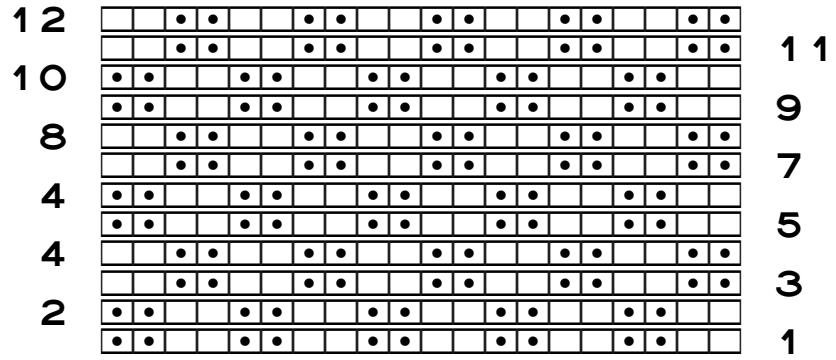
# Appendix 510

# ANSWERS

This appendix contains answers (and in some places, only one of several possible answers) for the exercises suggested throughout the book.

## Written-Out Instructions for Alternate Moss Stitch

Here's the chart.




The first two rows of alternate moss stitch are exactly the same as for 2x2 ribbing, then we "break" the 2x2 ribbing by moving the pattern over two stitches for two rows.

There are several ways to write out the instructions.

### Alternate Moss Stitch: Option 1

CO 20.
Row 1 (RS): * K2, P2 *, rpt betw * across.
Row 2 (WS): * K2, P2 *, rpt betw * across.
Row 3: * P2, K2 *, rpt betw * across.
Row 4: * P2, K2 *, rpt betw * across.
Rpt rows 1–4 two more times (12 rows total).
BO.

You could also simplify to these instructions:

### Alternate Moss Stitch: Option 2

CO 20.
Row 1 (RS): * K2, P2 *, rpt betw * across.
Row 2 (WS): Rpt row 1.
Row 3: * P2, K2 *, rpt betw * across.
Row 4: Rpt row 3.
Rpt rows 1–4 two more times (12 rows total).
BO.

The most compact form is

### Alternate Moss Stitch: Option 3

CO 20.
Rows 1 (RS) and 2 (WS): * K2, P2 *, rpt betw * across.
Rows 3–4: * P2, K2 *, rpt betw * across.
Rpt rows 1–4 two more times (12 rows total).
BO.

Some books may do the instructions this way.

### Alternate Moss Stitch: Option 4

CO 20.
Row 1 (RS): * K2, P2 *, rpt betw * across.
Row 2 and all WS rows: Work the sts as they present themselves.
Row 3: * P2, K2 *, rpt betw * across.
Rpt rows 1–4 two more times (12 rows total).
BO.

## Creating a Project Chart with Multiple Patterns

The exercise was to figure out the least common multiple for patterns that are six, ten, fourteen, and twenty-two rows tall (again, we are ignoring foundation rows any pattern may have).

If we put those numbers into an Internet least-common-multiple calculator, we would find out instantly that to create a project chart that had complete copies of all four patterns with no gaps anywhere, we would need a chart with…2,310 rows!

Yowsa!

We'd need 385 repeats of the six-row pattern, 231 of the ten-row pattern, 165 of the fourteen-row pattern, and 105 of the twenty-two-row pattern.

## *What to Do If the Number Is Big*

It's highly unlikely that we would ever need a project chart that had so many rows in it. Even a scarf that's sixty inches long at ten rows per inch would have only six hundred rows.

If we pick patterns that, when combined in our project chart, require such a hugely impractical and/or unneeded number of rows, then we can simply do the copying of patterns ***starting from the bottom of the chart and copying upwards***, for as many rows as we need. Then we just lop off the extra pattern rows at the top.

### The Exercise as a Sweater

Suppose we had picked those four patterns to make a sweater. If we use worsted-weight yarn, we'll probably get seven or eight rows to the inch. Let's assume we actually get ten rows per inch, just to make the arithmetic easier.

Many sweaters are about twenty-eight inches long, as measured from the edge of the bottom ribbing to the top of the back of the neck. At ten rows per inch, we only need 280 rows on the project chart to show every single stitch of these four patterns.

Once we had copied all the patterns to fill the entire project chart's 280 rows, we just end each pattern at whichever pattern row happens to fall on that chart row.

## *Some Tweaking May Be Necessary*

Note that we may want to be careful with cable and twist patterns. The top edge will probably look better if cable patterns end about halfway between crossings, instead of right before or right after crossing.

If we lop off the unneeded pattern rows based on the number of rows we need for the length we want, we may find that we do, for example, a cable in an awkward spot. We may have just completed a crossing, or we may be ending at the row right before a crossing. If it's a long-ish cable, like with an eight-row repeat, we might want to have the final row be three or four rows either before or after the crossing. For appearance' sake, we probably want at least a couple of plain rows after a crossing to avoid a tight hump at the shoulder, and we'd want to end several rows before a crossing to avoid a long, uncrossed column of knit stitches above the final crossing.

## *The Bottom Line of Combining Patterns*

Depending on the patterns involved, we might be able to just figure out in our head the number of chart rows we'd need. If the patterns are short enough, we might need only two

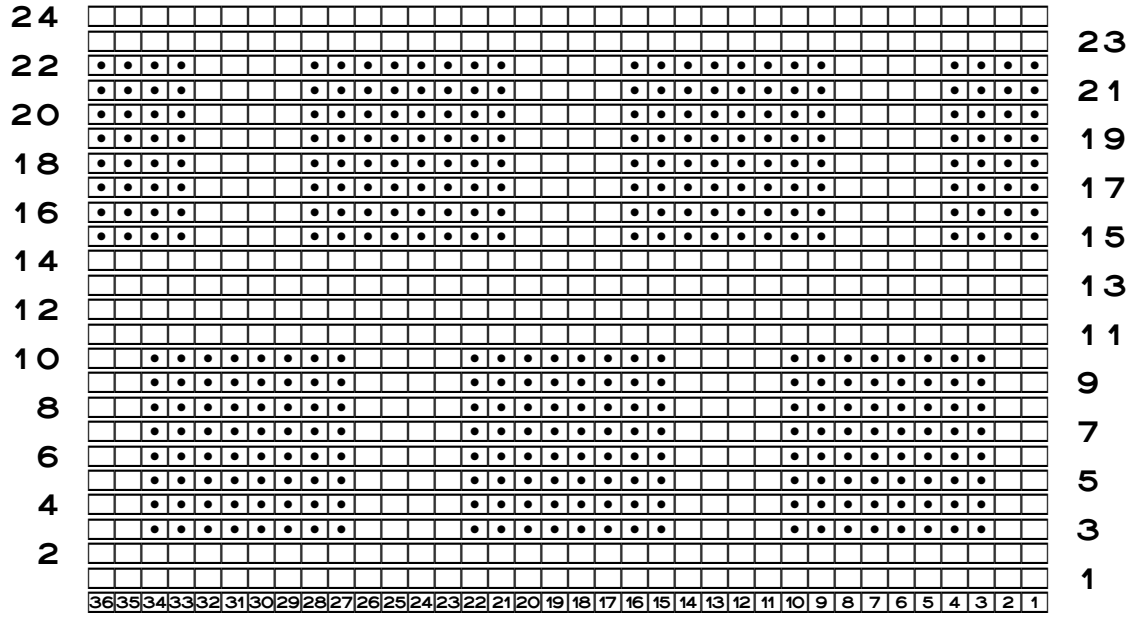
 

or three copies of the tallest pattern to have enough total rows to fit all the patterns evenly in the project chart.

But if we need more than a handful of copies of each pattern in the project chart, or if doubling, tripling, or quadrupling the tallest pattern still won't allow all the other patterns to fit in evenly, then using an online calculator is the quick solution.

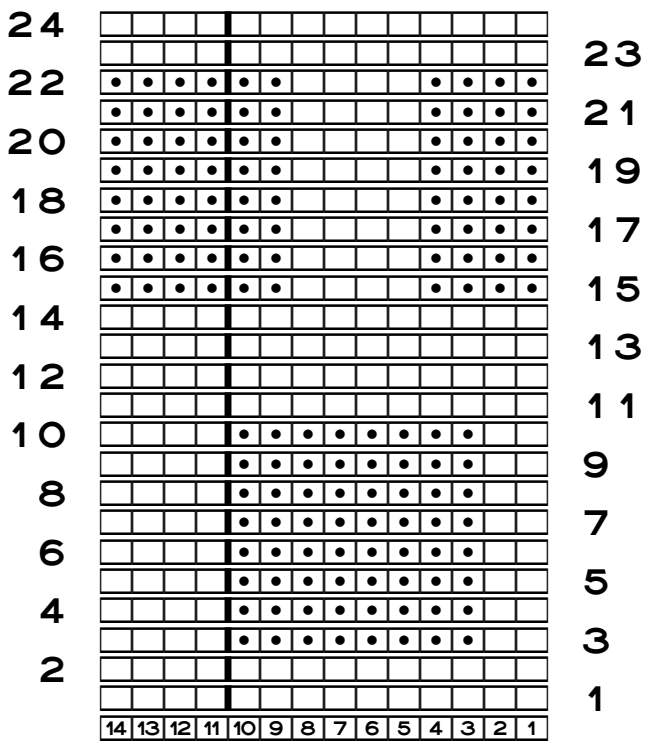
## Eight-by-Eight Basket-Weave

Here's the basic chart.



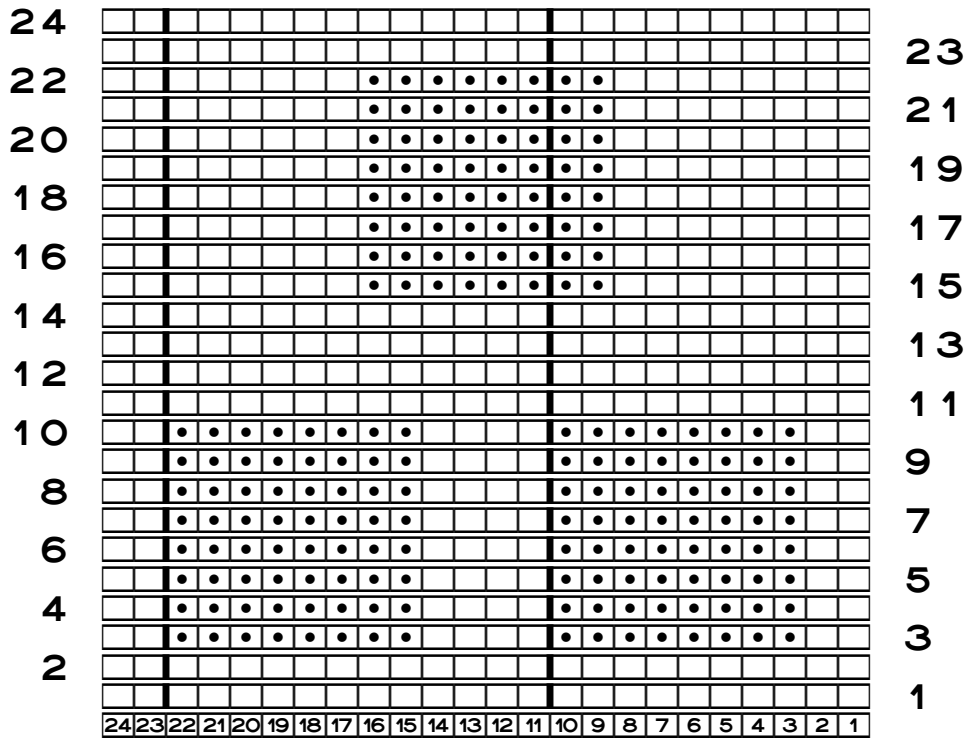

Using the standard procedure, the pattern repeat is




If we wanted to avoid partial blocks on the rows of offset blocks, then the chart would be

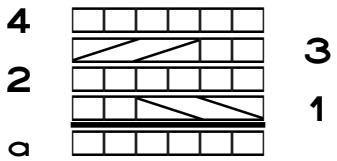
 




If we wanted to end the project with a row of original blocks, we would repeat rows one through twelve as the plus rows after working the twenty-four chart rows as often as desired.

## Upside-Down Braid

The chart in chapter 140 was




so the written-out instructions are

### Upside-Down Braid

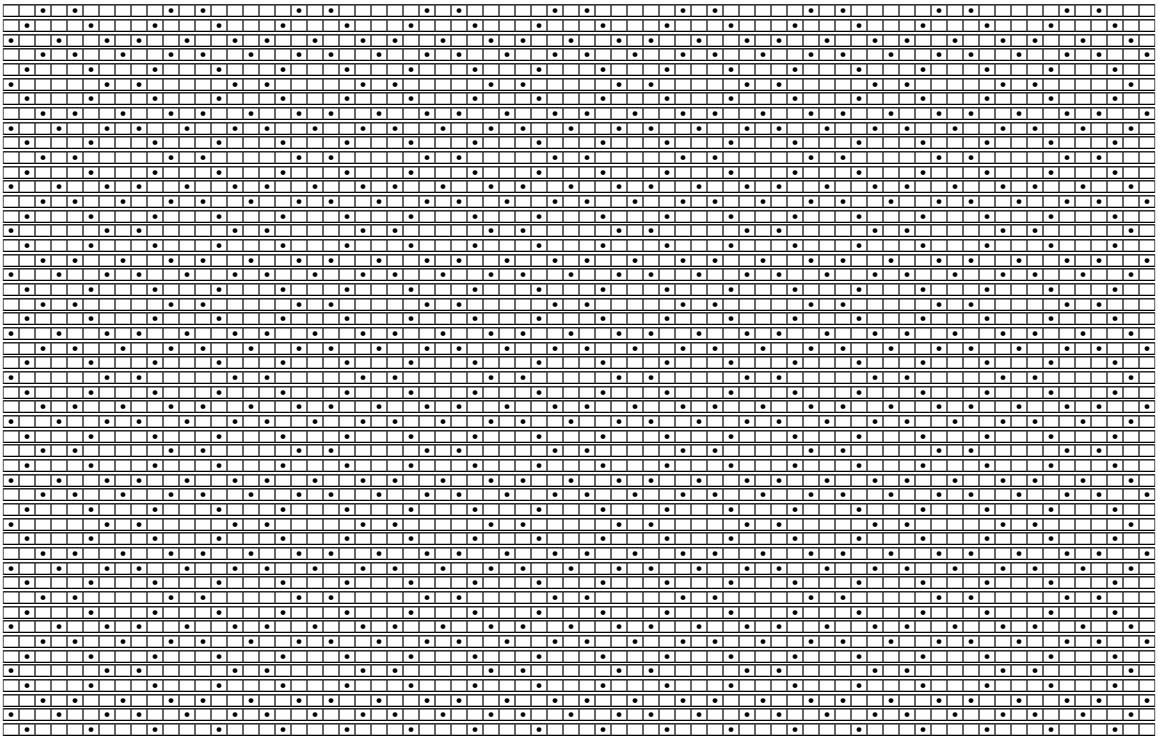
multiple of 6
C4R: put 2 sts on cn and hold to back, K2, K2 from cn
C4L: put 2 sts on cn and hold to front, K2, K2 from cn
Foundation row A and all WS rows: P.
Row 1 (RS): C4L, K2.
Row 3: K2, C4R.
Rpt rows 1–4.

# Variations on Interlocking Diamonds

In chapter 240, we rearranged the placement of the purl-diamond motif in two ways that took advantage of its diagonal shape. The suggested exercise was to create pattern charts for both those variations as well as an additional set of pattern charts that avoided partial motifs on all four edges.

## *The Hiccup Variation*

The first variation was

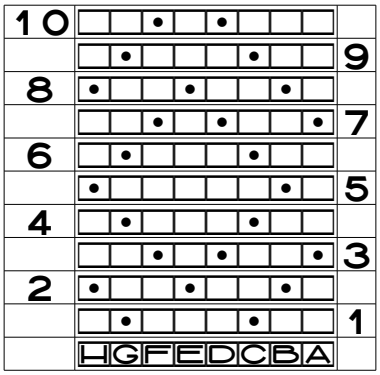


which had the diamonds positioned so that there were hiccups as we followed, say, the upper-left edge of a diamond from the lower left of the chart upward and to the right.

## *Charts for the Hiccup Version*

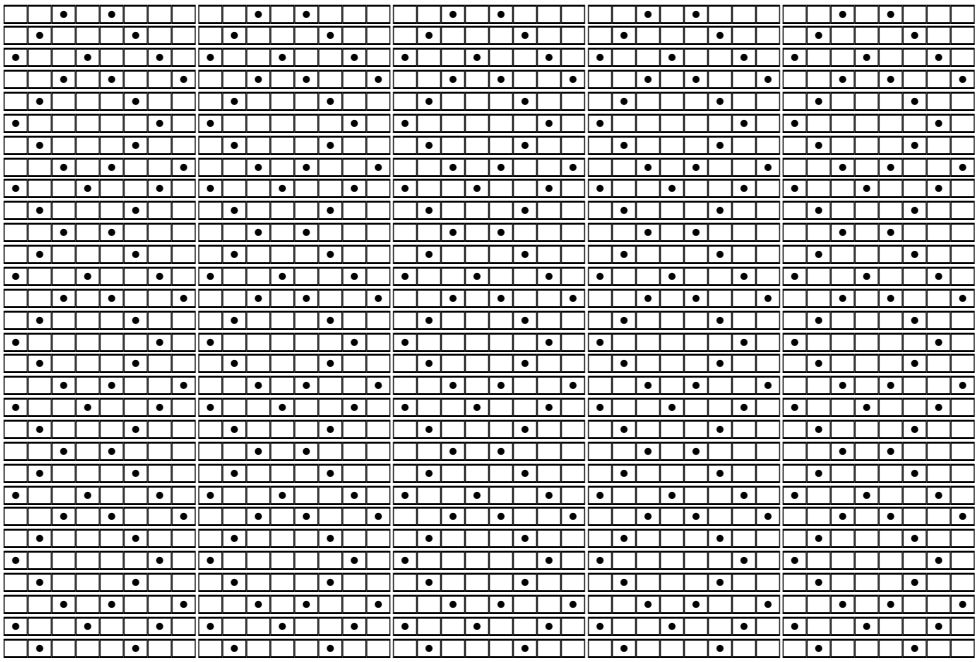
We use the standard procedure from chapter 220, and since the diamond motif is our design element, we'll choose to have a whole diamond in the pattern repeat.[1] Note that we've left a knit stitch to the right of the right corner and below the bottom corner of the complete diamond.



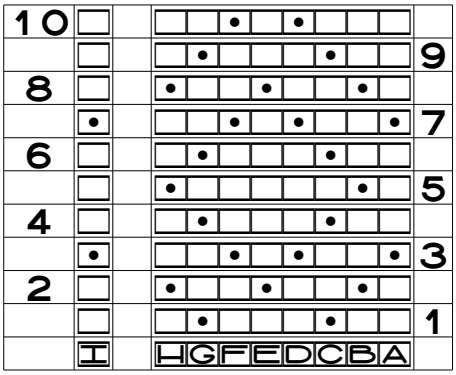

Here are copies of the pattern repeat in a table with several rows and columns, just so we can double-check that the pattern repeat is correct.

[1] There are lots of ways to chart the pattern repeats for these two variations, including the alternative positions of plus stitches and rows we saw in chapter 210. Other possible pattern repeats would not even have a full diamond in the repeat itself. All these variations would in turn require their own particular sets of plus stitches and rows.



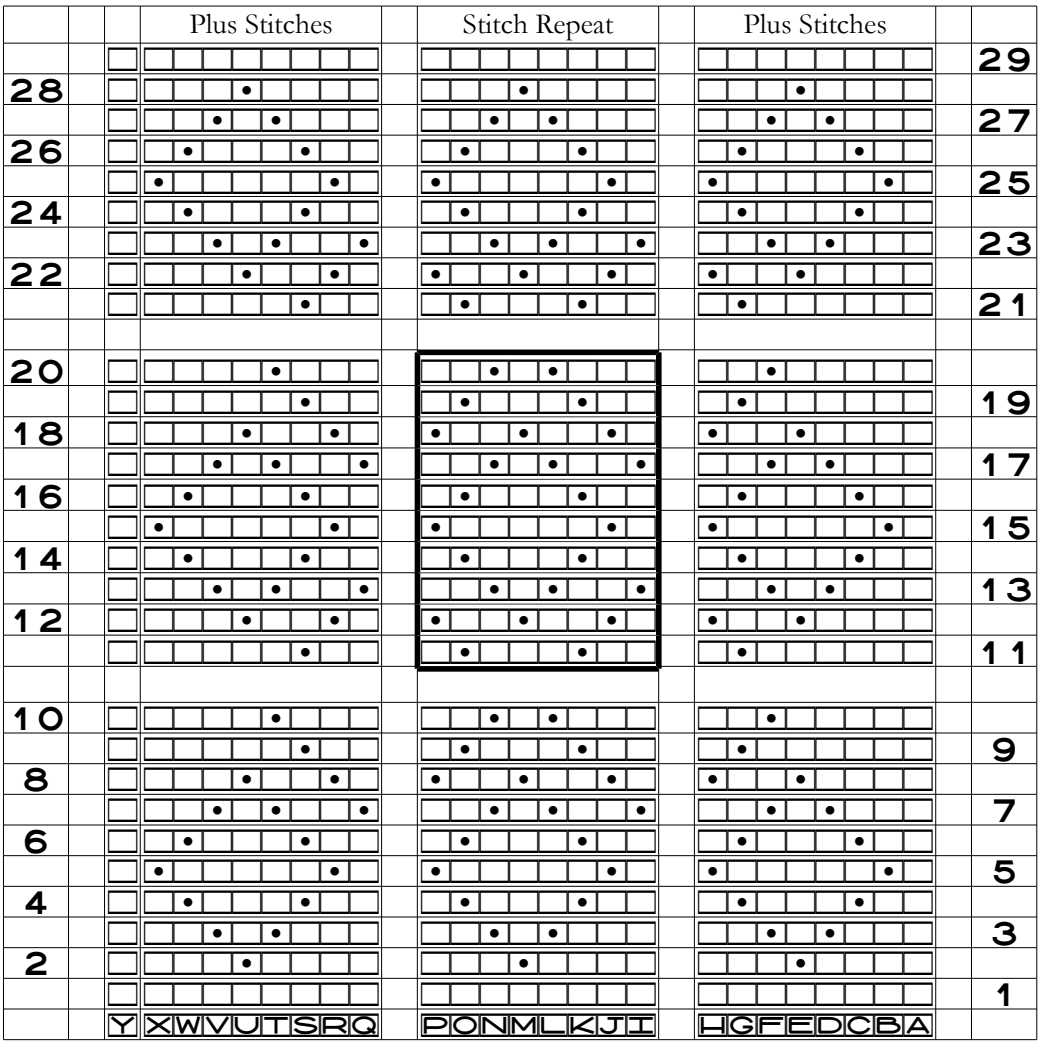
If we want the left edge to match the right edge, so that we have a knit stitch after the left point of the last diamond, then we need to add a plus stitch (an empty column indicates the boundary of the stitch repeat).




## Variation for Whole Diamonds Only

For the version that has only whole diamonds, so that there are no partial diamonds on any of the edges, we need a chart with plus stitches and rows, just like we did in the first basket-weave variation in chapter 230. For complete symmetry, we'll make the top row of diamonds be the same as the bottom row.




This chart uses blank columns and rows to show the boundaries between the pattern repeat and both sets of plus stitches and rows, and the pattern repeat has the dark border.

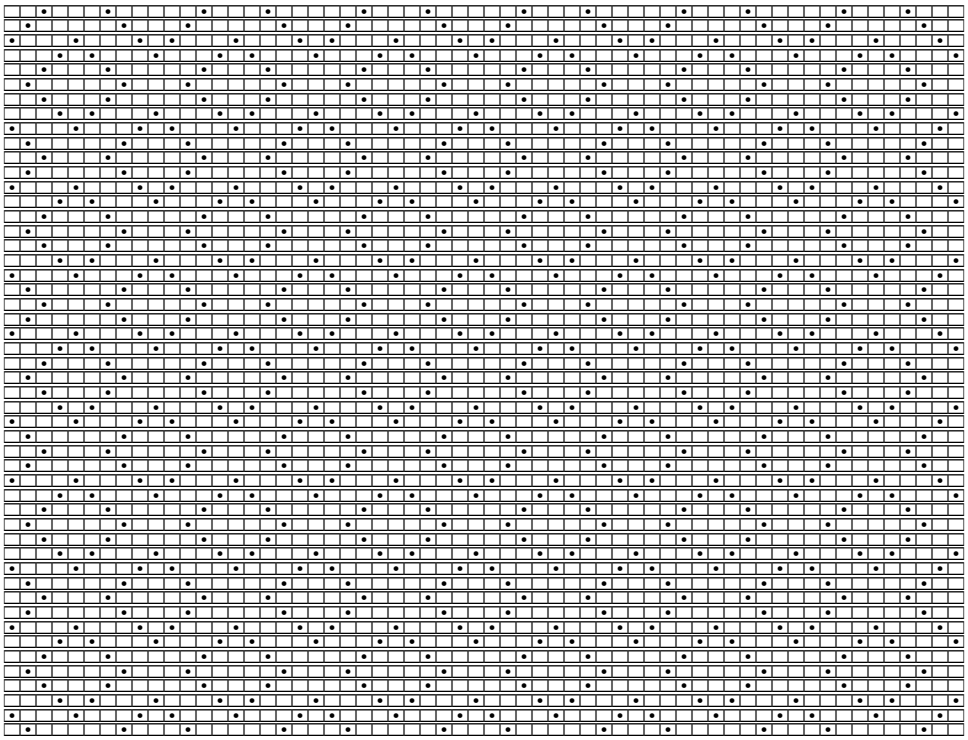
The plus stitches are stitches A through H and Q through Y. (Stitch Y was put into its own column, which is a bit easier than adding it to the left of every pattern row.) Rows one through ten and twenty-one through twenty-nine are the plus rows.

The pattern repeat is stitches I through P in rows eleven through twenty, which matches the pattern-repeat chart shown earlier.

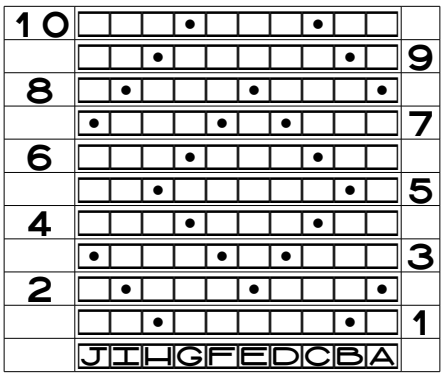
 

## *The Aligned Variation*

The second variation aligned the diamonds' sides by increasing the space between the motifs.

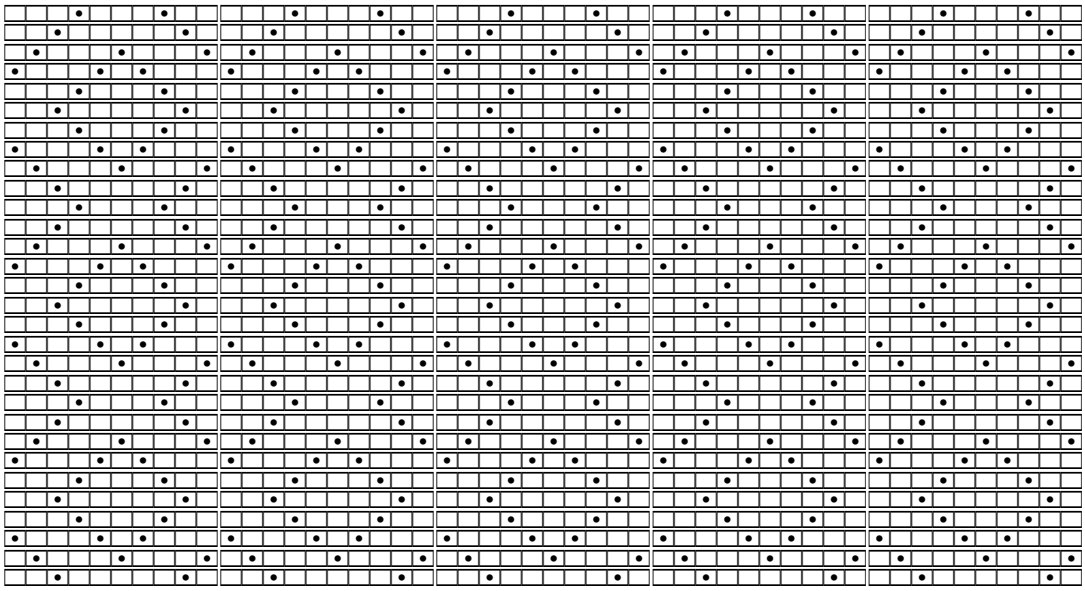


One possible pattern repeat that contains a complete diamond is

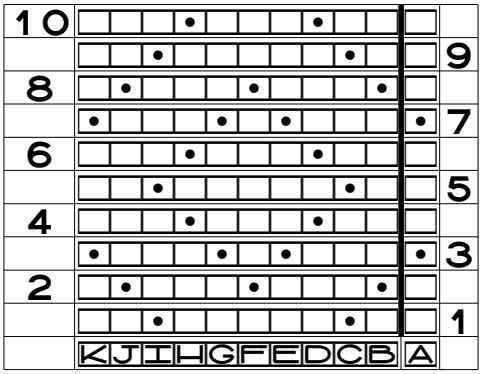



If we again put copies of the pattern repeat in a table with several rows and columns, we can double-check its accuracy.



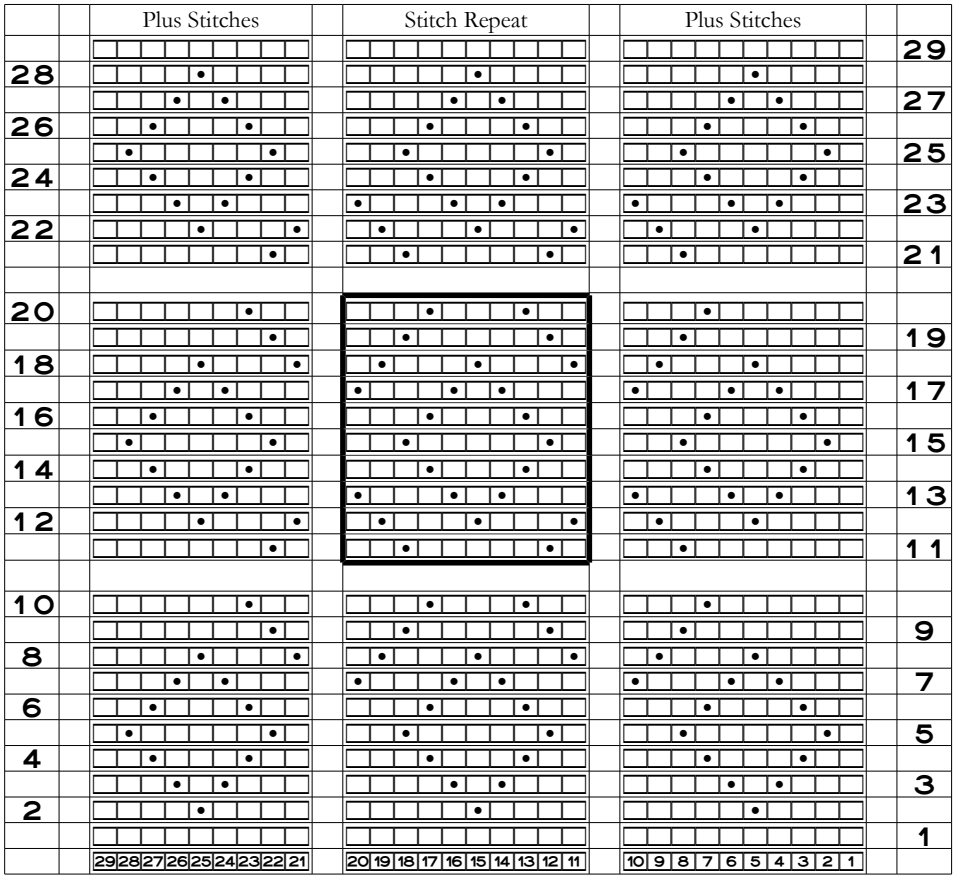
If we want the right edge to look like the left, then we need to add a plus stitch there. In this chart, a heavy cell border is used to show the boundary of the stitch repeat.




## Variation with Only Whole Diamonds

If we want whole diamonds only, we again need plus stitches and rows, determined by the normal method.




Since there are more than twenty-six stitches in the chart, the chart uses boxed numbers to identify them.

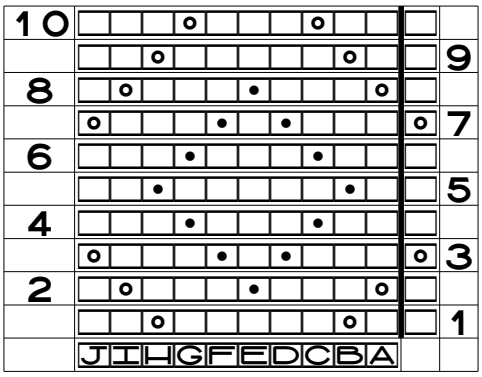
Stitches one through ten and twenty-one through twenty-nine are the plus stitches. Rows one through ten and twenty-one through twenty-nine are the plus rows.

The pattern repeat, bounded by the dark border, is stitches eleven through twenty in rows eleven through twenty, and it matches the original pattern repeat we determined earlier.

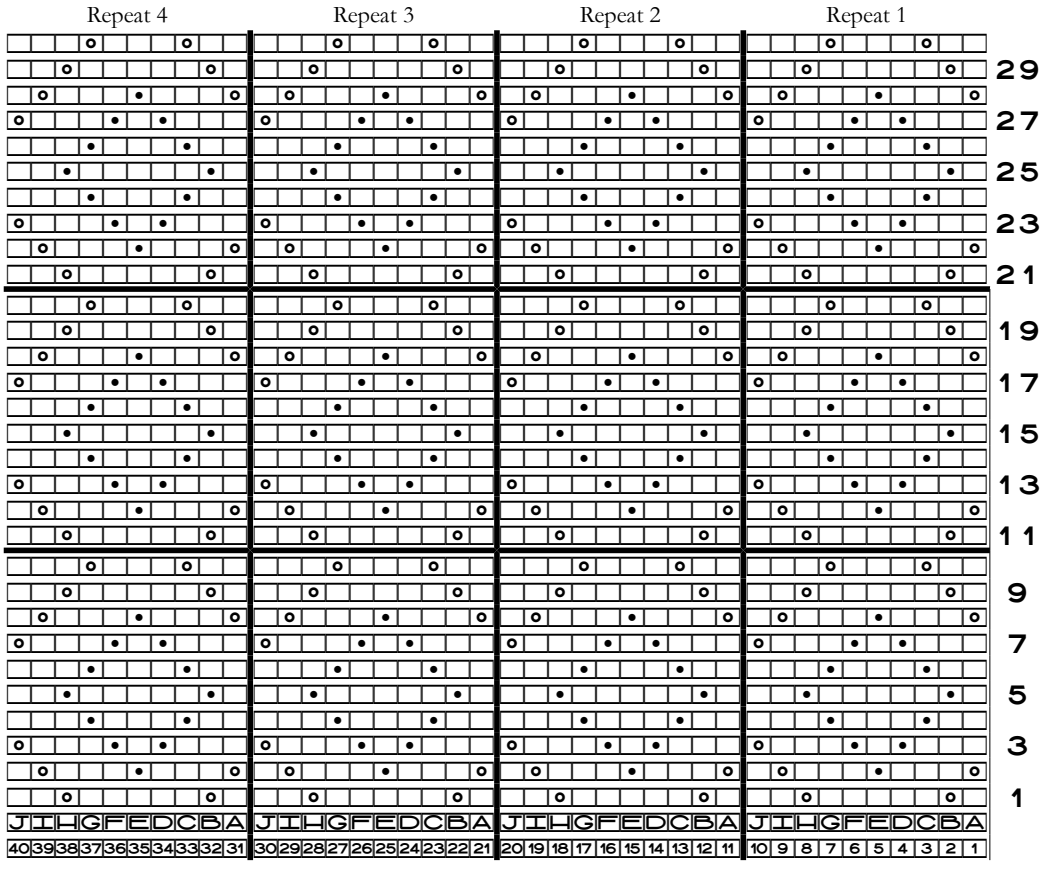
## *A Simpler Alternative*

But what if we type up the original chart of the pattern repeat slightly differently? The only thing we've done is substituted the symbol normally used for a yarnover in place of all the purl stitches that make up the partial diamonds in the corners of the pattern repeat.




Let's copy this chart several times both horizontally and vertically, putting heavy borders between the pattern repeats. (The plus stitch has been omitted to simplify the discussion.)




If we look carefully, we can see that where four copies of the pattern repeat meet one

another (the six places where the dark borders cross), we have full diamonds even where the stitch symbols have the open circles. The copies of the pattern repeat around the edges of the project chart, where only two pattern repeats are next to each other either horizontally or vertically, make only partial diamonds with the open-circle symbols.

We can use these facts to work the pattern repeat in such a way that we don't have to have a large chart that shows the plus stitches and rows explicitly. How?

## *Reinterpreting the Chart*

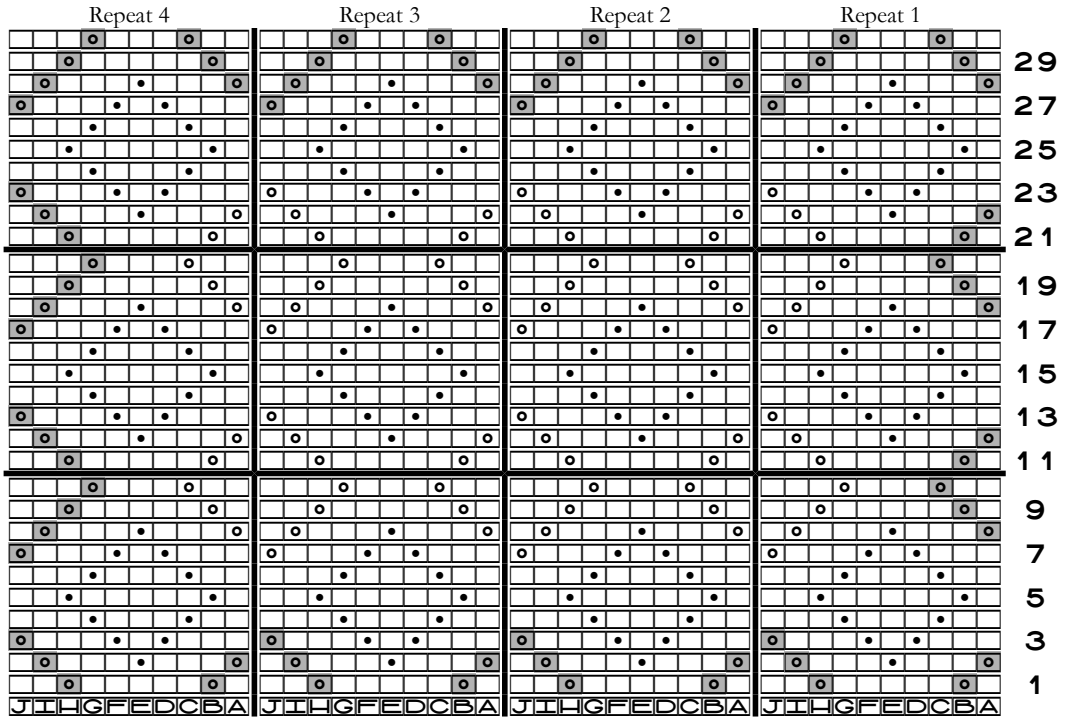
Since the open circles represent stitches that make only partial motifs, then we work them as motif stitches only where the corners of **four** pattern repeats meet. We would work the open circles as background stitches anywhere else.

So in the first three rows of the project chart, we have the top portions of five diamonds (where the open circles are) and the bottom points of four diamonds (where the purl symbols are). Since we don't want partial motifs, then we would work all the open circles in the first three pattern rows as background stitches. For the rest of the project, we would work those same open circles as motif stitches only when the end of one stitch repeat is followed by the beginning of the next stitch repeat. That means that we always work the open symbols in project stitches one through three and thirty-eight through forty as background stitches, never as motif stitches.

In the first full row of diamonds made with open circles, project-rows seven through thirteen, we would work as motif stitches only those open-circle symbols where repeat one touches repeat two, where repeat two touches repeat three, and where repeat three touches repeat four. We would work as background stitches the open circles at the beginning of repeat one and the end of repeat four, because, again, there is no pattern repeat before repeat one or after repeat four.

Let's highlight in the project chart the open circles that would be worked as motif stitches:




The interior stitches with open circles would be worked as motif stitches because when all the pattern repeats are worked, they'll form whole diamonds. But the ones around the edges that would form only partial diamonds would be worked as background stitches.

Note that it is incorrect to say that we "always work stitches A and B as background stitches." That statement is true only for the repeats on the right and bottom edges of the project. In the rest of the pattern repeats, both horizontally and vertically, those stitches must be motif stitches.

## *The General Rule*

So we can formulate a general rule for pattern charts that show at least one full and several partial motifs.

If we use a different symbol for all the stitches that make only the partial motifs, then when we are working the first or last stitch repeat on a project row, we do not work as motif stitches those that would make partial motifs at the very edges of the piece. They would be worked as background stitches instead. We work as motif stitches only those that will wind up making full motifs in the middle of the piece.

In the same way, when we're working the row repeat for the first or last time in the project, we again work as motif stitches only those that form complete motifs in the center

of the item. We work as background stitches those that would make partial motifs at the bottom or top edges of the project.

Once we understand this idea, then we don't have to have such a complicated chart to show the plus stitches and rows explicitly. We instead have some changes in how we **interpret the chart** while we're working at the project's edges. And once we got used to the idea, we wouldn't even have to use a different symbol for the stitches that form only partial motifs in the pattern chart. We would simply realize, "Oh, at this point in working the project, I won't be able to make a full motif, so I'll just work these stitches as background stitches instead of as motif stitches."

## *In Colorwork*

This same idea would also be valid in colorwork.

Suppose we want the diamond motif not as purls on a stockinette background but as knits in a different color on a stockinette background in a main color.

Again, the motif stitches around the edges of the project would be worked as the background color to avoid partial motifs. Those stitches would be worked in the motif color only when they would form complete motifs with stitches in adjacent pattern repeats.

## *Did You Notice?*

I actually changed the terms from *background* ***knits*** and *motif* ***purls*** to *background* ***stitches*** and *motif* ***stitches*** in the last few sections.

That's because the chart is symbolic, and we always have the option of making any of the symbols mean anything we want in a particular chart.