

# Euler's Stripes

(by marion nowak/nowaks nähkästchen)

I like pattern that are not regular but I find it tedious to figure out a rhythm that looks interesting. On the other side this is not necessary because the sciences offer a wide variety of numbers that can be used. (Mathematician and physicists may forgive my simplified view.) Since pi has been used over and over again but there are others, too. So I decided to pick Euler's number. Which makes the scarf also the perfect gift for the geek in your life, especially if he is a physicist or a mathematician. Or for anyone who likes the pattern of the stripes.

**Materials:** DK/ 8ply merino or wool yarns in 4 colors. My choice was:

Color 1: 190g (Schachenmayr „Merino Extra“)

Color 2: 80g (Filatura di Crosta „Zara Solid“)

Color 3: 70g (Filatura di Crosta „Zara Solid“)

Color 4: 90g (Filatura di Crosta „Zara Chiné“)

Knitting needles US #5/ 3.75mm

Tapestry needle

Size: ca. 2.30m/ 2.5 yd

Gauge in seedstitch 21 stitches/ 36 rows = 10 cm/ 4 inch

The scarf is knitted in seed stitch (also known as moss stitch). For the tip in the beginning there is one stitch added in each row at one side. At the end of the scarf one stitch is decreased on each row at one side to get the correspondent tip.

**CO 3 stitches in Color 1**

You start with the tip :

k1, p1, m1, p1

k1, m1, k1, p1, slip 1 stitch purlwise with yarn in front

**Change to C2 (in Row 3)**

2 x (k1, p1), m1, k1

k1, m1, 2 x (k1, p1), sl1p wyif

3 x (k1, p1), m1, k1

k1, m1, 3 x (k1, p1), sl1p wyif

4 x (k1, p1), m1, k1

k1, m1, 4 x (k1, p1), sl1p wyif



5 x (k1, p1), m1, k1

**C1 (R10):** k1, m1, 5 x (k1, p1), sl1p wyif

**C3 (R11):** 6 x (k1, p1), m1, k1

k1, m1, 6 x (k1, p1), sl1p wyif

7 x (k1, p1), m1, k1

k1, m1, 7 x (k1, p1), sl1p wyif

8 x (k1, p1), m1, k1

k1, m1, 8 x (k1, p1), sl1p wyif

9 x (k1, p1), m1, k1

k1, m1, 9 x (k1, p1), sl1p wyif

**C1 (R19):** 10 x (k1, p1), m1, k1

k1, m1, 10 x (k1, p1), sl1p wyif

**C4 (R21):** 11 x (k1, p1), m1, k1

k1, m1, 11 x (k1, p1), sl1p wyif

12 x (k1, p1), m1, k1

k1, m1, 12 x (k1, p1), sl1p wyif

13 x (k1, p1), m1, k1

k1, m1, 13 x (k1, p1), sl1p wyif

14 x (k1, p1), m1, k1

k1, m1, 14 x (k1, p1), sl1p wyif

**C1 (R29):** 15 x (k1, p1), m1, k1

**C2 (R30):** k1, m1, 15 x (k1, p1), sl1p wyif

16 x (k1, p1), m1, k1

k1, m1, 16 x (k1, p1), sl1p wyif

17 x (k1, p1), m1, k1

k1, m1, 17 x (k1, p1), sl1p wyif

18 x (k1, p1), m1, k1

k1, m1, 18 x (k1, p1), sl1p wyif

19 x (k1, p1), m1, k1

**C1 (R38):** k1, m1, 19 x (k1, p1), sl1p wyif

20 x (k1, p1), m1, k1

**C3 (R40):** k1, m1, 20 x (k1, p1), sl1p wyif

21 x (k1, p1), m1, k1

k1, m1, 21 x (k1, p1), sl1p wyif

22 x (k1, p1), m1, k1

k1, m1, 22 x (k1, p1), sl1p wyif

23 x (k1, p1), m1, k1

k1, m1, 23 x (k1, p1), sl1p wyif

24 x (k1, p1), m1, k1

**C1 (R48):** k1, m1, 24 x (k1, p1), sl1p wyif

25 x (k1, p1), m1, k1

k1, m1, 25 x (k1, p1), sl1p wyif

26 x (k1, p1), m1, k1



You have 54 stitches. Continue in seed stitch without adding more stitches. The first stitch of each row is always a knit stitch, the last one is worked sl1p wyif

#### **C4: 5R**

To make the color changes follow the table: *(If you want the owner of the scarf or any other person who knows Euler's number well enough to be able to „read“ the number from the stripes it is very important to work the color changes exactly as indicated. The number contains a certain amount of zeros which is indicated by omitted colors. But this can only be detected if the color changes are otherwise following a regular rhythm. Another point is that this gives the stripes a less „agitated“ appearance. If that is not an issue you can change the colors at random, use more or less colors... as you like.)*

The numbers in each column indicate how many rows to work with the corresponding color.

Repeat	Color 1	Color 2	Color 1	Color 3	Color 1	Color 4
1	13	-	-	5	2	3
2	5	3	8	-	-	8
3	7	4	7	1	3	5
4	2	6	6	2	4	9
5	7	7	5	7	2	4
6	16	-	-	3	6	9
7	9	9	5	9	5	7
8	4	6	2	7	7	2
9	13	-	-	6	6	3
10	-	3	5	3	5	4
11	7	5	9	4	5	7
12	1	3	8	2	1	7
13	8	8	5	2	5	1
14	6	6	4	2	7	4
15	2	7	4	6	6	3
16	9	2	8	-	-	-
17	-	9	9	2	1	8
18	1	7	4	1	3	5
19	9	6	6	2	13	-
20	-	3	5	7	2	9
21	3	-	-	3	4	2
22	9	5	2	6	-	5
23	9	5	6	3	-	7
24	3	8	1	3	2	3
25	2	8	6	2	7	9
26	4	3	4	9	-	7

Work 6R in C1.

**Start decreasing**

**C2:** k1, k2tog, p1, 25 x (k1, p1), k1, sl1p wyif

k1, 25 x (k1, p1), p2tog, sl1p wyif

k1, k2tog, p1, 24 x (k1, p1), k1, sl1p wyif

**C1:** k1, 24 x (k1, p1), p2tog, sl1p wyif

k1, k2tog, p1, 23 x (k1, p1), k1, sl1p wyif

**C3:** k1, 23 x (k1, p1), p2tog, sl1p wyif

k1, k2tog, p1, 22 x (k1, p1), k1, sl1p wyif

k1, 22 x (k1, p1), p2tog, sl1p wyif

**C1:** k1, k2tog, p1, 21 x (k1, p1), k1, sl1p wyif  
k1, 21 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 20 x (k1, p1), k1, sl1p wyif

**C4:** k1, 20 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 19 x (k1, p1), k1, sl1p wyif  
k1, 19 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 18 x (k1, p1), k1, sl1p wyif  
k1, 18 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 17 x (k1, p1), k1, sl1p wyif  
k1, 17 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 16 x (k1, p1), k1, sl1p wyif

**C1:** k1, 16 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 15 x (k1, p1), k1, sl1p wyif

**C2:** k1, 15 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 14 x (k1, p1), k1, sl1p wyif  
k1, 14 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 13 x (k1, p1), k1, sl1p wyif  
k1, 13 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 12 x (k1, p1), k1, sl1p wyif  
k1, 12 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 11 x (k1, p1), k1, sl1p wyif  
k1, 11 x (k1, p1), p2tog, sl1p wyif

**C1:** k1, k2tog, p1, 10 x (k1, p1), k1, sl1p wyif  
k1, 10 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 9 x (k1, p1), k1, sl1p wyif  
k1, 9 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 8 x (k1, p1), k1, sl1p wyif  
k1, 8 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 7 x (k1, p1), k1, sl1p wyif  
k1, 7 x (k1, p1), p2tog, sl1p wyif

**C3:** k1, k2tog, p1, 6 x (k1, p1), k1, sl1p wyif  
k1, 6 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 5 x (k1, p1), k1, sl1p wyif  
k1, 5 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 4 x (k1, p1), k1, sl1p wyif  
k1, 4 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, 3 x (k1, p1), k1, sl1p wyif  
k1, 3 x (k1, p1), p2tog, sl1p wyif

**C4:** k1, k2tog, p1, 2 x (k1, p1), k1, sl1p wyif  
k1, 2 x (k1, p1), p2tog, sl1p wyif  
k1, k2tog, p1, k1, p1, k1, sl1p wyif  
2 re, p1, 1re, p2tog, sl1p wyif  
k1, k2tog, p1, k1, sl1p wyif  
2 re, p2tog, sl1p wyif  
k1, p2tog, sl1p wyif

**BO** the remaining stitches.

Weave in thread ends and steam the scarf carefully with a steam iron. *(The scarf has a lot of thread ends so you might prefer to weave them in as you knit. You can also try at some changes to keep the yarn and catch it somewhere in the border of your knitting until the color appears for the next time. Since DK yarn is not thin this is visible also, so test and decide yourself what you like best. I did a bit of all, taking a new decision with each color change. I didn't find one technique that was superior over the others. So just do as it pleases you.)*

