

Chapter 25

OPTIONAL SHAPING TWEAKS

This chapter is completely optional. If your shaping preferences have already been explained in your version of “Bottom-Up Shaping,” then save this chapter for a rainy day.

If we want to tweak a project’s shaping in some way, then we can use charts to help us change the shaping to our preferences. We’ll use “The Basic Vest” in the size small and start from the charts constructed in “Bottom-Up Shaping.”

Since we’ll discuss thoroughly how to alter the shoulder bind-offs, we’ll skip over the underarm bind-offs and start with the underarm curve shaping.

Decrease at Both Ends of Every Other Row

For “The Basic Vest” in the size small, after we bound off six stitches on the first two underarm rows, we then had to “dec 1 st at beg of next 14 rows” for the underarm curves. If we prefer, we can change the shaping to “dec 1 st at both ends of next 7 RS rows.”¹

	Left Back Underarm		Right Back Underarm	
16				
				15
14				
				13
12				
				11
10				
				9
8				
				7
6				
				5
4				
				3
2	⌒⌒⌒⌒⌒⌒			
				1
a				
	46 45 44 43 42 41 40 39 38 37 36 35 34 33 32		32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	

Making this change means that on the private-side rows, all we have to do is work evenly, at least as far as the shaping is concerned.

¹ Note that the decreases are represented as being positioned at the very edge of the fabric. We still have complete freedom to place them as many stitches from the edges as we like, exactly as we had in “Bottom-Up Shaping.”

For “The Basic Vest” in the size small, we had to bind off three stitches at the beginning of a total of eight rows. Let’s see how we bind off at both ends of just the public-side rows.

The Vest Back Shoulder Shaping

In this alternative shaping method, the chart would show bind-offs at the beginning and end of each public-side row, and the private-side rows would be worked evenly.

	Left Back Shoulder		Right Back Shoulder	
b 8				
b 6				b 7
b 4				b 5
b 2				b 3
b				b 1
	33 32 31 30 29 28 27 26 25 24 23 22 21 20 19		19 20 21 22 23 24 25 26 27 28 29 30 31 32 33	

The Details in Needles and Yarn

We bind off at the beginning of row B1 in the usual way, then work until the same number of stitches remain on our source needle as we would bind off at the beginning of row B2. For the size small vest, that’s three stitches, so when we have three stitches left at the end of row B1, we’ll start binding them off.

We do, however, need to talk about the fourth stitch from the end of the row as well, so let’s start the discussion there.

Instead of using stitch numbers, we’ll give them names. We’ve worked to the last four stitches of row B1, having started the row by binding off three. We’ll call the stitch closest to the tip of the source needle Dino, the second one will be Pebbles, the third one will be Wilma, and the last stitch on the source needle will be Fred.

We work Dino as usual, and we won’t need to bother with him again until we’re ready to start the private-side row.

We work Pebbles and Wilma as usual, then we bind off Pebbles (which was the third stitch from the end) over Wilma, still doing nothing with Dino as he sits waiting on the working needle. We work Fred, then bind off Wilma over Fred.

Now we have to secure Fred, the third and final stitch we bind off.

Securing Fred

We have at least two methods to bind off the last stitch:

- ☉ break the yarn and pull the tail through Fred
- ☉ use an extra length of yarn to secure Fred, leaving the working yarn unbroken

If We Break the Yarn

We secure Fred by pulling the tail through him in the ordinary way. We turn, then to reattach the yarn, we work Dino as the first stitch on the private-side row. We complete the rest of the row, and when we turn, we're ready to work row B3 the same way we worked row B1.

If We Use an Extra Length

Using an extra length of yarn to secure Fred makes it easy to wind up with extra bulk, especially if we're using bulky yarn in the first place. At the outer edges of the shoulders, that extra bulk may be visible to everybody, but at the underarm, it might well mean the vest is uncomfortable for the wearer. We have at least two options, though, to minimize that bulk.

- ☉ We separate the plies at both ends of the extra length and run each one individually through the private side of the fabric in our usual way.
- ☉ We split out a ply (or two) from the extra length, optionally twisting the remaining plies a few times to give them a bit more strength, and use that thinner bit to secure Fred.

Since we didn't break the yarn, though, when we turn the work to the private side, we'll have a longish strand of working yarn across the fabric from Fred back to Dino, the nearest live stitch and the one we need to work first as we restart. We could somehow catch or otherwise bury that strand in the finishing, either in a vest's armhole ribbing or in a sweater's armhole seam. But if we're doing this technique because we're working with a bulky yarn, would we really want yet another strand near the armhole?

As usual, we can each choose the technique we prefer.

The Vest Front Shoulder Shaping

We could do the same technique on the front shoulders.

	Right Front Shoulder		Left Front Shoulder	
b 8	□□□		□□□	
	∩∩∩□□□		□□□∩∩∩	b 7
b 6	□□□□□□		□□□□□□	
	∩∩∩□□□□□		□□□□□□∩∩∩	b 5
b 4	□□□□□□□□		□□□□□□□□	
	∩∩∩□□□□□□□		□□□□□□□□∩∩∩	b 3
b 2	□□□□□□□□□□		□□□□□□□□□□	
	∩∩∩□□□□□□□□		□□□□□□□□□□∩∩∩	b 1
b	□□□□□□□□□□		□□□□□□□□□□	
	33 32 31 30 29 28 27 26 25 24 23 22 21 20 19		19 20 21 22 23 24 25 26 27 28 29 30 31 32 33	

The Details in Needles and Yarn

Since the front’s shoulders are not joined to each other like the back’s, we need to pay just a bit of attention to make sure we do the bind-offs at the proper end of the proper rows on both fronts.

On the left front shoulder, we’ll * bind off at the beginning of a public-side row (the end that’s closest to the armhole), work to the neck end, turn, work evenly all the way back, turn, and repeat from *. In other words, we work this shoulder the exact same way as we described in “Bottom-Up Shaping.”

But to work the right front shoulder, we’ll ** work a public-side row starting at the neck end and bind off the proper number of stitches as we approach the armhole end of the row. We then secure the final bound-off stitch in our preferred way. We turn and start working the private-side row with the stitch closest to the armhole end of the row, work evenly to the neck end, turn, and repeat from **.

Conclusion

This technique can probably be substituted in any situation where we bind off at the beginning of consecutive rows, as we saw here explicitly in the shoulder shaping and as we could do on the two underarm bind-off rows as well.³

Smooth Out Shoulder Bind-Off Stairsteps

Some knitters like to do a decrease at the end of a row when stitches will be bound off at the beginning of the following row. Doing that decrease helps smooth out the stairstep effect. This variation is easy to chart, especially for those who, like me, would be inclined to forget to do the decrease. When we decrease at the end of a row, we of course bind off one **less** stitch at the beginning of the next row, since that one stitch was already decreased away.

³ I think. My knitting imagination can’t figure out a situation where we couldn’t use this alternative.

The easiest way to chart this variation is to start with the original chart that shows the full number of bind-offs at the beginning of each row.

	Left Back Shoulder	Back Neck	Right Back Shoulder	
b 8	□□□			
b 6	□□□		□□□	b 7
b 4	□□□		□□□	b 5
b 2	□□□		□□□	b 3
b			□□□	b 1
	333231302928272625242322	212019181716151413121110987654321123456789101112131415161718192021	222324252627282930313233	

The Right Back Shoulder

Let's look in detail at the outermost fifteen stitches at the wearer's right shoulder.

	Right Back Shoulder	
b 8	□□□	
	□□□□	b 7
b 6	□□□□□	
	□□□□□□	b 5
b 4	□□□□□□□	
	□□□□□□□□	b 3
b 2	□□□□□□□□□	
	□□□□□□□□□□	b 1
b	□□□□□□□□□□□	
	19 20 21 22 23 24 25 26 27 28 29 30 31 32 33	

What we want to show is that at the end of a row just before a row that starts with bound-off stitches, we will decrease one stitch. We therefore change the symbol below the first bound-off stitch to a decrease. To make the shoulder shaping as invisible as possible, we'll use decreases that point at the shoulder's edge.⁴

	Right Back Shoulder	
b 8	□□□	
	□□□□	b 7
b 6	□□□□□	
	□□□□□□	b 5
b 4	□□□□□□□	
	□□□□□□□□	b 3
b 2	□□□□□□□□□	
	□□□□□□□□□□	b 1
b	□□□□□□□□□□□	
	19 20 21 22 23 24 25 26 27 28 29 30 31 32 33	

⁴ See part one's "Decreases" for information on making them prominent or minimized.

Since that decrease means we have one less stitch to bind off, we turn the bind-off symbol above each decrease to a blank space, indicating that that stitch is no longer there and reminding us that we bind off one less stitch.

Right Back Shoulder		
b 8	□□□	
	□□□	b 7
b 6	□□□□	
	□□□□	b 5
b 4	□□□□□	
	□□□□□	b 3
b 2	□□□□□□	
	□□□□□□	b 1
b	□□□□□□□	
	19 20 21 22 23 24 25 26 27 28 29 30 31 32 33	

Note that row B8, unlike the other private-side shoulder rows, does not end with a decrease, because B8 is the last row on the back of “The Basic Vest” in the size small; there will be no row B9.

The Left Back Shoulder

We do the exact same modifications at the left edge of the chart, indicating the back’s left shoulder shaping. The next chart shows the outermost fifteen stitches of the as-written shoulder shaping.

Left Back Shoulder		
b 8		□□□□□
		□□□□□
b 6		□□□□□
		□□□□□
b 4	□□□	□□□□□
	□□□	□□□□□
b 2	□□□	□□□□□
	□□□	□□□□□
b	□□□	□□□□□
	33 32 31 30 29 28 27 26 25 24 23 22 21 20 19	

We start by changing the final knit symbol on each public-side B row (the one below the first bound-off stitch of the following private-side row) to a decrease pointing the desired direction. We’re again selecting the decrease that points at the edge of the fabric, to minimize its appearance as much as possible.

Left Back Shoulder		
b 8		
		b 7
b 6		
		b 5
b 4		
		b 3
b 2		
		b 1
b		
	33 32 31 30 29 28 27 26 25 24 23 22 21 20 19	

Then we change the bind-off symbol above each decrease to be a blank space, since we'll only bind off two stitches at the beginning of the private-side shoulder rows.

Left Back Shoulder		
b 8		
		b 7
b 6		
		b 5
b 4		
		b 3
b 2		
		b 1
b		
	33 32 31 30 29 28 27 26 25 24 23 22 21 20 19	

The Complete Chart

Here's the complete chart with smoothed shoulder decreases.⁵

Left Back Shoulder	Back Neck	Right Back Shoulder
b 8		
		b 7
b 6		
		b 5
b 4		
		b 3
b 2		
		b 1
b		
33 32 31 30 29 28 27 26 25 24 23 22	21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	22 23 24 25 26 27 28 29 30 31 32 33

⁵ Some of you may have done some counting in this smoothed shoulder shaping chart. Yes, you're correct; this chart, like the original bind-off shaping chart it's based on, could be construed to be technically wrong in how many knit symbols are shown. As before, if you really want the gory details, then check out the appendix "Do Charts Lie?"

We would chart the shoulders on both front necks the exact same way, then we would work them either one at a time or use separate balls of yarn to work them simultaneously.

Shape Shoulders with Short Rows

For knitters who like to short-row shoulders in preparation for a three-needle bind-off or to graft the live stitches together, we can also chart that technique.

Here we'll look at wrap-and-turn short rows. There are two ways we might think of to convert from bind-offs to wrap-and-turn short rows, but only one will give the correct stitch count at the end.

Option A: Leave One More Stitch Than We'd Bind Off

Since we're supposed to bind off three stitches at the beginning of eight rows for the size small of "The Basic Vest," we might think we need to leave three stitches beyond each wrapped stitch.

We would thus stop short with four stitches to go, then wrap that fourth stitch, leaving unworked the three stitches past it since they're the stitches we'd have bound off on the next row.

	Left Back Shoulder		Right Back Shoulder	
	⊆			⊆
b				b 1
	⊆			⊆
	33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33	

Note that we worked the first few stitches of row B1 evenly, because short rows shift the shaping from the beginning of a row to its end. And even though we're keeping on the source needle at the end of row B1 the three stitches past the wrapped one, we're not showing them in the chart because they remain unworked for the moment. (The same blank area will appear at the end of each row, indicating all the stitches left waiting.)

We turn and work back, where we'll again leave the last four stitches unworked, wrapping the fourth stitch from the end of row B2 so that the three stitches we would have bound off at the beginning of row B3 remain past the unwrapped stitch.

	Left Back Shoulder		Right Back Shoulder	
b 2				
	⊆		⊆	
b				b 1
	⊆		⊆	
	33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15		15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33	

For the next six rows, we keep stopping four stitches (one more than we're supposed to bind off on every row) before the previous turning point, so that when we're done, there are

We continue working this way, counting back to the third stitch before the one wrapped previously, wrapping it, and turning. In this option, we wind up with two stitches (one less than we'd bind off) between all the wrapped ones.

	Left Back Shoulder		Right Back Shoulder	
b 8				
				b 7
b 6				
				b 5
b 4				
				b 3
b 2				
				b 1
b				
	33 32 31 30 29 28 27 26 25 24 23 22 21 20		20 21 22 23 24 25 26 27 28 29 30 31 32 33	

Let's look at the full back neck and shoulder shaping.

	Left Back Shoulder	Back Neck	Right Back Shoulder	
b 8				
				b 7
b 6				
				b 5
b 4				
				b 3
b 2				
				b 1
b				
	33 32 31 30 29 28 27 26 25 24 23 22 21 20	19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	20 21 22 23 24 25 26 27 28 29 30 31 32 33	

Note that the back of the neck, which we again measure between the wrapped stitches on the final two partial rows, goes from stitch twenty-one through stitch twenty-one inclusive, which is forty-one stitches, exactly as the instructions specify (and the same as the original bind-off chart showed).

In Sizes XXL/XXXL

In the two largest sizes, which have identical shoulder shaping, we have four extra rows of bind-offs, two on each shoulder. Of the five rows of each shoulder that start at the armhole end, on the first three of those rows, we bind off three stitches, and on the last two rows, we bind off four stitches. On those rows, we would work to four stitches before the last wrapped stitch, wrap that fourth stitch (and thus leave the three after it unworked), then turn.

	Left Back Shoulder		Right Back Shoulder	
b 10				
b 8				b 9
b 6				b 7
b 4				b 5
b 2				b 3
b				b 1
	41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23		23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41	

We’re left with stitches twenty-four through twenty-four inclusive, which matches the forty-seven back neck stitches specified for the two largest sizes of “The Basic Vest.”

Conclusion for Wrap-and-Turn Short Rows

We can see from charting both options that for wrap-and-turn short rows, we need to use option B: we stop short the same number of stitches we’re supposed to bind off on the following row, wrap the next stitch, and turn.

Slipping the First Stitch After Turning

Some knitters like to slip the first stitch after wrapping and turning, because the slipped stitch stretches upward to help smooth the transition point where one row becomes two rows. We can chart that detail as well: for each row that ends with a wrapped stitch, we simply change the first knit stitch on the following row to a slip stitch.⁷

	Left Back Shoulder	Back Neck	Right Back Shoulder	
b 8				
b 6				b 7
b 4				b 5
b 2				b 3
b				b 1
	33 32 31 30 29 28 27 26 25 24 23 22 21 20	19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	20 21 22 23 24 25 26 27 28 29 30 31 32 33	

Other Short-Row Techniques

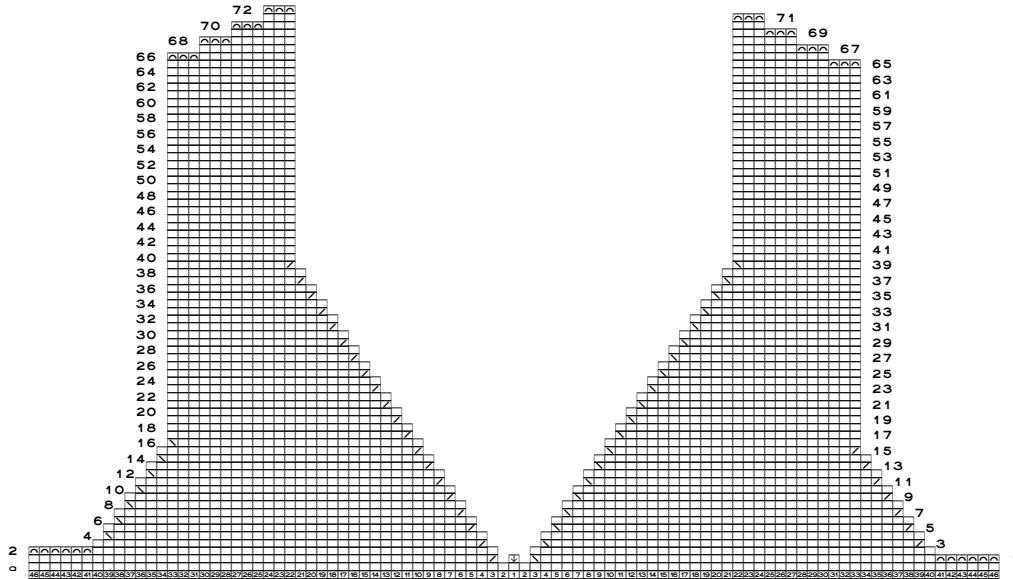
Some knitters loathe wrap and turn, so they will use other types of short rows. Those techniques can be charted as well so that we can make sure we turn at the proper spots.⁸

⁷ For those charting in the computer, the slip stitch symbol is under lowercase s.

⁸ Charting other short-row techniques is—*ough*—left as an exercise for the reader.

Tweak a V-Neck

We saw in “Bottom-Up Shaping” that we would have a fairly tall vertical edge between the end of the V-neck shaping and the very last row at the top of each shoulder. Using the arm-hole depth (nine inches) and gauges (five stitches and seven rows per inch) from that chapter, let’s look at a proportional version of the front shaping chart.⁹



But suppose we don’t like that long vertical bit. What if we want our V-neck’s diagonal edge to extend all the way up to the top of the shoulder? Once we know our row gauge and the exact armhole depth we need, we can adjust the rate of the decreases to make the front neckline go straight from one spot to the other.

We’ll still work the same number of decreases, twenty, on both sides of the front neckline, but we have to space them farther apart so that it takes all seventy-two rows to complete them. So the question is, How often do we now make the decreases?

- ☉ We know that decreasing every other row uses forty (technically thirty-nine) rows.
- ☉ If we decrease every third row, so that we work a decrease row then work two rows evenly (working evenly only at the neck ends of the rows, that is, since we’ll still be doing underarm decreases on the first few rows), we’ll need twenty decrease rows

⁹ See the appendix “Designing by Charting” for details on using row and stitch gauges to create a proportional computer chart. The charts here have their font size set to 4.0 points and their paragraph spacing set to “fixed” at 2.9 points. These values represent five stitches and seven rows per inch compressed by 360 percent. (The paragraph spacing ought to be 2.86 points, but the value gets rounded to the nearest tenth of a point.)

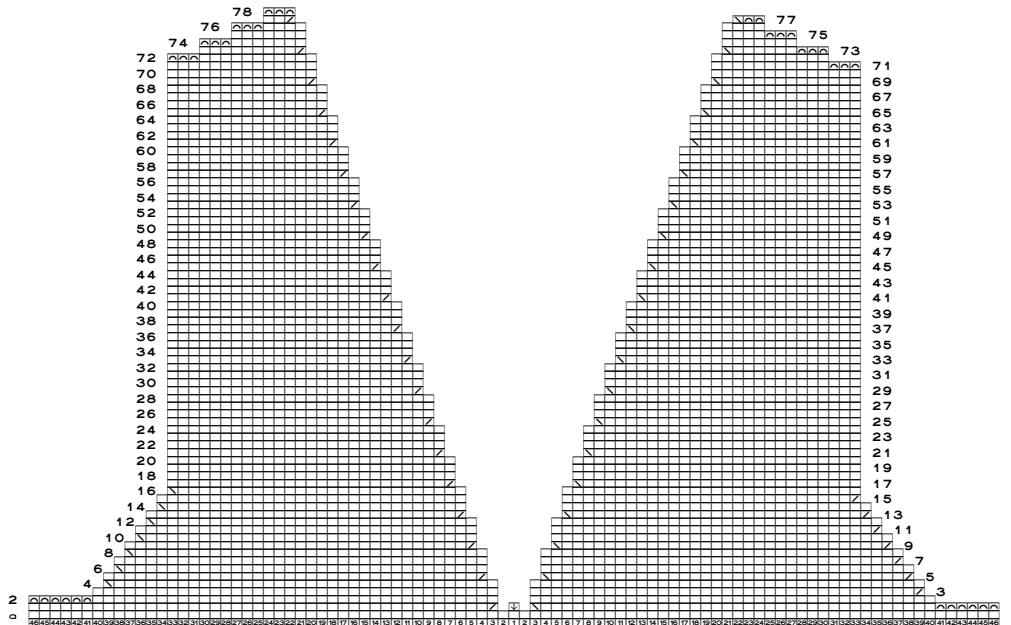
times three, which is sixty rows (technically fifty-eight, since we wouldn't do the two plain rows after the final decrease row).

- ☉ If we decrease every four rows (one decrease row followed by three rows worked evenly at the neck end), then we need twenty decrease rows times four, for a total of eighty rows (technically seventy-seven, because we wouldn't do the three plain rows after the final decrease row).

None of these solutions works exactly with the seventy-two rows we have available, so let's put on our designer hats and figure out what we can do.

Option A: Deepen the Armhole

We can make the armholes several rows deeper—six, as it turns out—while we do the neck decreases every fourth row. With those six extra rows, the new armhole will be deeper by a bit less than an inch at our working gauge of seven rows per inch. Since it's a vest that we may well want to wear over a shirt, the additional rows give the shirtsleeve's fabric some extra space at the underarm.

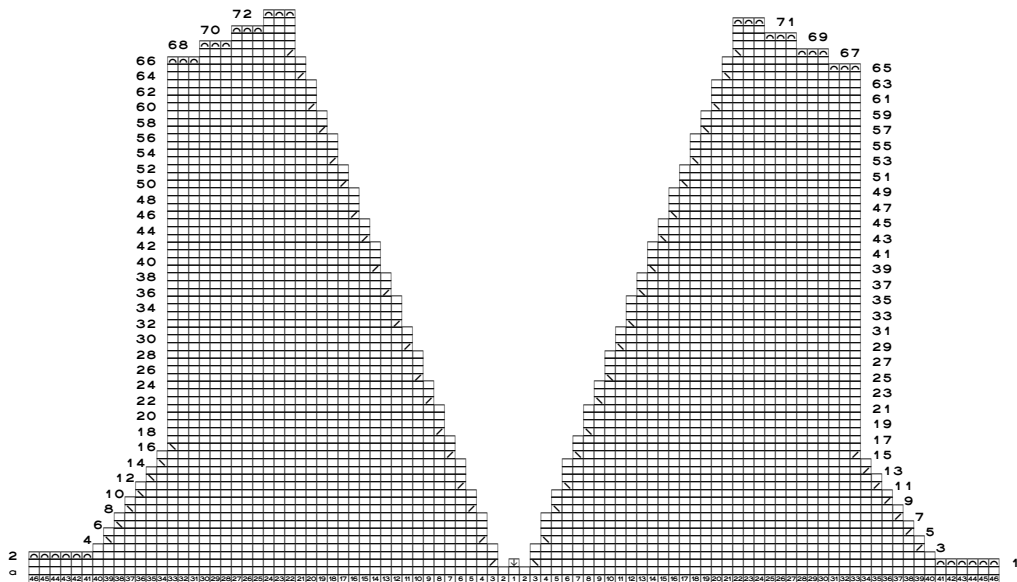


Note that in row seventy-seven, while doing the bind-offs on the left shoulder, we SSK the last two stitches, then bind off the single stitch that results.

If there's any chance we'll ever want to wear the vest without a shirt, though, then the extra depth in the armhole may, well, show things we don't really want to show.

Option B: Do an In-Between Decrease Rate

If we want to keep a nine-inch armhole and therefore the original seventy-two rows, that means we have to decrease one stitch every 3.6 rows (seventy-two rows divided by twenty decreases). That's very close to one stitch every 3.5 rows, which we could achieve if we * work a decrease row followed by two plain rows, then work a decrease row followed by three plain rows, and repeat from *. That combination will decrease two stitches every seven rows. If we do ten such combinations, we decrease twenty stitches in seventy rows. Close enough!



Note that we'll now need to do directional decreases on both public- and private-side rows. Since we chose to do SSKs on the left neckline's public-side rows, we'll do SSPs there on private-side rows. On the right neckline, where we do K2togs on the public-side rows to mirror-image the left neckline, we'll do P2togs on the private-side rows.¹⁰

Option C: Change the Shoulder Stitch Count

We could adjust the final stitch count on the tops of the shoulders (stitch count *s* in the appendix "Garment Design Details") so that we have a narrower shoulder width when we finish the neck decreases. If we switch the decrease rate to one stitch every third row for all seventy-two armhole rows, that will decrease twenty-four stitches (seventy-two rows divided by three). That's just four stitches more than designed, so the shoulders will each be narrower by just over three-quarters of an inch at our working gauge of five stitches per inch.

¹⁰ See the section on purl decreases in part one's "Decreases" for complete details on which way purl decreases lean when worked on the private side of stockinette.

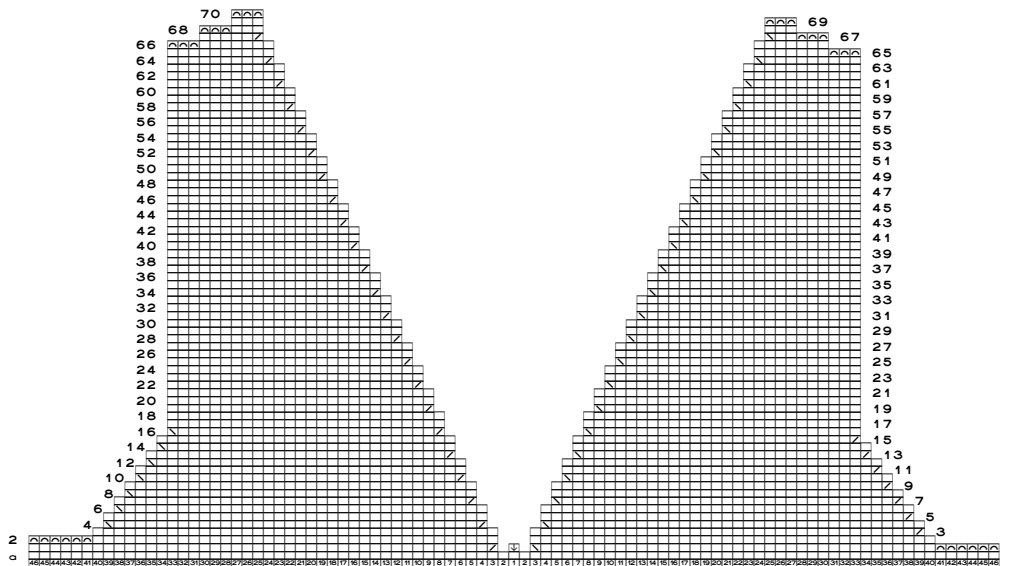
In the designed shoulder shaping, we have twelve stitches on each front shoulder and bind off three stitches at the beginning of the four rows that start near the armhole ends of the rows. Losing four stitches on each shoulder to allow neck decreases to continue all the way up means we have only eight stitches left at the top of each shoulder.

We now have to adjust the shoulder shaping so that it takes into account the fact that we've changed the number of stitches we'll actually have.

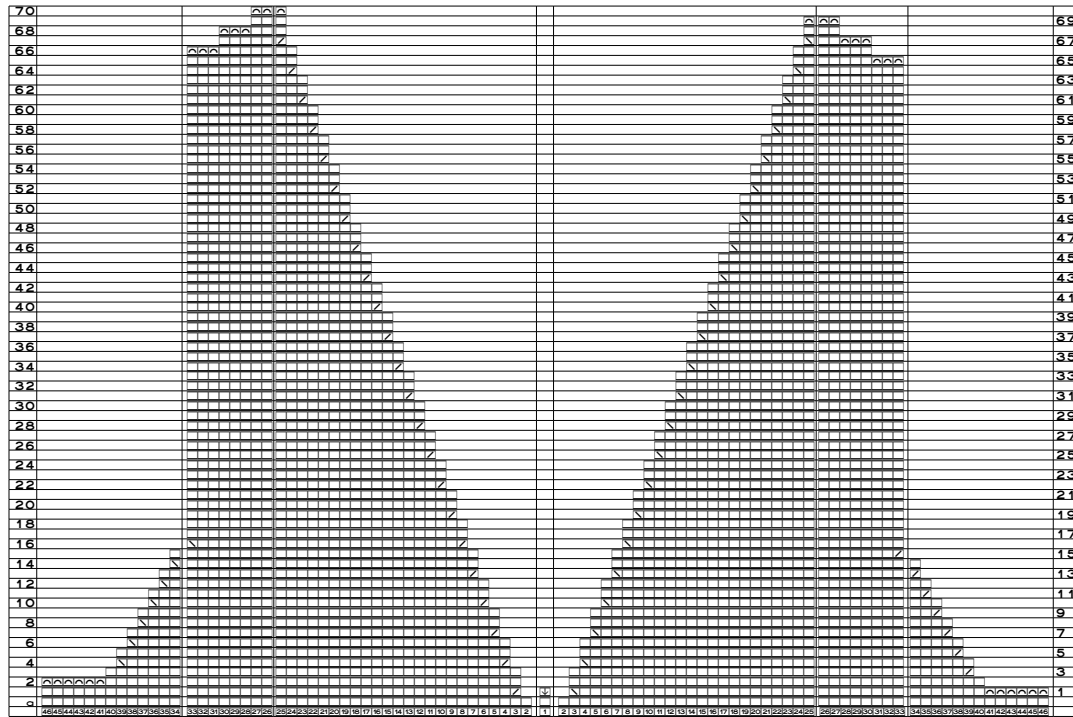
Variation 1: Keep the Original Bind-Off Rate

We continue to bind off three stitches at the armhole end of each shoulder row, which we could do twice, then bind off the last two shoulder stitches and the last neck stitch during the final row on each shoulder.

That means we're now doing the shoulder shaping over only six rows instead of eight. Losing two rows from the shoulder shaping in turn goes back into the total number of armhole rows (!), so the front's neckline shaping will be only seventy rows tall. Seventy rows divided by decreases every third row means we'll decrease only twenty-three stitches on each side of the V-neck. Close enough!



In the table version of the chart, four of the shoulder stitches on each side have been moved to the adjacent column containing the neckline stitches. That change reflects the fact that we'll have four fewer stitches at the top of the shoulder and that we're decreasing more stitches along the neckline. The ninth stitch on each shoulder is therefore actually in the neckline shaping columns.



We again will have to do directional purl decreases on private-side rows, exactly as described in option B.

Variation 2: Adapt the Bind-Off Rate

We could also change the shoulder shaping to bind off just two stitches at the beginning of each shoulder row, which would exactly use eight stitches and also fit perfectly in the original eight rows. Since we add two rows back to the front shaping, we also get to do the twenty-fourth decrease on each neckline edge.



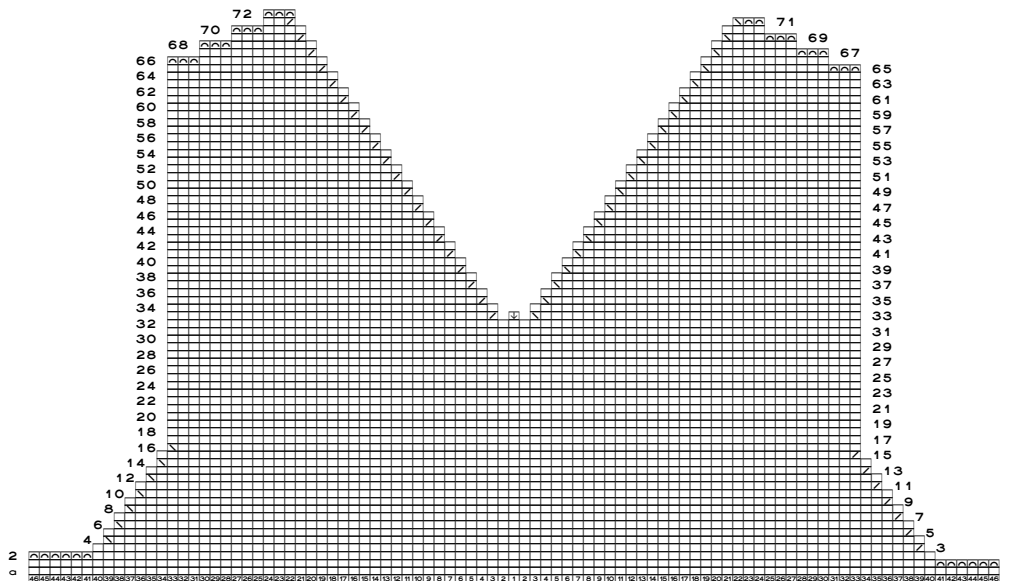
Make the Back Shoulder Shaping Match

Whichever variation of option C we decide on, we would need to work the back shoulder shaping the same way so that the shoulder widths will match when we join front and back.

A Different Kind of Option: Start the V-Neck Decreases Later

We could delay the V-neck's starting point so that it **ends** at the **last** shoulder row instead of **starting** at the **first** armhole row. The designed twenty decreases every other row are completed in forty rows.

So where do we begin the front neckline decreases? Since the neckline edge of the armhole will be seventy-two rows tall and the neckline decreases use forty rows, we subtract forty rows from seventy-two rows, then add one to get the inclusive row number. We therefore start the neckline decreases on armhole row thirty-three instead of armhole row one.



As in option A, we have to work an SSK as we bind off the final two stitches on the left shoulder.

If we use this option, though, the wearer's head may not go through, especially after the neck ribbing is added.¹¹

¹¹ My knitting imagination simply fails me in this situation.