continue with the rest of the scarf.

Charts

□ C1 ■ C2

Chart 1: Telomeres

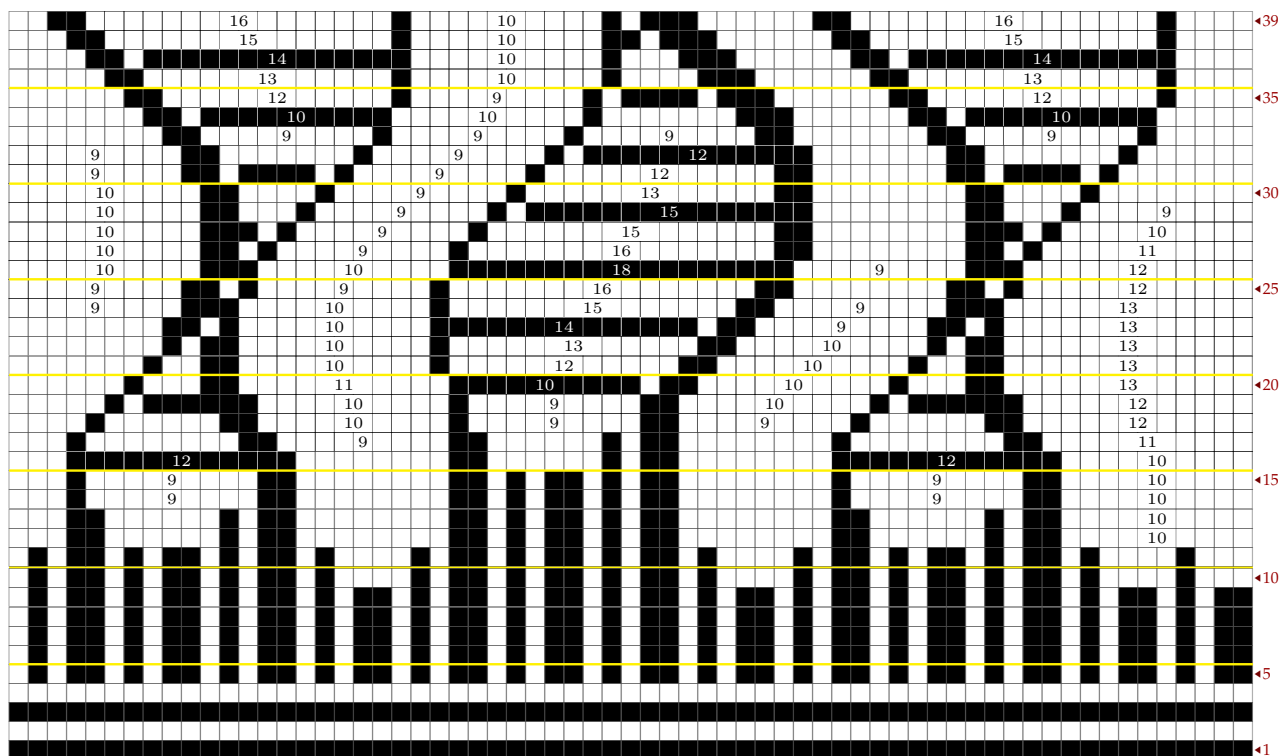


Chart 2: Double Helix

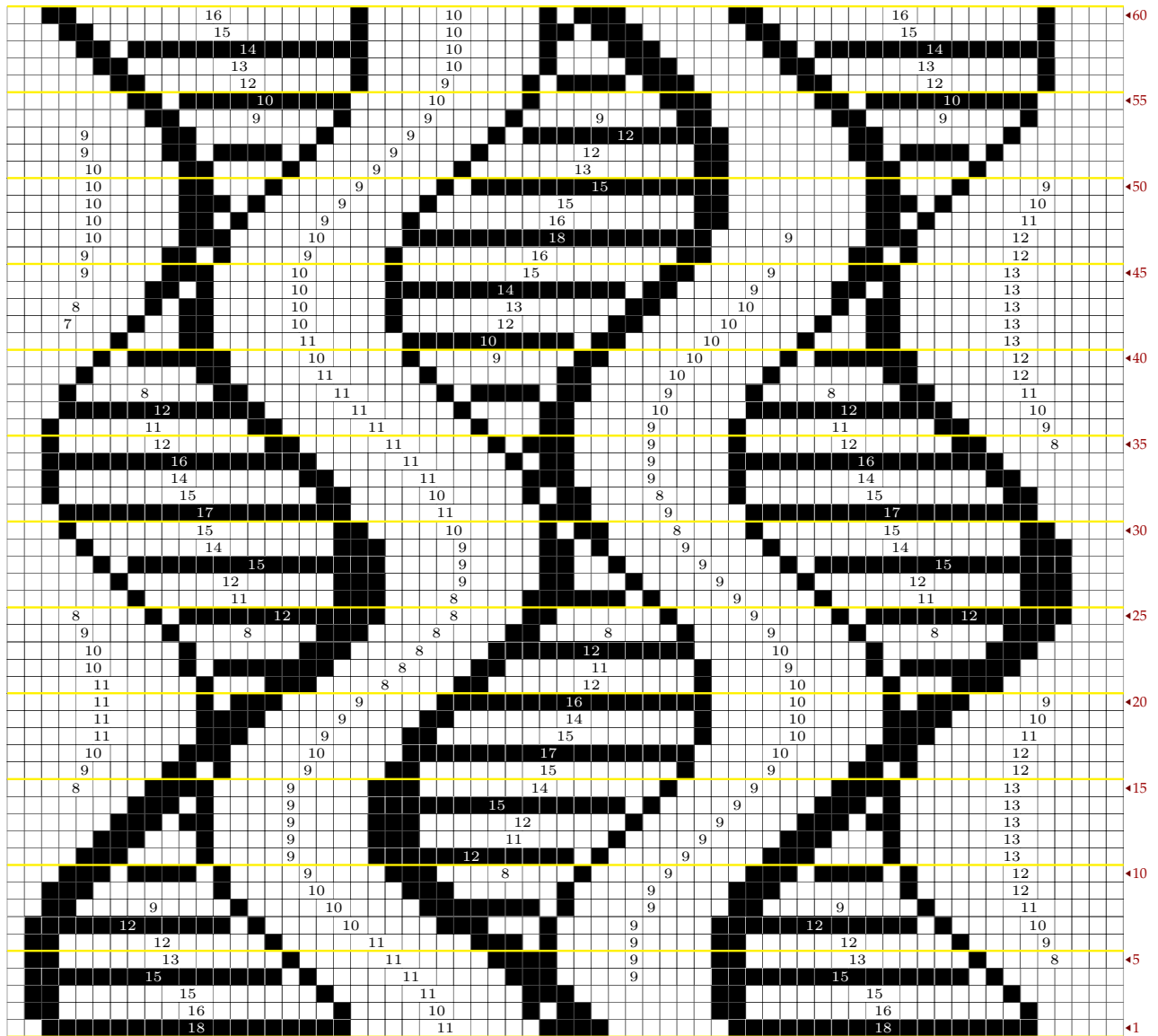


Chart 3: Transition

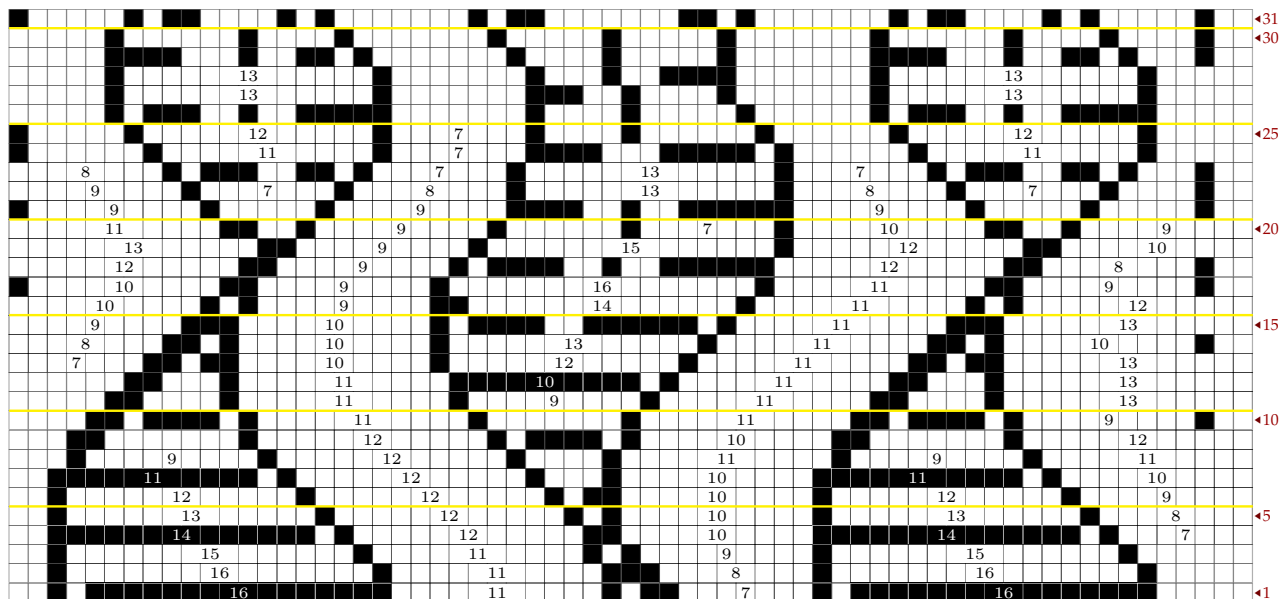


Chart 4: Single Helix

