

COZY STITCHERY

The Cozy Stitchery Complete Maker's Kit

Quilting, sewing, knitting, crochet and needlework planners in one warm, printable kit: do the math once, cut with confidence, and finish what you start.

24 worksheets · print as many copies as you like

Quilt Size Planner

Measure the bed, not the chart

Maker	Date
Quilt for	Bed and mattress

Standard quilt size charts disagree with each other by several inches, because they assume different mattress depths and different drops. The mattress you are actually covering decides the size. Measure its width, length and depth, choose how far the quilt should hang and whether it tucks under the pillows, and the finished size is simple addition.

US mattress sizes

Mattress	Width x length (in)	Your mattress measured	Depth measured
Crib	28 x 52		
Twin	38 x 75		
Twin XL	38 x 80		
Full or double	54 x 75		
Queen	60 x 80		
King	76 x 80		
California king	72 x 84		

Mattress depth varies from about 8 in on a basic mattress to 14 in or more on a pillow-top, and a mattress topper adds more. That difference is why a chart quilt fits one bed and looks short on the next.

Finished size worksheet

Width is mattress width plus a drop on both sides. Length is mattress length plus a drop at the foot plus a pillow tuck, if you want one.

Step	Example: queen	Your quilt
Mattress width	60 in	
Mattress length	80 in	
Mattress depth	12 in	
Drop wanted (depth plus overhang)	15 in	
Pillow tuck, if any	12 in	
Finished width (width + 2 x drop)	90 in	
Finished length (length + drop + tuck)	107 in	
Allowance for quilting take-up and shrinkage	A few percent, more for dense quilting	
Target top size		

Dense quilting draws a quilt in, and cotton batting shrinks on the first wash. Check the batting package for its expected shrinkage and decide whether to prewash.

Common finished quilt sizes

Quilt	Common finished size range (in)	Your planned size
Crib or baby	36 x 52 to 45 x 60	
Lap or throw	50 x 60 to 60 x 72	
Twin	66 to 72 x 88 to 96	
Full or double	80 to 86 x 88 to 108	
Queen	88 to 94 x 94 to 108	
King	104 to 110 x 94 to 108	
California king	100 to 106 x 100 to 112	
Wall hanging or table runner	Measure the wall or table	

Ranges, not rules. Sources vary with the drop and tuck they assume. The worksheet above, done with your own mattress, beats every chart.

Crib quilts and safe sleep

The American Academy of Pediatrics advises no quilts, blankets, pillows or other soft bedding in a crib for babies under 12 months. A crib quilt is a play mat, a stroller cover under supervision or a wall hanging until then. Include this note if you are gifting one.

Quilt plans

Quilt name	For	Bed	Finished size	Pattern	Started	Finished

Measuring and planning a bed quilt

A large self-healing mat and a long ruler make the finished size real on the first cut rather than on the third.

- **Janome Memory Craft Horizon 8200QCP Special Edition:** An 11 x 4.7 in work space to the right of the needle is what lets a queen top measured on this sheet roll through without fighting the machine.
- **Olfa 35 x 70 Continuous Grid Connecting Rotary Mat Set:** Three 23 x 35 in mats clip into a continuous 35 x 70 in grid, long enough to square a border after you add the drop to the mattress width.
- **Omnigrid 6 x 24 Rectangle Quilting Ruler:** A 6 x 24 in ruler spans a folded width-of-fabric cut in one pass, with 30, 45 and 60 degree angle lines for the setting triangles.
- **Hoechstmass 60-Inch Retractable Tape Measure:** A 60 in retractable tape reaches across a king mattress and around its depth, which is the measurement the size charts on this sheet cannot do for you.

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Quilt Pattern Planning & Graph Grid

Draw the whole quilt to scale before cutting a single strip

Maker	Quilt
Scale: one square equals	Finished size

A quilt drawn to scale shows problems that a cut list hides: a border that swamps the blocks, a block that does not divide evenly into the bed width, a directional print running the wrong way. Choose a scale so the whole quilt fits the grid, then sketch the layout, shade values and count the pieces from the drawing.

Layout decisions

Decision	Options	Your choice
Setting	Straight set, on point, medallion, rows, sampler, whole cloth	
Block	Name or sketch number	
Finished block size		
Sashing	None, plain, with cornerstones	
Borders	None, one, multiple, pieced	
Directional prints	Which way up, and does it matter on the bed	
Quilting plan	Edge to edge, custom, hand, walking foot lines	

Choosing the scale

Squares across equals finished width divided by inches per square. Pick the smallest whole number of inches per square that fits the 24 by 24 grid below.

Step	Example: 80 x 94 in throw	Your quilt
Finished width and length	80 x 94 in	
Inches per square tried	4 in	
Squares across (80 / 4)	20	
Squares down (94 / 4)	23.5	
Fits a 24 x 24 grid?	Yes	
A 12 in block at this scale	3 x 3 squares	
A 2 in sashing strip	Half a square	

Graph grid

One square equals the scale written at the top. Outline the quilt edge first, then blocks, sashing and borders. Shade lights, mediums and darks in pencil.

[illegible]

Piece count from the drawing

Unit	Finished size	Count from drawing	Fabric	Cut size	Carry to sheet 5

Designing on paper, screen or wall

A felt design wall shows the layout at full size. A digital fabric cutter turns the finished plan into accurately cut pieces.

- **Brother ScanNCut DX SDX325 Cutting Machine:** Scans a drawn block and cuts it, and carries 140 built-in quilt patterns, so a sketch from the grid above becomes pieces without hand tracing.
- **Cricut Maker 4 Smart Cutting Machine:** Cuts and draws on more than 100 materials from Design Space, useful for turning a scaled layout into templates and applique shapes.
- **Missouri Star Handy Grip Pin-Free Quilt Design Wall 62 x 72:** A 62 x 72 in cotton flannel wall with a 5 in grid holds blocks without pins, so you can judge the layout at full size before sewing rows.

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Fabric Color & Value Planning

Value does the work; color gets the credit

Maker

Quilt

Color scheme

Focus fabric

Value is how light or dark a fabric reads, regardless of its color. A quilt pattern appears because neighboring pieces contrast in value; two fabrics of different colors but the same value blur together from across the room. Sort fabrics by value first, then check the color scheme, then the print scale.

Checking value

- ☐ Photograph the fabrics together and view the photo in black and white
- ☐ Squint, or step back several feet
- ☐ Use a red value viewer for most colors; it does not work on red fabrics, so use a green viewer for reds
- ☐ Lay fabrics in a line from lightest to darkest and look for any that jump out of order
- ☐ Check the background fabric against every other fabric it touches

Color schemes

Scheme	Built from	Feel	Using it?
Monochromatic	One hue in many values	Calm, elegant	
Analogous	Neighbors on the color wheel	Harmonious	
Complementary	Opposites on the wheel	Lively, high contrast	
Split-complementary	One hue plus the two beside its opposite	Lively but softer	
Triadic	Three hues evenly spaced	Bold, playful	
Scrappy	Many hues held together by value or background	Cozy, vintage	

Warm colors tend to advance and cool colors recede. A common decorating proportion, roughly 60 percent main, 30 percent secondary and 10 percent accent, works well as a starting point for yardage.

Fabric roles and values

Rate value from 1, lightest, to 10, darkest. Record print scale as small, medium or large.

Fabric	Role	Hue	Value 1 to 10	Print scale	Share of quilt	Yardage
	Background					
	Focus or feature print					
	Light					
	Medium					
	Medium dark					
	Dark					
	Accent					
	Binding					
	Backing					

Print scale mix

Scale	Reads as	Good for	Fabrics chosen
Small or tone-on-tone	Nearly solid	Small pieces, backgrounds	
Medium	Texture	Most block pieces	
Large	A picture	Big squares, borders, backing	
Stripes and plaids	Direction	Binding, sashing, deliberate movement	

Large prints lose their design when cut small. Save them for pieces at least several inches across.

Swatch notes

Pin or tape small swatches beside each line

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Seeing color accurately

Choose fabrics under daylight-balanced, high-CRI light; warm household bulbs shift colors and hide value problems.

- **Daylight Company Artist Studio Lamp 2:** A 6,000 lux, 95+ CRI daylight lamp over the sorting table is what makes the value test on this sheet honest; a warm bulb hides value differences.
- **OttLite Flex LED Floor Lamp:** A 95+ CRI floor lamp that adjusts from 49 to 71 in, so you can put true-color light over a design wall or a cutting table.
- **Daylight Company DuoPro Double Shade Table Lamp:** A 6,000K, 95+ CRI double shade lamp at 2,100 lux for judging swatches at the machine rather than carrying them to a window.
- **Missouri Star Handy Grip Pin-Free Quilt Design Wall 62 x 72:** Stepping back from a 62 x 72 in flannel wall is the squint test: value problems show up at distance that you cannot see at arm's length.

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Blocks, Sashing & Borders Math

Finished size plus a quarter inch on every side

Maker	Quilt
Finished block size	Layout

Every piece in a quilt has two sizes. The finished size is what shows once it is sewn, and the unfinished or cut size is a half inch larger, because a standard quarter inch seam takes a quarter inch from each side. Plan in finished sizes, cut in unfinished sizes, and write both down so the two never get mixed up.

Layout worksheet

Center width is blocks across times block size, plus sashing strips between and around them. Add the border width twice for the finished quilt.

Step	Example: throw	Your quilt
Finished block size	12 in	
Blocks across	5	
Blocks down	6	
Blocks needed (across x down)	30	
Finished sashing width	2 in	
Center width (5 x 12 + 6 x 2)	72 in	
Center length (6 x 12 + 7 x 2)	86 in	
Finished border width	4 in	
Finished quilt width	80 in	
Finished quilt length	94 in	

That layout uses sashing around the outside edge as well as between blocks. Without the outer frame, use one fewer sashing strip in each direction.

Sashing, cornerstones and borders cut list

Piece	How many	Cut size	Example count and size	Your quilt
Blocks, unfinished	Across x down	Finished + 1/2 in	30 at 12 1/2 in square	
Sashing strips	(across + 1) x down + (down + 1) x across	Sash width + 1/2 by block + 1/2	71 at 2 1/2 x 12 1/2 in	
Cornerstones	(across + 1) x (down + 1)	Sash width + 1/2 square	42 at 2 1/2 in square	
Side borders	2	Border + 1/2 by measured center length	4 1/2 x 86 1/2 in	
Top and bottom borders	2	Border + 1/2 by measured width with side borders on	4 1/2 x 80 1/2 in	

Measure borders through the center of the quilt, not along the edges, which stretch. Cut to the center measurement and ease the edge to fit, and the quilt will lie flat instead of rippling.

Half-square triangles and quarter-square triangles

Finished unit	HST, 2 at a time: square to cut	HST, 8 at a time: square to cut	QST, 4 at a time: square to cut
2 in	2 7/8 in	5 3/4 in	3 1/4 in
3 in	3 7/8 in	7 3/4 in	4 1/4 in
4 in	4 7/8 in	9 3/4 in	5 1/4 in
6 in	6 7/8 in	13 3/4 in	7 1/4 in
Formula	Finished + 7/8 in	Finished x 2 + 1 3/4 in	Finished + 1 1/4 in

These are exact sizes. Many quilters add about 1/2 in and trim the unit down to unfinished size afterward, which forgives a wobbly seam. If you trim, write the trim size here too.

Flying geese

A flying geese unit is twice as wide as it is tall. The no-waste method makes four identical geese from one large square and four small squares.

Finished goose (W x H)	No-waste: 1 large square	No-waste: 4 small squares	Stitch and flip: rectangle	Stitch and flip: 2 squares
2 x 1 in	3 1/4 in	1 7/8 in	2 1/2 x 1 1/2 in	1 1/2 in
3 x 1 1/2 in	4 1/4 in	2 3/8 in	3 1/2 x 2 in	2 in
4 x 2 in	5 1/4 in	2 7/8 in	4 1/2 x 2 1/2 in	2 1/2 in
6 x 3 in	7 1/4 in	3 7/8 in	6 1/2 x 3 1/2 in	3 1/2 in
Formula	W + 1 1/4 in	H + 7/8 in	(W + 1/2) x (H + 1/2)	H + 1/2 in

On-point settings

Item	Formula	Example: 12 in block	Your block
Block diagonal (finished)	Block x 1.414	16.97 in	
Side setting triangles, square to cut twice diagonally	Block x 1.414 + 1 1/4 in	18.22, cut 18 1/4 in	
Corner triangles, square to cut once diagonally	Block / 1.414 + 7/8 in	9.36, cut 9 3/8 in	

Cutting side setting triangles twice on the diagonal keeps the straight grain on the outside edge of the quilt, so the edge does not stretch.

Accurate cutting and a true quarter inch

Every number on this sheet assumes an accurate cut and a true quarter inch seam. A square-up ruler and a quarter inch foot protect both.

- **Janome 3160QDC-G Sewing and Quilting Machine:** Its bonus quilt kit includes the quarter-inch foot every number on this sheet assumes, plus a walking foot and an extension table.
- **Olfa 45mm Ergonomic Squeeze-Handle Rotary Cutter RTY-2/DX:** A 45mm squeeze-handle blade retracts the moment you let go, and 45mm is the size the strip widths in the cut list are drafted around.
- **Omnigrid Square Quilting Ruler Value Pack (4-1/2, 6-1/2, 9-1/2 and 12-1/2 in):** 4-1/2, 6-1/2, 9-1/2 and 12-1/2 in squares with a 45 degree diagonal line, so a block gets trimmed to its unfinished size before it goes into a row.
- **Bloc Loc Half-Square Triangle Ruler Set #2:** Grooved 2-1/2, 4-1/2 and 6-1/2 in rulers lock onto the seam of a half-square triangle, which is where the HST math on this sheet usually goes wrong.

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Fabric Yardage, Backing & Binding

Buy once, in the same dye lot

Maker	Quilt
Finished size	Shop

Quilting cotton is sold as 42 to 44 inches wide, but after the selvages are trimmed and the fabric is squared, plan on 42 inches of usable width of fabric, or WOF. Every yardage figure on this sheet is worked from strips cut across that width. Round up, add a little for squaring and mistakes, and buy it all at once, because prints go out of stock.

Yardage from a cut list

Pieces per strip is 42 divided by the piece width, rounded down. Strips needed is pieces divided by pieces per strip, rounded up. Inches of fabric is strips times strip width, and yards is that divided by 36.

Fabric	Piece size	Pieces needed	Strip width	Pieces per strip	Strips	Inches	Yards to buy
Example: sashing	2 1/2 x 12 1/2 in	71	12 1/2 in	16	5	62.5	1.74, buy 2
Example: cornerstones	2 1/2 in square	42	2 1/2 in	16	3	7.5	0.21, buy 1/3

For the sashing, a 12 1/2 in strip subcut into 2 1/2 in widths gives 16 pieces, where a 2 1/2 in strip subcut into 12 1/2 in lengths gives only 3. Try both directions and use whichever needs less fabric.

Backing: pieced or wide

Backing is the quilt top plus extra on every side. Longarm quilters commonly ask for about 4 in extra per side; ask yours. Pieced from 42 in fabric, count about 40 in per panel after seams.

Step	Example: 80 x 94 in quilt	Your quilt
Backing size (top + 4 in per side)	88 x 102 in	
Vertical seams: panels (88 / 40, round up)	3 panels x 102 in = 8.5 yd	
Horizontal seams: panels (102 / 40, round up)	3 panels x 88 in = 7 1/3 yd	
108 in wide backing (length needed = 88 in)	2.44 yd, buy 2 1/2 yd	
Cheapest option for this quilt		

Try the seams both ways. The shorter panel direction often saves more than a yard, and wide backing removes the seam entirely.

Binding

Step	Example	Your quilt
Perimeter (2 x width + 2 x length)	2 x 80 + 2 x 94 = 348 in	
Plus 10 to 12 in for corners and joining	360 in	
Usable length per strip after diagonal joins	About 40 in	
Strips needed (round up)	9	
Strip width	2 1/2 in, common double-fold	
Fabric (strips x width / 36)	22.5 in = 0.63 yd, buy 3/4 yd	

Batting

Batting size	Typical packaged size (in)	Fits a top up to about	Your pick
Crib	45 x 60	37 to 41 x 52 to 56	
Twin	72 x 90	64 to 68 x 82 to 86	
Full	81 x 96	73 to 77 x 88 to 92	
Queen	90 x 108	82 to 86 x 100 to 104	
King	120 x 120	112 to 116 x 112 to 116	

Batting should be the quilt top plus 4 to 8 in overall, the same margin as the backing. Packaged sizes vary by brand, so check the label. The example 80 x 94 in quilt needs 88 x 102 in, which a queen batt covers.

Precut equivalents

Precut	Piece size	Pieces, commonly	Rough yardage equivalent	In your stash
Mini charm pack	2 1/2 in squares	42	About 1/6 yd	
Charm pack	5 in squares	42	About 2/3 yd	
Layer cake	10 in squares	42	About 2 3/4 yd	
Jelly roll	2 1/2 in x WOF strips	40	About 2 3/4 yd	
Fat quarter	18 x 21 in, approx.	1	Same area as 1/4 yd	
Fat eighth	9 x 21 in, approx.	1	Same area as 1/8 yd	

Piece counts vary by manufacturer, so count the bundle before cutting. Equivalents are by area at 42 in WOF. Sheet 6 turns each precut into block yields.

Cutting it all out

- Once a cut list passes a hundred pieces, a fabric cutting machine or a rotary system with a large mat saves hours and fabric.
- **AccuQuilt GO! Big Electric Fabric Cutter Starter Set:** An electric cutter that takes all GO! dies, including 14 x 16 in GO! Big dies, and cuts up to 6 layers of cotton at a time when the cut list runs long.
 - **AccuQuilt GO! Fabric Cutter Starter Set:** The folding manual cutter, also up to 6 layers, with a 4.5 in square, 2.5 in square and half-square triangle die to start the cut list.
 - **ROC-Ion 108 in Wide Cotton Quilt Backing, White, 3 Yards:** At 108 in wide, a single 3 yd length backs a throw or twin with no backing seam to piece, which is the whole point of the backing worksheet.
 - **Hobbs Heirloom 80/20 Cotton/Poly Batting, Queen:** A 90 x 108 in 80/20 batt at about 1/8 in loft, quiltable up to 4 in apart, with about 3 to 5% shrinkage to allow for in the size math above.

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Precuts Project Yield Chart

What a charm pack, layer cake, jelly roll or fat quarter actually makes

Maker	Precut
Line and designer	Count verified

Precuts are sold by the piece, but patterns are written by the unit: squares, strips, half-square triangles. This sheet converts one into the other so you can see before buying whether a bundle stretches to the quilt you want. Yields assume 42 pieces in square packs and 40 strips in a jelly roll, which is common but not universal, so count yours.

Charm packs and layer cakes

Precut and method	Yield per piece	Yield from 42 pieces	Finished unit	Your count
Charm (5 in) cut into quarters	4 x 2 1/2 in squares	168	2 in squares	
Charm paired with a 5 in background square, HST 2 at a time	2 HSTs	84	4 1/8 in exact, or trim to 4 in	
Charm sewn edge to edge, 6 x 7 layout	1 square	42	Top 27 x 31 1/2 in	
Layer cake (10 in) cut into quarters	4 x 5 in squares	168	4 1/2 in squares	
Layer cake paired with a 10 in background square, HST 8 at a time	8 HSTs	336	4 1/8 in exact, or trim to 4 in	
Layer cake sewn edge to edge, 6 x 7 layout	1 square	42	Top 57 x 66 1/2 in	

HST 2 at a time finishes at the square size minus 7/8 in: 5 minus 7/8 is 4 1/8 in. HST 8 at a time finishes at (square minus 1 3/4) divided by 2: (10 minus 1.75) / 2 is 4 1/8 in. Pinked edges: follow the pattern on whether to measure from the points or the valleys.

Jelly rolls

A 2 1/2 in strip about 42 in long, subcut. Pieces per strip is 42 divided by the length, rounded down.

Subcut length	Pieces per strip	From 40 strips	Finished unit	Your count
2 1/2 in	16	640	2 in squares	
4 1/2 in	9	360	2 x 4 in rectangles	
6 1/2 in	6	240	2 x 6 in rectangles	
8 1/2 in	4	160	2 x 8 in rectangles	

The jelly roll race, worked

Step	Example	Your roll
Strips sewn end to end (40 x 42 in)	About 1,680 in	
Fold in half and sew along the long edge, repeat 5 times	1,680 / 32 = 52.5 in long	
Strips across after 5 folds	32	
Width (32 x 2 in finished)	64 in	
Approximate top before trimming	About 50 x 64 in, after seam and end losses	

The joining seams and trimmed ends take a little length, so the top usually finishes slightly under the arithmetic. Add borders to reach a larger size.

Fat quarters and fat eighths

Yields assume 18 x 21 in for a fat quarter and 9 x 21 in for a fat eighth. Pieces equal rows times columns, each rounded down.

Square cut size	From a fat quarter	From a fat eighth	Your count
2 1/2 in	7 x 8 = 56	3 x 8 = 24	
3 1/2 in	5 x 6 = 30		
4 1/2 in	4 x 4 = 16		
5 in	3 x 4 = 12	1 x 4 = 4	
6 1/2 in	2 x 3 = 6		
10 in	1 x 2 = 2		

Many fat quarters measure under 18 x 21 in after prewashing and squaring. Measure before counting on the last row of squares.

Will this bundle make my quilt?

Unit the pattern needs	How many	Precut that yields it	Yield per bundle	Bundles needed	Extra yardage

Precuts and the tools that trim them

- Square rulers in the precut sizes make trimming HSTs fast, and a spare blade keeps cuts clean through stacked layers.
- **AccuQuilt GO! Big Qubed Starter Pack:** Electric cutting in 6, 8, 9, 10, 12 and 16 in Qube block formats plus a 2-1/2 in strip cutter, so you can cut your own jelly roll and charm equivalents.
 - **Moda Bella Solids White Layer Cake:** 42 squares of 10 in cotton, the exact precut the layer cake yields in this sheet are counted from.
 - **Omnigrid Square Quilting Ruler Value Pack (4-1/2, 6-1/2, 9-1/2 and 12-1/2 in):** The 4-1/2 and 6-1/2 in squares trim charm-pack and layer-cake HSTs to size faster than measuring each one.
 - **Olfa 45mm Rotary Replacement Blades RB45-10 (10 Pack):** Ten replacement 45mm tungsten steel blades; stacked precut layers dull a blade quickly, and a dragging blade shifts the stack.

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Quilt Project Journal

One quilt per page: pattern, fabrics, timeline, recipient and label

Maker	Quilt name
Started	Finished

A finished quilt outlives the memory of how it was made. Print a fresh copy of this page for each quilt and fill it in as you go: where the pattern came from, what fabrics went in, who quilted it and who it was for. The label section at the bottom is what future owners will read.

The quilt

Detail	Record
Pattern and designer	
Source: book, shop, website, original	
Block and setting	
Finished size	
Occasion	
Recipient	
Fabric line or colorway	
Background fabric	
Backing	
Binding	
Batting: brand, fiber, loft	
Thread: piecing and quilting	
Quilted by, and design	
Washed before gifting?	

Fabric swatches

Pin or tape a small swatch in each row.

Swatch	Fabric name and number	Where used	Yardage used

Timeline

Milestone	Planned date	Actual date	Hours
Pattern chosen and fabric bought			
Fabric prewashed and pressed, if you prewash			
Cutting done			
Blocks pieced			
Top assembled with borders			
Backing and batting ready			
Basted, or dropped off with the longarm quilter			
Quilting done			
Binding done			
Label sewn on			
Gifted or put on the bed			
Total hours (carry to sheet 22)			

Label text

A good label names the quilt, the maker, the quilter if different, the place and the year, and the recipient and occasion if it is a gift.

Draft the label wording

Draft the label wording

Draft the label wording

Draft the label wording

Draft the label wording

Care instructions given with it

- ☐ Wash cold on gentle, with mild detergent
- ☐ Color catcher sheets for the first washes if colors might run
- ☐ Tumble dry low or line dry out of direct sun
- ☐ No bleach or fabric softener unless the fabrics allow it
- ☐ Store folded in breathable cotton, not plastic, and refold along different lines occasionally

What I would change next time

Notes for the next quilt

Notes for the next quilt

Notes for the next quilt

Finishing and labeling

An embroidery machine stitches a label that lasts as long as the quilt. Printable fabric sheets are the simple alternative.

- **Brother PE545 Embroidery Machine:** A 4 x 4 in embroidery field with 135 built-in designs and 10 fonts stitches the label text from this sheet so it lasts as long as the quilt.
- **Brother Skitch PP1 Embroidery Machine:** A 4 x 4 in field fed from the Artspira app, for makers who want to design a label on a phone rather than at a machine screen.
- **Clover Chaco Liner, White:** Fine white chalk marks the label placement and the care-card guides, then brushes away instead of needing a wash.

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Free-Motion & Longarm Practice Log

Consistent stitches come from logged practice, not from a new machine alone

Quilter	Machine
Stitch regulator on?	Practice sandwich size

Free-motion quilting is a coordination skill: your hands set stitch length by how fast they move against the machine speed. Practice on sandwiches of the same fabric, batting and thread as your real quilt, a common size being about 18 in square, and log the settings next to the result. Within a few sessions the log shows which speed, tension and motion give even stitches.

Setup checklist

- ☐ Domestic machine: feed dogs lowered or covered, free-motion or darning foot fitted
- ☐ Longarm or sit-down: stitch regulator mode chosen, or manual mode noted
- ☐ Fresh needle suited to the thread (sheet 16)
- ☐ Top and bobbin thread weights noted
- ☐ Practice sandwich basted with the same batting as the real quilt
- ☐ Slippery slider mat or gloves if you use them
- ☐ Machine speed set to a moderate, steady level
- ☐ Ruler work only with a ruler foot and rulers made for machine quilting, commonly 1/4 in thick; never a rotary cutting ruler

Drills

Drill	Builds	Tip	Sessions done
Meander or stipple	Smooth curves, no crossing lines	Keep the path wandering; avoid sharp points	
Loops	Rhythm and even size	Say the motion as you sew	
Pebbles	Slow, controlled circles	Travel over previous stitching lightly	
Echo quilting	Consistent spacing	Use the foot edge as a guide	
Straight lines with a ruler	Ruler control	Light, steady pressure against the foot	
Swirls	Filling space evenly	Plan the exit before starting a swirl	
Feathers	Planning and symmetry	Draw a spine first	
Pantograph (frame with stylus or laser)	Following a line smoothly	Look ahead along the line, not at the stylus	

Stitch and tension troubleshooting

What you see	Likely cause	Try
Eyelashes of top thread on the back at curves	Hands moving too fast through curves, or top tension too loose	Slow down at curves; tighten top tension slightly
Bobbin thread showing as dots on top	Top tension too tight, or bobbin too loose	Loosen top tension slightly
Very long stitches	Hands too fast for machine speed	Raise speed or slow hands; try regulator mode
Tiny, piled-up stitches	Hands too slow for machine speed	Lower speed or move more steadily
Thread shredding or breaking	Needle too small or worn, thread path, speed	New larger needle, rethread, slow down
Skipped stitches	Needle, or fabric flagging up and down	New needle, lower the foot height if adjustable

Change one setting at a time and record it. Tension settings vary by machine, so the manual is the reference for your dial.

Practice log

Stitches per inch: count stitches over a measured inch on a straight-ish section. Many quilters aim for a consistent length somewhere around 10 to 12 stitches per inch.

Date	Drill	Speed setting	Top tension	Stitches per inch	Minutes	Evenness 1 to 5	Change next time

Longarm loading notes

Item	Plan or setting
Backing extra per side	Commonly about 4 in; per your frame
Batting extra per side	
Edge-to-edge, custom or ruler work	
Pantograph or digital design name	
Advance distance per pass	From sheet 18
Thread weight and color	

Practice kit, up to a sit-down longarm

Gloves and a slider mat help on a domestic machine. A sit-down longarm with stitch regulation is the big step up in throat space and stitch consistency.

- **Handi Quilter Amara ST 20 Stationary Longarm with Lift Table:** A 20 in throat and up to 2,500 SPM on a height-adjustable lift table: this is the practice-log machine, where consistent stitches come from speed you can hold steady.
- **Westalee Design Sew Steady Ruler Foot Starter Package, Low Shank:** A low-shank ruler foot starter package, the attachment the ruler-work drills on this sheet require before you trace a single straight line.
- **Machingers Quilting Support Gloves by Quilter's Touch (Small/Medium):** Fingertip grips let you move a sandwich with less pressure, which is what the practice log is trying to make repeatable.
- **The Gypsy Quilter Supreme Slider, Queen Size:** An 11-1/2 x 17 in Teflon-topped, silicone-backed slider cuts drag on the bed plate so stitch length stays even during the drills.

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Garment Measurement & Ease Worksheet

Pattern sizes follow body measurements, not the size on your clothing tags

Sewist	Date measured
Pattern	Size chosen

Sewing patterns are sized by body measurements, and the major pattern companies' sizes run noticeably smaller than ready-to-wear sizes. Measure the body, choose the size from the envelope chart, then compare the finished garment measurements printed on the pattern to see how much ease the design adds. Most fit problems are solved on paper before the fabric is cut.

Body measurements

Measure over well-fitting undergarments, tape snug but not tight and level all the way around. Take each measurement twice.

Measurement	How to take it	First	Second	Date
Full bust or chest	Fullest part, tape level across the back			
High bust	Under the arms, above the bust			
Waist	Natural waist, where the body bends sideways			
Hip	Fullest part of the seat			
Back waist length	Prominent neck bone to natural waist			
Shoulder	Neck base to shoulder point			
Arm length	Shoulder point over a bent elbow to wrist bone			
Upper arm	Fullest part of the bicep			
Neck	Base of the neck			
Inseam	Crotch to desired hem, on the inside leg			
Crotch depth or rise	Seated, waist to chair surface at the side			
Height	Without shoes			

Choosing the pattern size

Garment	Choose by	Example	Your size
Tops, dresses, jackets	Full bust, or high bust if full bust minus high bust is more than 2 in, then a full bust adjustment	Bust 36 in: size 14 on a typical Big 4 misses chart	
Skirts and pants	Hip, then adjust the waist	Hip 39 in: between 14 (38 in) and 16 (40 in)	
Between sizes	Grade between sizes across the waist and hip	Size 14 at bust, blend to 16 at hip	

Major pattern companies commonly draft for a B cup; many independent designers draft for a C cup or offer cup options. Check the pattern instructions, and use the size chart printed with the pattern you are sewing rather than a memory of a previous one.

Ease

Ease is the finished garment measurement minus the body measurement. Bust ease for dresses, blouses and tops, as used on major pattern company ease charts:

Fit	Bust ease	Your garment
Close-fitting	0 to 2 7/8 in	
Fitted	3 to 4 in	
Semi-fitted	4 1/8 to 5 in	
Loose-fitting	5 1/8 to 8 in	
Very loose-fitting	Over 8 in	

Worked example: a pattern printing a finished bust of 38 1/2 in, sewn for a 36 in bust, has 2 1/2 in of ease, which is close-fitting. Jackets and coats use larger ease ranges, and knits designed for stretch can have zero or negative ease.

Finished measurement check

Location	Body	Pattern finished	Ease	Wanted ease	Adjust by
Bust					
Waist					
Hip					
Upper arm					
Back length					
Garment length					

Pattern adjustment log

Pattern	Adjustment	Amount	Where on the pattern	Muslin result	Keep for next time?
	Lengthen or shorten bodice		Lengthen or shorten line		
	Full bust adjustment				
	Swayback				
	Narrow or broad shoulder				
	Full upper arm				
	Waist or hip grading				
	Pant length or rise				

Check the seam allowance before adjusting: major pattern companies commonly use 5/8 in, and many independent patterns use 3/8 or 1/2 in. Sew a muslin or toile in inexpensive fabric of similar weight before cutting the real fabric.

Fitting and finishing garments

An adjustable dress form makes fitting alone possible, and a serger gives knit and woven seams a professional inside finish.

- **Brother AIR1800 Air Threading Serger:** Push-button air threading of the loopers and 2, 3 or 4 thread stitches at up to 1,300 SPM, so the fitted seams from this worksheet get a finished inside.
- **Dritz My Double Designer Adjustable Dress Form, Small, US 4 to 14:** 12 rolling-wheel adjustments across US 4 to 14 and a lockable rolling base, so you can check the finished measurements from this sheet without a second pair of hands.
- **Singer Quantum Stylist 9960 Computerized Sewing Machine:** 13 one-step buttonholes and 600 built-in stitches, enough buttonhole styles to match the garment you just fitted.
- **Prym Tailor's Ham Pressing and Molding Tool:** A dual-surface ham shapes the darts and curved seams this sheet adds ease to; pressing them flat undoes the fit.

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Knitting & Crochet Gauge and Yarn Planner

Gauge is the pattern, the needle size is only a suggestion

Maker

Project

Pattern

Yarn and dye lot

A pattern works only at its stated gauge. Knit or crochet a swatch at least 6 inches square, wash and dry it the way the finished piece will be treated, then count stitches and rows over the middle 4 inches. If you have more stitches than the pattern, go up a needle or hook size. Fewer, go down. Then write the numbers here before casting on.

Yarn weight chart

Weight	Also called	Knit gauge per 4 in	Needle	Crochet gauge per 4 in	Hook
0 Lace	Lace, thread, cobweb	33 to 40 sts	1.5 to 2.25 mm (US 000 to 1)	32 to 42 dc	Steel 1.4 to 1.6 mm, or 2.25 mm (B-1)
1 Super Fine	Sock, fingering, baby	27 to 32 sts	2.25 to 3.25 mm (US 1 to 3)	21 to 32 sc	2.25 to 3.5 mm (B-1 to E-4)
2 Fine	Sport, baby	23 to 26 sts	3.25 to 3.75 mm (US 3 to 5)	16 to 20 sc	3.5 to 4.5 mm (E-4 to 7)
3 Light	DK, light worsted	21 to 24 sts	3.75 to 4.5 mm (US 5 to 7)	12 to 17 sc	4.5 to 5.5 mm (7 to I-9)
4 Medium	Worsted, afghan, aran	16 to 20 sts	4.5 to 5.5 mm (US 7 to 9)	11 to 14 sc	5.5 to 6.5 mm (I-9 to K-10.5)
5 Bulky	Chunky, craft, rug	12 to 15 sts	5.5 to 8 mm (US 9 to 11)	8 to 11 sc	6.5 to 9 mm (K-10.5 to M-13)
6 Super Bulky	Super bulky, roving	7 to 11 sts	8 to 12.75 mm (US 11 to 17)	7 to 9 sc	9 to 15 mm (M-13 to Q)
7 Jumbo	Jumbo, roving	6 sts and fewer	12.75 mm and larger (US 17 and up)	6 sc and fewer	15 mm and larger (Q and up)

Based on the Craft Yarn Council Standard Yarn Weight System. Knit gauge is in stockinette. These are guidelines, and the ball band and the pattern override them.

Gauge swatch log

Date	Yarn	Needle or hook	Stitch pattern	Sts per 4 in	Rows per 4 in	Washed?	Matches pattern?

Stitch count from gauge

Stitches per inch is stitches per 4 in divided by 4. Stitches needed is the finished width times stitches per inch. Rows work the same way.

Step	Example	Your project
Your gauge, stitches per 4 in	18	
Your gauge, rows per 4 in	24	
Stitches per inch	4.5	
Rows per inch	6	
Finished width wanted, including ease	40 in	
Stitches to cast on (40 x 4.5)	180	
Length wanted	15 in	
Rows (15 x 6)	90	

Why the swatch matters: a pattern written at 20 sts per 4 in says cast on 200 for 40 in. At your 18 sts per 4 in, those 200 stitches measure $200 / 4.5 = 44.4$ in, over 4 in too wide.

Evenly spaced increases and decreases

Step	Example	Your row
Stitches on the needle	180	
Increases or decreases wanted	12	
Stitches per section (180 / 12)	15	
Increase in the round	(K15, M1) 12 times = 192 sts	
Increase worked flat, centred	K8, M1, (K15, M1) 11 times, K7 = 192 sts	
Decrease in the round	(K13, K2tog) 12 times = 168 sts	

When the division has a remainder, spread the extra stitches across the sections, one extra in a few of them, so no section is visibly longer.

Yardage planning

Project	Rough range, worsted weight	Pattern says	Yards per skein	Skeins to buy
Adult hat	150 to 250 yd			
Mittens, adult	150 to 250 yd			
Cowl	150 to 300 yd			
Scarf, adult	250 to 450 yd			
Socks, adult, fingering weight	350 to 450 yd			
Baby blanket	800 to 1,200 yd			
Adult sweater	1,000 to 1,800 yd, more for larger sizes			
Throw blanket	1,500 to 2,500 yd			

Rough ranges only. Size, stitch pattern and yarn weight move these a long way, and crochet often uses more yarn than knitting the same piece. The pattern figure always wins. Buy every skein from one dye lot, plus one spare.

Gauge tools and bigger machines

A needle gauge and blocking mats make the swatch honest. A knitting machine is the big step up for makers turning out blankets and sweaters.

- **addi Express Kingsize Knitting Machine, 46 needles:** 46 needles, 13.8 in circular and 17.7 in flat, the step up for a maker whose gauge math keeps ending in sweater and blanket quantities.
- **ChiaoGoo Twist Red Lace Interchangeable Set, Complete, 5 inch tips:** US 2 to 15 tips with 14, 22 and 30 in cables in two sizes, so you can re-swatch a size up or down without buying another needle.
- **Clover Swatch Ruler & Needle Gauge, White:** A 4 in (10 cm) swatch window with holes and notches sized in metric, US and Japanese, which is the measurement this whole sheet turns on.
- **Knit Picks Premium Blocking Mats, 9 pack with T-pins:** Nine 12 by 12 in half-inch mats with a 1 in grid and 100 T-pins, so the swatch is measured after blocking rather than before.

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Knitting Project Journal & Yarn Substitution

Swap yarns by gauge, yardage and fiber behavior, not by the label weight alone

Knitter	Project
Pattern yarn	Substitute yarn

Two yarns labeled worsted can behave very differently. A substitute has to match the pattern gauge, supply enough total yardage, and have a fiber that drapes, stretches and recovers the way the design expects. Compare the numbers below, swatch the substitute, and record the project so the next one starts from what worked.

Wraps per inch (WPI)

Wrap the yarn around a ruler or WPI tool side by side, without stretching or gaps, and count wraps in one inch. Use it to classify a yarn with no label.

Weight	Approximate WPI	Your yarn
Fingering	About 14 to 22	
Sport	About 12 to 18	
DK	About 11 to 15	
Worsted	About 9 to 12	
Aran	About 8 to 9	
Bulky	About 6 to 8	
Super bulky	About 6 and fewer	

Sources vary widely because wrapping tension varies. Wrap a labeled yarn of known weight the same way for a reliable comparison, and always confirm with a swatch.

Yardage substitution

Total yards needed equals pattern skeins times pattern yards per skein. Substitute skeins equal that total divided by the substitute's yards per skein, rounded up.

Step	Example	Your project
Pattern skeins for your size	8	
Pattern yarn: yards per skein	220	
Total yards needed (8 x 220)	1,760	
Substitute: yards per skein	190	
Substitute skeins (1,760 / 190 = 9.26, round up)	10	
Pattern yarn: yards per 100 g	220	
Substitute: yards per 100 g	190	
Density check	Substitute is denser; expect a heavier fabric	
Plus one spare skein from the same dye lot?		

Compare yards per 100 g, not just the weight category. A big difference in yards per 100 g at the same gauge usually means a different fabric weight and drape.

Fiber behavior

Fiber	Stretch and memory	Drape and weight	Watch for	Suits
Wool	Good elasticity, springs back	Light, warm	Felts if not superwash	Sweaters, hats, socks
Superwash wool	Less memory than untreated wool	Can grow when washed	Swatch after washing	Machine-washable garments
Cotton	Little memory, stretches with wear	Heavy, cool	Garments lengthen	Summer tops, dishcloths
Linen	Very little stretch	Crisp, softens with washing	Can be stiff at first	Summer garments
Alpaca	Low memory	Heavy, drapey, very warm	Grows; halo hides stitch detail	Shawls, cowls, loose sweaters
Acrylic	Moderate	Light	Melts with a hot iron	Blankets, toys, washable items
Blends	Depends on the mix	Depends on the mix	Read the fiber percentages	Balancing care and behavior

Substitution checklist

- ☐ Same or very close gauge after washing the swatch
- ☐ Enough total yardage, from one dye lot
- ☐ Fiber behaves like the pattern yarn, or the design tolerates the difference
- ☐ Similar construction: plied, single, chainette or novelty
- ☐ Care instructions suit the recipient

Project journal

Detail	Record
Pattern and designer	
Size made and finished measurements	
Yarn, colorway and dye lot	
Skeins used	
Needles	
Gauge after washing	
Cast on	
Bound off	
Modifications	
Recipient	
Care instructions	
Would make again?	

Winding, measuring and blocking

A swift and ball winder turn hanks into center-pull cakes in minutes, and blocking mats make a substituted yarn show its true finished size.

- **Stanwood Needlecraft 10 oz Metal Ball Winder and Amish Style Swift Bundle:** A 10 oz metal winder paired with an Amish-style swift, which is the pair that turns a substituted hank into a center-pull cake before you cast on.
- **Knit Picks Yarn Winding Bundle, Ball Winder and Birch Swift:** A 100 g winder and birch umbrella swift that clamp to tables up to 1.5 in thick, the lighter version of the same job.
- **ChiaoGoo Swatch & Needle Gauge 5.5 Inch:** A 5.5 in square gauge with conversion charts and yarn standards tables printed on it, for checking WPI and needle size against the substitute yarn.
- **Leslye Solomon's Original Blocking Wires Kit:** Eight 36 in, four 18 in and two 27 in flexible stainless wires with 30 T-pins, so a substituted yarn shows its true blocked dimensions.

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Crochet Blanket Size & Yardage Planner

Weigh a swatch, and the whole blanket's yardage follows

Maker	Blanket
Yarn	Hook

Blanket patterns rarely come in exactly the size you want, and changing the size changes the yarn. The reliable way to estimate is to crochet a swatch in the real stitch pattern, weigh it, convert grams to yards from the ball band, and scale by area. The same method works for knit blankets.

Common blanket sizes

Blanket	Common size range (in)	Your size
Lovey or security blanket	12 to 18 square	
Stroller or car seat	About 30 x 35	
Baby or receiving	30 x 30 to 40 x 40	
Lapghan	About 36 x 48	
Throw	About 50 x 60	
Twin bed	60 to 66 x 90	
Queen bed	About 90 x 100	

Sources vary. For babies, loose blankets do not belong in a crib under 12 months, and car seat blankets go over the buckled harness, never under the straps.

Yardage from a weighed swatch

Step	Example	Your blanket
Swatch size (in)	6 x 6 = 36 sq in	
Swatch weight (g)	12	
Yarn yards per gram (ball band yards / grams)	200 yd / 100 g = 2	
Swatch yards (12 x 2)	24	
Yards per sq in (24 / 36)	0.667	
Blanket area (50 x 60)	3,000 sq in	
Blanket yards (3,000 x 0.667)	About 2,000	
Plus 10% for border, joining and tails	About 2,200	
Skeins at 200 yd each	11	

Use a kitchen scale that reads to 1 g or better. Weigh the swatch after blocking, without long tails, and include the border stitch in a second swatch if it is very different.

Granny squares and motifs

Step	Example	Your blanket
Target size	50 x 60 in	
Finished square size, after blocking	6 in	
Squares across (50 / 6 = 8.3)	8 gives 48 in, 9 gives 54 in	
Squares down (60 / 6)	10	
Layout chosen	9 x 10 = 90 squares	
Border width (in)	2	
Finished size with border (54 + 4) x (60 + 4)	58 x 64 in	
Yards per square (weigh one finished square)		
Total yards: squares x yards each, plus joining and border		

Color plan for motifs

Mark each square with a color letter. The grid is 12 by 12; use as much as the layout needs.

1	2	3	4	5	6	7	8	9	10	11	12

Progress log

Date	Rows or squares done	Total so far	Percent of target	Skeins used	Notes

Blanket-scale tools

A gram scale makes this sheet work, and interlocking blocking mats square up dozens of motifs at once.

- **Authentic Knitting Board 38 inch Adjustable Blanket Loom:** A 38 in loom with 170 pegs, 84 of them double, sized for blanket panels rather than the hats and scarves a round loom makes.
- **Clover Amour Crochet Hook Set, 10 sizes:** Ten soft-grip hook sizes, so you can re-hook a swatch until the weighed-gram math on this sheet lands on the blanket size you want.
- **KnitIQ Blocking Mats, 9 piece set with T-pins:** Nine 0.75 in mats with 100 T-pins, enough surface to square up a batch of motifs at once instead of one at a time.
- **PAVILIA Large Knitting Yarn Storage Bag:** A 16 x 12.5 x 10.5 in bag with a clear top, so the color plan for a motif blanket stays sorted between sessions.

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Amigurumi Planner

Six stitches, six more each round, and tight enough that the stuffing stays hidden

Maker	Toy
Yarn	Hook

Amigurumi are crocheted toys worked in continuous spirals of tight single crochet. Almost every round shape is the same arithmetic: start with 6 stitches in a magic ring and add 6 stitches each round until the widest point, work even, then decrease in reverse. Plan each part here, keep a stitch count for every round, and weigh the prototype to know how much yarn the next one takes.

Yarn and hook

Choice	Common approach	Your choice
Hook size	One to two sizes smaller than the ball band suggests, so stitches are tight	
Worsted weight	Often about a 3.5 mm hook	
Yarn fiber	Cotton for crisp shapes, acrylic for softness and washing	
Stitch	Single crochet in a continuous spiral	
Start of round	Stitch marker moved up every round	

Sphere math

Round n has 6 x n stitches while increasing. Circumference at the widest round is stitches divided by stitches per inch, and diameter is circumference divided by 3.1416.

Round	Instruction	Stitch count	Your count
1	6 sc in a magic ring	6	
2	Inc in each st	12	
3	(sc, inc) x 6	18	
4	(2 sc, inc) x 6	24	
5	(3 sc, inc) x 6	30	
6	(4 sc, inc) x 6	36	
7 to 12	Sc in each st, work even	36	
13	(4 sc, dec) x 6	30	
14	(3 sc, dec) x 6	24	
15	(2 sc, dec) x 6	18	
16	(sc, dec) x 6, stuff firmly	12	
17	dec x 6, close	6	

Worked example: at a gauge of 5 sc per inch, the 36-stitch widest round is $36 / 5 = 7.2$ in around, and $7.2 / 3.1416 =$ about 2.3 in across. Staggering the increase position each round keeps the ball round rather than hexagonal.

Parts list

Part	Color	Qty	Rounds	Widest stitch count	Stuffed?	Done
Head		1				
Body		1				
Arms		2				
Legs		2				
Ears		2				
Tail		1				
Details						

Toy safety

Plastic safety eyes, buttons, beads and bells are choking hazards for children under 3. For babies and toddlers, embroider the eyes and features with yarn instead, sew all parts on securely, and do not use plastic pellets or loose fills. Toys sold to the public in the US must meet federal children's product safety requirements, so check the rules before selling.

- ☐ Features embroidered for any toy going to a child under 3
- ☐ All limbs sewn on firmly and tugged to test
- ☐ Stuffing firm and fully enclosed, no gaps between stitches
- ☐ Tails woven in and hidden inside
- ☐ Care instructions written for the recipient

Prototype record

Item	Record
Finished height	
Yarn used per color (g, weigh leftovers)	
Yards per color (grams x yards per gram)	
Fiberfill used (g)	
Hours	
Changes for the next one	

Small tools for small toys

An ergonomic hook matters more in amigurumi than anywhere else, because tight single crochet is hard on the hands.

- **Tulip Etimo Rose Crochet Hook Set:** Ten hooks from 2.00 to 6.00 mm with cushioned grips, plus yarn needles and scissors, for the tight single crochet amigurumi needs to hide stuffing.
- **Clover Quick Locking Stitch Marker Set:** Locking markers are what keep the round count honest in a continuous spiral, where the six-more-each-round math on this sheet lives.
- **Knit Picks Rosewood Yarn Bowl:** A 6 in rosewood bowl holds a 100 g cake still, so a tightly worked spiral does not drag the ball across the floor.
- **DMC Embroidery Floss Special Selection Pack, 16 Skeins:** 16 skeins of six-strand cotton for embroidered eyes and mouths, the safe alternative to plastic safety eyes on a toy for a small child.

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Cross Stitch Chart Sizing & Progress Tracker

Stitch count divided by fabric count is the finished size

Stitcher	Design
Stitch count	Fabric

A chart gives you stitches, not inches. Divide the stitch count by the fabric count, the number of stitches per inch, and you have the finished design size. Add the margin for framing before cutting the fabric, check the floss list against your stash, then track progress in chart blocks so a large piece stays motivating.

Finished size by fabric count

Worked for a design 140 stitches wide by 98 stitches high.

Fabric	Stitches per inch	Finished width	Finished height	Your design
11 count Aida	11	12.73 in	8.91 in	
14 count Aida	14	10 in	7 in	
16 count Aida	16	8.75 in	6.13 in	
18 count Aida	18	7.78 in	5.44 in	
28 count evenweave or linen, over two	14	10 in	7 in	
28 count, over one	28	5 in	3.5 in	

Over two means each cross covers two threads each way, so 28 count stitched over two finishes the same size as 14 count Aida. Over one gives finer detail at half the size, and on linen it needs care so stitches do not slip between threads.

Fabric to cut

Step	Example: 140 x 98 on 14 count	Your design
Design width (stitches / count)	10 in	
Design height	7 in	
Margin per side for framing	3 in	
Fabric width (design + 2 x margin)	16 in	
Fabric height	13 in	
Center marked?		
Edges secured against fraying?		

Three inches per side is a common framing margin. Check with your framer, and add more for a pillow or other finishing that needs seam allowance.

Needles and strands

Fabric	Tapestry needle, common	Floss strands, common	Your choice
11 count Aida	22 to 24	3	
14 count Aida	24	2	
16 count Aida	24 to 26	2	
18 count Aida	26	1 to 2	
28 count over two	26 to 28	2	
32 count and finer, or over one	28	1	

Floss estimate, measured your way

A standard six-strand skein holds 8 m, about 315 in. Cut an 18 in length, stitch with it, and count the full crosses it makes. Then scale up.

Step	Example	Your floss
Skein length	315 in	
Working length	18 in	
Full six-strand lengths per skein (315 / 18, round down)	17	
Strands used	2 of 6, so 3 working threads per length	
Working threads per skein (17 x 3)	51	
Full crosses counted from one working thread	30	
Crosses per skein (51 x 30)	1,530	
Stitches of this color in the chart		
Skeins needed (round up, add one for dark or background colors)		

The 30 crosses is a placeholder; count your own. Tension, travel between areas and tail length all change it. Most chart keys and pattern software list a skein count, which is a good cross-check.

Time to finish

Step	Example	Your design
Total stitches (140 x 98, full coverage)	13,720	
Your measured stitches per hour	200, placeholder	
Hours to finish (13,720 / 200)	68.6	
Hours stitched per week	5	
Weeks to finish (68.6 / 5)	About 13.7	

Time yourself for a full hour on a typical area to get stitches per hour. Areas with frequent color changes run much slower than solid backgrounds.

Chart block tracker

Divide the chart into 10 x 10 stitch blocks. The example design is 140 / 10 = 14 blocks across and 98 / 10, rounded up, = 10 blocks down. Shade each block as you finish it.

1	2	3	4	5	6	7	8	9	10	11	12	13	14

Floss tracker

Floss number	Color name	Symbol	Skeins needed	Have	Bought	Bobbin labeled

Hoop and frame choice

- ☐ Working hoop large enough that the area being stitched sits inside the inner ring
- ☐ Display hoop about 1 to 2 in larger than the design
- ☐ Bind the inner ring with cotton tape to protect fabric and keep tension
- ☐ Remove the hoop between sessions to avoid permanent hoop marks
- ☐ Scroll frame or snap frame for designs larger than a comfortable hoop
- ☐ Floor or lap stand for two-handed stitching on long projects

Stands, light and magnification

On 18 count and linen, good light and a magnifier matter more than any other upgrade. A floor stand frees both hands.

- **Brother PE900 Embroidery Machine:** A 5 x 7 in field with 193 designs and 13 fonts, for stitchers who want a machine to handle the lettering and finish work around hand-stitched pieces.
- **Daylight Company StitchSmart Embroidery Stand:** A 360 degree rotating clamp jaw holds hoops and frames, which frees both hands for the two-handed stabbing motion on high counts.
- **Daylight Company Anita Floor Lamp with Magnifier:** A magnifier plus up to 2,600 lux at 6,000K and 95+ CRI, the single upgrade that makes 18 count and linen comfortable for long sessions.
- **ArtBin Floss Finder Box, Embroidery Floss Organizer:** A 10.75 x 7.375 in box with 6 fixed and 12 adjustable compartments, so the floss tracker on this sheet matches what is actually in the box.

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Needlepoint Canvas & Stitch-Count Planner

Mesh times inches is stitches, and the margin is for blocking

Stitcher	Canvas
Mesh	Finishing plan

Needlepoint canvas is sized by mesh, the number of holes per inch, so stitch count is the design size times the mesh. Leave generous unworked canvas around the design for blocking and finishing, choose a thread that covers the canvas at that mesh, and estimate thread by stitching a measured test patch.

Canvas mesh

Mesh	Typical use	Tapestry needle, common	Persian wool plies, common start	Your canvas
5 to 7	Rugs and quick point	13 to 16	Rug yarn	
10	Beginner pieces, bold designs	18	3 ply	
12 to 13	Standard hand-painted canvases	20	2 ply	
14	More detail	20 to 22	2 ply	
18	Fine detail	22	1 ply	
22 and finer	Petit point	24 to 26	Fine threads	

Coverage depends on the stitch, the thread and your tension. Stitch a small test patch and hold it to the light to see whether canvas shows through before committing to a thread.

Stitch count and canvas size

Step	Example	Your piece
Design size (in)	8 x 10	
Mesh	13	
Stitches across (8 x 13)	104	
Stitches down (10 x 13)	130	
Total stitches (104 x 130)	13,520	
Unworked margin per side (in)	2	
Canvas to cut (8 + 4) x (10 + 4)	12 x 14 in	
Edges taped?		

At least 2 in of unworked canvas on every side is a common minimum; many finishers prefer 3 in. Ask your finisher before cutting.

Thread estimate from a test patch

Step	Example	Your thread
Stitch a 1 in square patch in the planned stitch	Basketweave	
Thread used for the patch (yd)	1.5, placeholder	
Area in this color (sq in)	50	
Yards for this color (50 x 1.5)	75	
Plus 15% for travel and tails	About 86	
Yards per skein or card		
Skeins needed		

The 1.5 yd is a placeholder; measure your own patch. Basketweave distorts the canvas less than continental and generally uses a little more thread.

Stitch and finishing plan

Area	Stitch	Thread	Color	Sq in	Yards	Done

Blocking and finishing

- ☐ Stretcher bars or a frame sized so the design sits inside the opening
- ☐ Canvas mounted square before stitching
- ☐ Tension kept even; avoid pulling stitches tight
- ☐ Blocking done on a grid board, damp and pinned square, dried flat
- ☐ Finishing type decided: pillow, framed piece, ornament, belt, eyeglass case
- ☐ Finisher contacted about margin and turnaround time

Frames and stands

- Stretcher bars keep the canvas square, and a floor stand with a magnifier lamp makes long sessions on 18 mesh comfortable.
- EZ Stitch American Dream Products Needlework Floor Stand:** Solid red oak, adjustable 24 to 48 in wide, sized to hold the scroll frames and side bars a full needlepoint canvas is mounted on.
 - Frank A. Edmunds 12-Inch Adjustable Stretcher Bar Set (4012):** Four routed bars that adjust with the canvas attached and fit a canvas 12 x 12 in or smaller, keeping the mesh square so blocking has less to correct.
 - Daylight Company Magnificent Pro Magnifying Lamp:** A 1.75X, 5 in lens over a 6,000K, 95+ CRI, 600 lumen lamp with five brightness levels, for counting 18 mesh without leaning in.
 - Colonial Needle Tapestry Hand Needles, Size 24, 6 Pack:** Size 24 blunt tapestry needles, the size that passes through mesh without splitting the canvas threads you just counted.

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Machine Settings & Maintenance Log

The right needle, the right thread, a clean bobbin case

Owner

Machine

Model and serial

Last service

Skipped stitches, looping thread and puckered seams are almost always a needle, thread or lint problem rather than a broken machine. Change the needle, match it to the fabric and thread, clean out the bobbin area, and most problems disappear. The manual for your machine sets the oiling and cleaning rules, and some modern machines should not be oiled by the owner at all.

Needle type and size by fabric

Needle	Common sizes	Use for	In your kit
Universal	70/10 to 90/14	General wovens, some stable knits	
Microtex or sharp	60/8 to 80/12	Batiks, fine wovens, precise piecing	
Quilting	75/11 to 90/14	Piecing and quilting through layers	
Jeans or denim	90/14 to 110/18	Denim, canvas, heavy wovens	
Ball point	70/10 to 90/14	Jersey, interlock, sweater knits	
Stretch	75/11 to 90/14	Swimwear, spandex blends	
Topstitch	80/12 to 100/16	Heavy and decorative thread, large eye	
Embroidery	75/11 to 90/14	Machine embroidery thread	
Metallic	80/12 to 90/14	Metallic threads that shred	
Leather	90/14 to 110/18	Genuine leather only	

Sizes read metric/US, and a larger number is a thicker needle. A common guide is to change the needle after 6 to 8 hours of sewing, at the start of each new project, or immediately after hitting a pin.

Thread weight chart

For weight-numbered thread, a higher number is a finer thread.

Weight	Typical use	Needle pairing, common	Your threads
100 wt	Invisible applique, fine hand work	60/8 to 70/10	
60 wt	Fine piecing, bobbin fill, English paper piecing	70/10	
50 wt	Standard piecing and garment sewing	70/10 to 80/12	
40 wt	Machine quilting, machine embroidery	80/12 to 90/14	
30 wt	Quilting that shows, topstitching	90/14	
12 wt	Bold topstitching, big-stitch look	100/16 topstitch	

A common pairing only. Thread makers publish their own needle recommendations, and they take priority.

Stitch length reference

Stitch length	Stitches per inch	Common use
1.5 mm	16.9	Paper piecing, tiny pieces
2.0 mm	12.7	Precise piecing
2.5 mm	10.2	Standard piecing and seams
3.0 mm	8.5	Topstitching, garment seams
3.5 mm	7.3	Topstitching with heavier thread
4.0 to 5.0 mm	6.4 to 5.1	Basting and gathering

Stitches per inch is 25.4 divided by the stitch length in millimetres.

Settings that worked

Date	Fabric	Needle	Top thread	Bobbin thread	Stitch length	Tension	Foot	Result

Cleaning and maintenance record

Task	Typical interval	Your manual says	Last done	Next due
Needle change	Every 6 to 8 sewing hours or new project			
Brush lint from bobbin area and feed dogs	Every few bobbins, and after each project			
Oil the hook race or other points	Only where and when the manual says			
Check bobbin case for burrs or nicks	Each cleaning			
Serger: clean looper area, check knives	Per manual			
Professional service	About once a year for machines in regular use			

Never use canned compressed air inside a machine unless the manual allows it. It can push lint deeper into the mechanism. Unplug the machine before cleaning or changing needles.

Bobbin and presser foot inventory

Item	Class or type	How many	Condition	Replace?
Bobbins	Class per manual, e.g. 15, L, M			
Standard presser foot				
Quarter inch piecing foot				
Walking or dual feed foot				
Free-motion or darning foot				
Zipper foot				
Open-toe embroidery foot				
Other				

Bobbins that look alike are often not interchangeable. The wrong class causes tension trouble and can damage the hook.

Machine embroidery: hoop fields and stabilizers

Hoop field	Metric	Suits
4 x 4 in	100 x 100 mm	Monograms, small motifs
5 x 7 in	130 x 180 mm	Most towel, bag and shirt designs
6 x 10 in	160 x 260 mm	Larger motifs, quilt blocks
8 x 12 in	200 x 300 mm	Jacket backs, large quilt blocks
9.5 x 14 in and larger	240 x 360 mm and up	Large designs without re-hooping

Hoop sizes are nominal; the true stitch field is set by the machine. Stabilizer: cutaway for knits, stretchy fabric and dense designs; tearaway for stable wovens and light designs; water-soluble for freestanding lace and as a topping on towels and terry.

Machines and the small kit that keeps them sewing

A serger finishes seams a regular machine cannot, and an embroidery machine is the largest step up in what a sewing room can make. A stock of needles in the right types keeps both happy.

- **Brother SE2000 Sewing and Embroidery Machine:** A 5 x 7 in embroidery field and 241 sewing stitches in one machine, which means one maintenance log covers both jobs and both needle systems.
- **Brother 1034D Serger:** A 3 or 4 thread metal-frame serger at up to 1,300 SPM, the machine that finishes the seams a straight-stitch machine leaves raw.
- **SCHMETZ Quilting Needles, Assorted 75/11 and 90/14, Pack of 5 Cards:** Five cards of assorted 75/11 and 90/14 quilting needles in the 130/705 H-Q system, so the needle chart above turns into a drawer you can actually pull from.
- **Singer All Purpose Sewing Machine Oil, 3.38 fl oz:** A 3.38 fl oz bottle of all-purpose oil for the cleaning record on this sheet; check the manual first, since some machines are not user-oiled.

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Machine Buying Decision Matrix

Sewing, quilting or combo embroidery, scored against the projects you actually make

Maker

Date

Main projects

Largest quilt size

The machine is the biggest purchase in a sewing room, and buying for the projects you imagine rather than the ones you make is the costly mistake. List what you sew most, weight what matters, and score each machine class. The winner tells you which aisle to shop; the feature table then compares real models within it.

Machine ladder by need

Tier	Machine class	Throat space, typical	Speed and fields	Suits
Beginner	Mechanical or basic computerized	About 6 to 7 in	Standard domestic speed	Garments, bags, lap quilts
Intermediate	Computerized quilting machine	About 8 to 10 in	Needle up and down, knee lift, speed control	Twin and queen quilts on a domestic
Intermediate	Straight-stitch semi-industrial	About 8 to 9 in	Commonly about 1,500 stitches per minute	Fast piecing and free-motion
Expert	Large-throat domestic	About 10 to 13 in	Stitch regulation on some models	King quilts on a domestic
Embroidery	Embroidery or combo machine	Varies	4 x 4 in entry, 5 x 7 in mid, 8 x 12 in and up expert	Monograms through large designs
Big-ticket	Sit-down longarm	About 15 to 20 in	Stitch regulation, table-mounted	Free-motion quilting without a frame
Big-ticket	Longarm on a frame	About 18 to 26 in	Stitch regulation, frame-mounted	King quilts, quilting for others

Throat space is measured from the needle to the machine body. Stitches per minute and field sizes vary by model, so check the spec sheet rather than the box headline. Sheet 18 covers the longarm decision in detail.

Weighted scoring

Weight each factor 1 to 3, score each class 1 to 5 for your needs, multiply and add. The example maker quilts queen-size quilts and wants occasional monograms.

Factor	Weight	Sewing machine	Quilting machine	Combo embroidery	Your weight	Your sewing	Your quilting	Your combo
Throat space for quilts	3	2	5	3				
Speed (stitches per minute)	2	3	5	3				
Feet included: walking, 1/4 in, free-motion	2	2	5	3				
Embroidery field	1	1	1	5				
Stitch and buttonhole variety	1	4	4	5				
Needle up/down, thread cutter, knee lift	2	3	5	4				
Budget fit	3	5	3	2				
Dealer support and lessons	1	3	4	4				
Weighted total (maximum 75 in the example)		45	63	49				

In the example the quilting machine wins clearly. If monograms mattered more, raising the embroidery weight to 3 would add 10 points to the combo and only 2 to each of the others, which is how the matrix reflects changing priorities.

Model comparison

Feature	Model A	Model B	Model C
Model name			
Throat space (in)			
Maximum stitches per minute			
Feet included			
Embroidery field and hoops included			
Embroidery file format			
Built-in stitches and buttonhole styles			
Needle up/down, thread cutter, knee lift			
Extension table included			
Bobbin type and class			
Weight (lb), if it travels to classes			
Warranty terms			
Nearest dealer and free lessons			

Embroidery files are brand-specific: .pes for Brother and Baby Lock, .jef for Janome, .exp for Bernina, .vp3 for Husqvarna Viking and Pfaff, and .dst as a common commercial format. Check the formats your machine reads before buying designs.

Test-sew checklist at the dealer

- ☐ Bring your own fabric: quilting cotton, a knit and something thick
- ☐ Sew a quarter inch seam with the included foot and measure it
- ☐ Sew across a thick seam intersection and watch for skipped stitches
- ☐ Try free-motion with feed dogs down
- ☐ Wind a bobbin and thread the machine yourself
- ☐ Stitch a buttonhole, and a sample embroidery if it is a combo
- ☐ Listen for noise at full speed and feel vibration on the table
- ☐ Ask what lessons, servicing and trade-in terms come with purchase

Machines by class

Shortlist one model in the winning class and one in the runner-up, and fill in the comparison table before visiting a dealer.

- **Brother Stellaire XJ1 Sewing, Embroidery and Quilting Machine:** A 9.5 x 14 in embroidery field and 11.25 in needle-to-arm space with four frames included, the top of the combo class this matrix scores.
- **Janome Horizon Memory Craft 9410QC Sewing and Quilting Machine:** 11 in of bed space right of the needle at up to 1,060 SPM, the large-throat quilting class, with an extra-wide table and AcuFeed feet in the bonus pack.
- **Juki TL-2010Q High-Speed Sewing and Quilting Machine:** Straight stitch only at up to 1,500 SPM with an automatic trimmer and a knee lifter, the semi-industrial class for piecing volume.
- **Brother CP100X Computerized Sewing and Quilting Machine:** 100 stitches, 8 auto-size buttonholes and 10 feet with a wide table, the computerized class to score the others against.

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Longarm Chooser: Sit-Down vs Frame

The room decides before the budget does

Quilter

Date

Room dimensions

Quilts per year

A sit-down longarm moves the quilt under a stationary machine on a table, much like a domestic machine with a far bigger throat. A frame longarm holds the quilt stretched on rollers while you move the machine across it. The frame handles large quilts with less wrestling but needs a long room. Do the room math first, then compare how each suits the quilts you make.

Sit-down vs frame

Factor	Sit-down	Frame	Matters to you?
Floor space	Table footprint plus room for the quilt to drape	Frame length plus walking room at both ends	
Large quilts	Possible, but you move the full weight of the quilt	Comfortable; the frame carries the weight	
Posture	Seated	Standing and walking	
Basting	Needed, as with a domestic machine	Not needed; layers are loaded on the rollers	
Pantographs	Not practical	Yes, with a laser or stylus, or computerized robotics	
Ruler work and custom quilting	Yes	Yes	
Computerized automation	Rare	Available as a major add-on	
Quilting for others as a business	Limited	Common	
Convertibility	Some sit-down machines can later mount on a frame		

Frame room math

Room length should be at least the frame length plus walking room at both ends. Room depth should be at least the frame depth plus room to stand at the front and at the back.

Step	Example	Your room
Frame length (ft), from the spec sheet	12	
Walking room each end (ft), commonly 2 to 3	2.5	
Room length needed (12 + 2 x 2.5)	17 ft	
Frame depth (ft), from the spec sheet	3.5, placeholder	
Standing room front and back (ft)	2.5	
Room depth needed (3.5 + 2 x 2.5)	8.5 ft	
Actual room length and depth		
Fits?		
Dedicated outlet available near the frame		
Floor level enough for the frame to be leveled		

Frame depth varies by model, so the 3.5 ft is a placeholder. The maximum quilt width a frame accepts is less than its overall length; check that it exceeds your largest backing width.

Passes per quilt on a frame

Step	Example	Your quilt
Quilt length (in)	94	
Usable quilting depth per advance (in), measured or from the spec	14, placeholder	
Advances (94 / 14 = 6.7, round up)	7	

The usable depth per advance is less than the throat space, because the rolled quilt takes up part of it. Deeper throats mean fewer advances and fewer places to match the quilting design.

Sit-down space and support

Item	Plan	Your room
Table footprint	From the spec sheet	
Space behind and left of the needle for the quilt	Enough to support the quilt so it does not drag	
Extension tables or a wall to lean the quilt against		
Chair height and table height	Elbows near table height, shoulders relaxed	
Lighting over the needle area		

Feature priorities

Feature	Why it matters	Must have	Nice to have	Skip
Stitch regulation	Even stitches regardless of hand speed			
Throat space	Quilting area per pass			
Built-in lighting	Seeing the stitches			
Bobbin size and thread break sensor	Fewer interruptions			
Laser or stylus for pantographs	Frame only			
Computerized robotics	Automated edge-to-edge designs			
Dealer training and service distance	Setup and repairs			

Longarms and their essentials

Buy the room first, then the machine. If the frame math fails, a sit-down longarm is the largest throat that fits a typical sewing room.

- **Handi Quilter Moxie XL Longarm with 8 ft Loft Frame:** 18 in of throat on an 8 ft Loft Frame, with Cruise, Precision and Manual stitch regulation: run the frame room math on this sheet before ordering it.
- **Handi Quilter Amara ST 20 Stationary Longarm with Lift Table:** A 20 in throat at up to 2,500 SPM on a lift table, the sit-down answer when the frame math fails and the room cannot take 8 ft of rails.
- **Handi Quilter Steady-Fit Ruler Base 15 in for HQ Moxie and Moxie XL:** A 15 in ruler base made for the Moxie and Moxie XL, which is what makes longarm rulers safe to use against the needle.
- **Superior Threads King Tut 40wt Quilting Thread, #997 Alabaster, 2,000 Yard Cone:** A 2,000 yd cone of 40wt extra-long staple Egyptian cotton, sized for longarm needle 18, so you are not reloading mid-pass.

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Serger & Knitting Machine Buying Checklist

Two machines with very different jobs, and what to check before buying either

Maker	Date
Main garments or projects	Yarn weights used most

A serger trims, sews and overcasts a seam in one pass, which is why store-bought knits look finished inside. A knitting machine produces stockinette fabric many times faster than hand knitting, within the yarn weights its needle spacing allows. Neither replaces a regular sewing machine or hand knitting; each takes over one job. Check the features below against the projects you make.

Serger buying checklist

Feature	What to know	Model A	Model B
Model name			
Thread configurations	4-thread overlock is the standard seam; 3-thread for lighter seams and edges; 2-thread on some models		
5-thread or safety stitch	Adds a chain stitch beside the overlock for woven seams		
Coverstitch	Hem finish for knits; on combo machines, switching takes time		
Differential feed	Essential for knits and gathering; check the ratio range		
Threading system	Air or jet threading saves a great deal of time		
Rolled hem	Built-in lever vs changing the plate		
Knife disengage	Lets you serge without cutting		
Stitch width and length ranges			
Free arm	Sleeves and cuffs		
Feet included			
Dealer lessons	Threading and tension are easier to learn in person		

Knitting machine chooser

Needle spacing, the gauge of the machine, sets which yarns it can knit.

Machine gauge	Needle spacing	Yarn it suits	Suits projects	Your fit
Fine gauge	About 3.6 mm	Lace and thin fingering	Fine garments	
Standard gauge	About 4.5 mm	Fingering to sport	Sweaters, socks, fine fabric	
Mid gauge	About 6.5 to 7 mm	Sport to worsted	Everyday garments	
Bulky or chunky gauge	About 8 to 9 mm	Worsted to bulky	Blankets, outerwear	
Circular hobby machine	Small fixed needle count	Usually worsted	Tubes: hats, scarves, simple toys	

Many classic flatbed machines are no longer manufactured and are bought used. Check parts availability, and ask whether the sponge bar has been replaced, since it deteriorates with age on many older machines.

Knitting machine feature checklist

- ☐ Gauge matches the yarn you use most
- ☐ Patterning: none, punchcard or electronic
- ☐ Ribber available or included, for ribbing and double-bed fabrics
- ☐ Lace and intarsia carriages available if wanted
- ☐ Manual and replacement parts available
- ☐ Table or stand to clamp it to, and the room to work at it
- ☐ Used: all needles straight and latches moving freely
- ☐ Local group, dealer or online community for learning

Sergers and knitting machines

Air threading is the feature serger owners most often say they wish they had paid for. For knitting machines, match the gauge to your yarn before anything else.

- **Janome AirThread 2000D Serger:** One-push air threading of the loopers, 2, 3 or 4 thread stitches and an 8-piece feed dog: air threading is the checklist line owners regret skipping.
- **Juki MO-735 5-Thread Serger and Cover Hem Machine:** Up to 5 threads with cover hem in one machine, the answer to the combo question on this checklist if bench space is short.
- **Janome CoverPro 1000CPX Coverstitch Machine:** One, two or three needle chain, cover and triple cover stitch over a 4 x 5.5 in bed at up to 1,000 SPM, the dedicated hem machine.
- **addi Express Kingsize Knitting Machine, 46 needles:** 46 needles giving 13.8 in circular and 17.7 in flat, so match the gauge to the yarn weight on this checklist before ordering.

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Sewing Room Setup, Ergonomics & Safety

Set up for the body you have, and close the rotary cutter every time

Maker	Date
Room	Main machine

An ergonomic sewing room is the one you keep sewing in. Plan where the machine, cutting table and pressing station go so work flows between them in a step or a chair swivel, set every surface to your own height, light the needle properly, and put the safety habits that prevent sewing room injuries in writing.

Space planning

Item	Plan or guide	Your room
Room length and width		
Longarm frame, if any	Room math on sheet 18	
Sit-down longarm table and quilt drape space	Sheet 18	
Sewing table surface around the machine	Flat support left of and behind the needle	
Cutting table footprint		
Pressing station, within a step or a chair swivel		
Outlets and dedicated circuit	Iron and machine on separate outlets where possible	
Design wall		
Storage for fabric, yarn and notions	Sheet 22	

Ergonomics

Setting	Guide	Your measurement
Chair	Adjustable height, feet flat, knees about level with hips	
Sewing surface	Machine bed near seated elbow height, so shoulders stay relaxed	
Machine sunk flush in a cabinet or table	Keeps the quilt level with the bed	
Cutting table height	High enough to cut without stooping, often 36 to 40 in by height	
Pressing surface height	Similar to the cutting table	
Task light	Daylight color around 5000 to 6500K, high CRI, aimed at the needle	
Room light	Even overhead light to reduce shadows	
Breaks	Stand and stretch every 30 to 60 min	

Safety in the sewing room

Close the rotary cutter every single time you set it down. The rotary cutter is the most common cause of serious sewing room cuts, and nearly all of them happen when an open blade is left on the table or the ruler slips. Cut away from your body, keep the free hand flat on the ruler with fingers away from the edge, and consider a cut-resistant glove on that hand.

- ☐ Rotary cutter closed whenever it leaves your hand
- ☐ Dull or nicked blades replaced, and used blades stored in a closed, labeled container
- ☐ Iron with auto shut-off, stood on its heel, cord out of the walkway
- ☐ Steam burns: keep fingers clear when steaming, and children away from the pressing station
- ☐ Pins removed before they reach the needle; sewing over pins breaks needles
- ☐ Magnetic pin bowl, and a sweep with a magnet for dropped pins and needles
- ☐ Machine unplugged for needle changes, cleaning and threading
- ☐ Broken needles and blades kept away from pets and small children

Workflow check

Move	Distance or steps now	Could it be shorter?	Change
Machine to pressing station			
Pressing station to cutting table			
Cutting table to design wall			
Machine to thread and notions			

The room around the machine

A cabinet that sets the machine flush with the table is the single biggest comfort upgrade for quilters, followed by a real task lamp.

- **Kangaroo Quilting Storage Sewing Cabinet with Joey Caddy:** A hydraulic lift that drops the machine flush with the surface, an A7 opening of 23-3/4 x 12-1/2 in and a 71-1/2 x 40-1/2 in open work surface for the space plan above.
- **Arrow H7013B Adjustable Height Hydraulic Sewing Chair:** A seat that adjusts 18 to 22 in on a five-star swivel base, which is how you match seat height to the table height this sheet has you measure.
- **FLEXISPOT Electric Adjustable Workbench, 48 x 30 in:** A 48 x 30 in top that moves from 28.1 to 45.7 in with four memory presets, so cutting happens at standing height and sewing does not.
- **Daylight Company Lumi Task Lamp:** 4,000 lux at 95+ CRI with a 100 cm reach, so one task lamp covers the machine bed from outside your line of sight.

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Complete Shopping List by Hobby & Tier

Beginner, Intermediate and Expert kits for every craft, machines first

Maker	Date
Hobbies	Target total

Buy the core tool for your craft first, because it decides everything else: the machine sets the feet and bobbins, the needle set sets the yarn you can use. Tick what you own, write budgets beside what you need, and total the list at the bottom. Tiers describe what you make, not who you are: you can be an Expert quilter and a Beginner knitter at the same time.

Quilting

Tier	Items	Own it	Need it	Budget
Beginner	Sewing machine with 1/4 in foot, rotary cutter, 18 x 24 in mat, 6 x 24 in ruler, pins, iron			
Intermediate	Quilting machine with 8 to 10 in throat, walking foot, 24 x 36 in mat, square-up rulers, design wall			
Expert	Large-throat domestic or sit-down longarm, digital fabric cutter, pressing station			
Big-ticket	Frame longarm, computerized robotics			

Quilting picks

Start with the class your scoring on sheet 17 chose.

- **Handi Quilter Moxie XL Longarm with 8 ft Loft Frame:** The big-ticket line: 18 in throat with an 8 ft Loft Frame, for quilters whose scoring came out on frame longarm.
- **Handi Quilter Amara ST 20 Stationary Longarm with Lift Table:** A 20 in sit-down throat on a lift table, the Expert tier answer for a room that cannot hold a frame.
- **Janome Memory Craft Horizon 8200QCP Special Edition:** 11 x 4.7 in of work space with detachable AcuFeed Flex and a 9 mm stitch width, the large-throat domestic tier.
- **AccuQuilt GO! Big Electric Fabric Cutter Starter Set:** Electric die cutting up to 6 layers, including 14 x 16 in GO! Big dies, the Expert tier cutting line.

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Garment sewing and embroidery

Tier	Items	Own it	Need it	Budget
Beginner	Sewing machine with buttonhole, fabric shears, tape measure, seam ripper, pattern weights			
Intermediate	Serger, adjustable dress form, tailor's ham, needle assortment			
Expert	Coverstitch or combo serger, embroidery machine with 5 x 7 in or larger field			
Big-ticket	Combo sewing and embroidery machine with a large field, air-threading serger			

Garment and embroidery picks

A serger usually changes garment results more than a fancier sewing machine does.

- **Brother Innov-is NQ3550W Sewing and Embroidery Machine:** A 6 x 10 in embroidery field with 291 sewing stitches and wireless design transfer, the big-ticket combo line.
- **Brother PE900 Embroidery Machine:** A 5 x 7 in embroidery-only field with 7.4 in needle-to-arm space, for makers who already have a sewing machine they like.
- **Brother AIR1800 Air Threading Serger:** Push-button air threading with 1 or 2 needles at up to 1,300 SPM, the serger line that changes garment results most.
- **Janome CoverPro 900CPX Coverstitch Machine:** Chain stitch and 2-needle cover stitch at up to 1,000 SPM with a free arm, for hemming knits properly.

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Knitting and crochet

Tier	Items	Own it	Need it	Budget
Beginner	Needles or hooks in two or three sizes, stitch markers, tapestry needle, tape measure			
Intermediate	Interchangeable circular set, ergonomic hook set, swift and ball winder, blocking mats			
Expert	Complete interchangeable set, WPI tool and scale, blocking wires, yarn storage			
Big-ticket	Knitting machine in your yarn gauge, with ribber			

Cross stitch and needlepoint

Tier	Items	Own it	Need it	Budget
Beginner	Hoops, tapestry needles, embroidery scissors, floss bobbins and box			
Intermediate	Scroll or snap frame, stretcher bars, magnifier			
Expert	Floor stand, daylight magnifier lamp, full floss collection			

Yarn and needlework picks

For stitchers, light and a stand are the upgrades that make long projects comfortable.

- **addi I Want It All Knitting Machine Pro Set (Kingsize and Express Pro):** Both the 46-needle Kingsize and the 22-needle Express Pro with three pattern books, the big-ticket knitting machine line.
- **Daylight Company Anita Floor Lamp with Magnifier:** A floor lamp with magnifier at up to 2,600 lux, 6,000K and 95+ CRI, the Expert tier light and magnification line in one stand.
- **ChiaoGoo Twist Red Lace Interchangeable Set, Complete, 5 inch tips:** US 2 to 15 tips with cables from 14 to 30 in in two sizes, the complete interchangeable set the Expert tier assumes.
- **DMC Embroidery Floss Assortment, 100 Colors:** 100 cotton skeins with no duplicates, the base a full floss collection grows from.

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Sewing room

Tier	Items	Own it	Need it	Budget
Beginner	Sturdy table, adjustable chair, task lamp			
Intermediate	Cutting table at standing height, pressing station, storage bins			
Expert	Sewing cabinet with machine lift, design wall, thread racks			

Typical totals by tier

These are what the complete setups on cozystitchery.com add up to, every line included, so the number you budget against is the same number the site publishes. They are typical totals, not quoted prices: they move whenever any item in the list moves, and leaving out the optional lines takes a meaningful bite out of each one.

Craft	Beginner	Intermediate	Expert	Your target
Quilting	About \$1,460	About \$3,210	About \$17,030	
Garment sewing	About \$1,260	About \$3,310	About \$7,260	
Machine embroidery	About \$820	About \$2,180	About \$7,780	
Knitting	About \$280	About \$640	About \$1,560	
Crochet	About \$235	About \$545	About \$1,240	
Cross stitch	About \$245	About \$545	About \$1,680	
Sewing room	About \$1,055	About \$2,340	About \$7,990	

The machine is the reason the columns spread so far apart: the Expert quilting total is mostly one longarm, and the Expert sewing room total is mostly one cabinet. Yarn and needlework crafts stay in the hundreds at every tier because there is no machine to buy unless you want one.

Budget tracker

Item	Hobby	Tier	Chosen product	Budget	Actual	Bought
Main machine						
Second machine: serger, embroidery, longarm or knitting						
Cabinet or table						
Chair						
Lighting						
Cutting tools						
Pressing						
Cutting machine						
Storage						
Feet and accessories						
Total						

Set the machine budget first, since it is usually the largest line, then fill the rest. Leave room for the feet and accessories the machine you choose does not include.

Stash, Supplies & Project Cost Tracker

Know what you have before you buy, and what a finished piece really costs

Maker	Date
Storage location	Inventory updated

A stash is only useful if you know what is in it. Record fabric by yardage and yarn by weight and yardage, and shop from this sheet first. When a project is finished, cost it honestly, including your hours, because that is the number that matters when someone asks you to make them one.

Fabric stash inventory

Fabric or line	Color and print	Yardage or precut	Width	Fiber	Prewashed?	Earmarked for

Yarn stash inventory

Yarn	Weight	Fiber	Color and dye lot	Skeins	Yards per skein	Total yards

Notions and supplies to restock

- ☐ Machine needles in the sizes you use most
- ☐ Rotary blades, plus a closed container for used ones
- ☐ Piecing thread in neutral colors
- ☐ Bobbins, pre-wound or empty
- ☐ Pins, clips and a magnetic pin bowl
- ☐ Marking tools that wash or heat away as expected, tested on a scrap
- ☐ Batting, and fusible or stabilizer on the roll
- ☐ Embroidery floss in your most used colors
- ☐ Stitch markers, tapestry needles and a tape measure

Project cost

Line	Example: 80 x 94 in quilt	Your project
Fabric for top and binding	11 yd x \$13 = \$143	
Backing	2 1/2 yd of 108 in wide x \$22 = \$55	
Batting	\$40	
Thread	\$18	
Materials subtotal	\$256	
Outsourced quilting	7,520 sq in x \$0.025 = \$188	
Your hours	40	
Your hourly rate	\$20	
Labor (hours x rate)	\$800	
Subtotal	\$1,244	
Overhead: machine wear, blades, electricity, fees (10%)	\$124.40	
Total cost to make	\$1,368.40	

The prices and rates in the example are placeholders to show the arithmetic. Use your own receipts, your quilter's actual rate and a labor rate you would accept for the hours.

Handmade pricing formula

Price = materials + (labor hours x hourly rate) + overhead. That is the break-even price for your time. Selling through a shop or a consignment gallery that takes a share needs that share added on top, and a wholesale price has to leave room for the retailer.

Most handmade pieces are underpriced because the hours are left out. Log hours on every project, even gifts, so the next price you quote is based on a real number.

Piece	Materials	Hours	Rate	Overhead	Price	Sold or gifted

Storage that keeps the stash visible

Fabric folded on boards and yarn in clear bins is fabric and yarn that gets used instead of bought again.

- **Arrow Dingo Kangaroo 9-Drawer Storage Cabinet:** Nine locking drawers, one large, one medium and seven small, plus a rear quilt leaf work surface, so the stash inventory has a place it stays visible.
- **Amazon Basics Collapsible Fabric Storage Cubes, 13 Inch, 6-Pack:** Six 13 in cubes with handles, the size that holds yardage folded on boards so you can read the fold ends like a bookshelf.
- **PAVILIA Large Knitting Yarn Storage Bag:** A 16 x 12.5 x 10.5 in bag with a clear PVC top, so a yarn inventory line can be checked without unpacking it.
- **Threadart 120 Spool Wood Thread Rack:** A 15 x 24 in rack for 120 spools, freestanding or wall mounted, which turns the thread column of the restock list into a glance.

Affiliate links. We earn a commission at no extra cost to you, and it never changes what gets recommended.

Holiday Season Gift-Making Planner

Work backwards from the gift date, and check capacity before promising anything

Maker	Gift date
Weeks until then	Hours per week available

Handmade gifts miss their date for one reason: the hours were never added up. List every gift, estimate its hours honestly from your journals, add a buffer for finishing, washing, wrapping and shipping, and compare the total with the hours you actually have. If it does not fit, cut the list now, not in the last week.

Capacity check

Step	Example	Your season
Gift hours needed (40 + 12 + 6 + 6)	64	
Weeks until the gift date	12	
Hours per week available	5	
Hours available (12 x 5)	60	
Shortfall or spare (60 - 64)	4 hours short	
Decision	Swap one gift for a quicker project, or start sooner	

Start-by dates, worked backwards

Weeks needed equals estimated hours divided by hours per week, rounded up. Start by equals the gift date minus weeks needed minus the buffer.

Recipient	Project	Est. hours	Weeks needed	Buffer weeks	Start by	Materials cost	Done
Example	Sweater	40	40 / 4 = 10	2	12 weeks before		

The example assumes 4 hours per week on that gift alone. If a quilt is going to a longarm quilter, add their queue time to the buffer and ask them early, since the holiday season is their busiest stretch. Shipping carriers publish holiday season cutoff dates each year.

Quick gifts when time runs short

Craft	Quick project idea	Typical time	Your estimate
Quilting	Mug rugs, table runners, pot holders	An evening to a weekend	
Sewing	Zip pouches, pillow covers, tote bags	An evening	
Knitting	Hats, cowls, dishcloths	A few evenings	
Crochet	Coasters, ornaments, small amigurumi	An evening or two	
Cross stitch	Small ornaments on 14 count	A few evenings	
Machine embroidery	Monogrammed towels, patches	An hour or two each	

Times are rough and depend on skill and pattern; your own journal entries are the better estimate.

Gift tags and care cards

Recipient	Fiber content	Care instructions	Tag written	Wrapped	Shipped or given

Tools that make gifts faster

An embroidery machine personalizes a store-bought towel in minutes, and a cutting machine turns a stack of gift pouches into an afternoon job.

- **Brother SE700 Sewing and Embroidery Machine:** Sews and embroiders in one machine with a 4 x 4 in field and wireless design transfer, so a monogram is a short job between other gifts.
- **Cricut Maker 4 Smart Cutting Machine:** Cuts more than 100 materials and up to 12 ft of Smart Materials without a mat, which is how a stack of gift pouches becomes one afternoon.
- **Brother ST4031HD Strong and Tough Serger:** A 3 or 4 thread serger at up to 1,300 SPM with a carbon steel blade and an extension table, for fast finished seams on bags and pouches.
- **Aunti Em's Kitchen Flour Sack Towels for Embroidery, White, 13 Pack:** Thirteen hemmed 100% cotton flour sack towels, the blank that turns an embroidery machine into a finished gift in minutes.

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Maker's Quick-Reference Cards

Print, cut along the tables and keep them by the machine

Maker	Printed
Kept in	Main craft

The figures you look up in the middle of a project, on one page. Each table is a card. Every figure matches the full worksheet it came from, where the worked examples and caveats live.

Card 1: Mattress and quilt math

Mattress	Size (in)	Formula
Twin	38 x 75	Width = mattress + 2 x drop
Full	54 x 75	Length = mattress + drop + tuck
Queen	60 x 80	Backing and batting = top + 4 in per side
King	76 x 80	Binding = perimeter + 10 to 12 in
California king	72 x 84	Cut size = finished + 1/2 in

Card 2: Triangles and geese

Unit	Cut
HST, 2 at a time	Finished + 7/8 in
HST, 8 at a time	Finished x 2 + 1 3/4 in
QST, 4 at a time	Finished + 1 1/4 in
Geese no-waste, large square	Finished width + 1 1/4 in
Geese no-waste, 4 small squares	Finished height + 7/8 in
On-point side triangles	Block x 1.414 + 1 1/4 in, cut twice
On-point corner triangles	Block / 1.414 + 7/8 in, cut once

Card 3: Precuts

Precut	Size	Common count
Mini charm	2 1/2 in squares	42
Charm pack	5 in squares	42
Layer cake	10 in squares	42
Jelly roll	2 1/2 in x WOF strips	40
Fat quarter	About 18 x 21 in	1
Fat eighth	About 9 x 21 in	1

Card 4: Yarn weights

Weight	Knit sts per 4 in	Needle	Hook
1 Super Fine	27 to 32	2.25 to 3.25 mm	2.25 to 3.5 mm
2 Fine	23 to 26	3.25 to 3.75 mm	3.5 to 4.5 mm
3 Light	21 to 24	3.75 to 4.5 mm	4.5 to 5.5 mm
4 Medium	16 to 20	4.5 to 5.5 mm	5.5 to 6.5 mm
5 Bulky	12 to 15	5.5 to 8 mm	6.5 to 9 mm
6 Super Bulky	7 to 11	8 to 12.75 mm	9 to 15 mm

Card 5: Knitting needle sizes

US	mm	US	mm
0	2.0	7	4.5
1	2.25	8	5.0
2	2.75	9	5.5
3	3.25	10	6.0
4	3.5	10.5	6.5
5	3.75	11	8.0
6	4.0	13	9.0

Card 6: Crochet hook sizes

US	mm	US	mm
B-1	2.25	H-8	5.0
C-2	2.75	I-9	5.5
D-3	3.25	J-10	6.0
E-4	3.5	K-10.5	6.5
F-5	3.75	L-11	8.0
G-6	4.0	M/N-13	9.0
7	4.5	N/P-15	10.0

Card 7: Fabric counts and canvas

Fabric	Stitches per inch	140 stitches finish at
11 count Aida	11	12.73 in
14 count Aida	14	10 in
16 count Aida	16	8.75 in
18 count Aida	18	7.78 in
28 count over two	14	10 in
13 mesh canvas	13	10.77 in

Card 8: Machine needles and stitch length

Item	Figure
Piecing needle	Microtex or quilting 75/11 to 80/12
Denim needle	90/14 to 110/18
Knit needle	Ball point 70/10 to 90/14
Change needle	Every 6 to 8 sewing hours
Piecing stitch length	2.0 to 2.5 mm, 12.7 to 10.2 per inch
Stitches per inch	25.4 / stitch length in mm