Size:

Gauge = st per 4 inches \* rows per 4 inches

sizeDesired (in inches) \* sts per inch = cast on number

sizeDesired (in inches) \* rows per inch = total row in pattern

Yardage:

Length of swatch \* width of swatch = total area

Weight of swatch \* area of swatch = total square inches

Total square inches / ball (in grams) = total balls needed

Increases and Decreases:

Stitches you have – stitches you want = number of stitches to decrease

Stitches you want – stitches you have = number of stitches to increase

Short Row Repeat:

SizeInPattern (in inches) – sizeDesired (in inches) = amount of room need to add/ subtract

roomAmountNeeded (in inches) \* pattern repeat size (in inches) = stitchesNeeded (round up or down)

stitchesNeeded / pattern repeat in stitches = number of repeats to add/ subtract

Total stitches (in inches) / length of pattern repeat (in inches) = number of pattern repeat needed

Centering long patter repeats:

Centering: total number of stitches – stitches in repeat = total number of background stitches

Number of background stitches / 2 = number of stitches to knit before and after doing pattern repeat

Vertical pattern repeats:

Swatch including two pattern repeats : row gauge

If gauge match pattern: Total swatch length (in inches) – (number of repeats x whole repeat inches) = new total length

If not:

Total swatch length (in inches) / height of repeat) = total repeats to achieve pattern length

Row gauge \* total desired length (in inches) = total number of rows

Total number of rows / number of rows in one repeat = number of repeats + extra rows (top or bottom)