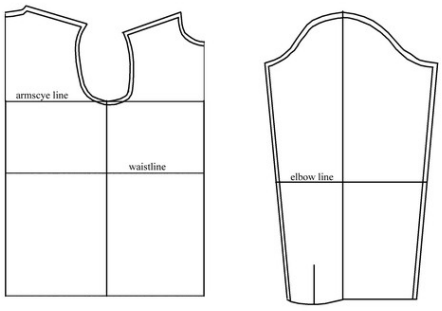
Drafting the Men's Shirt Block

By: gedwoods

http://www.burdastyle.com/techniques/drafting-the-men-s-shirt-blo



Finally, I have gotten around to preparing and uploading the instructions for drafting a man’s shirt. As for my other blocks, I will provide instructions in both imperial and metric measurements. Also, I incorporate both the shirt block and the sleeve block within this technique, but I will prepare separate instructions for the cuffs, collar, collar stand and sleeve plaquet, as these are likely to interest a broader group of people than the men’s shirt per se. These instructions are for a fairly casual shirt – for a more fitted dress shirt, they would need additional manipulation or a different set of instructions. Note that these instructions are inspired by and partly based on blocks found in Winifred Aldrich’s book, “Metric Pattern Cutting for Menswear”. I’ve adapted these blocks to some extent for my needs, but her book is very thorough and provides many more blocks for a range of contexts – I strongly recommend the book which is a mine of information.

Step 1 — Paper preparation

You will need to work with paper that is wide enough to accommodate roughly half the chest (or girth) circumference with some room to spare. Length will be roughly similar to this - perhaps somewhat longer to be on the safe side. Typically, you will need the following measurements : NECK size, circumference across the CHEST (although I use a girth measurement instead), ARMSCYE depth (distance from shoulder to underarm), natural WAIST LENGTH (length from neck to waist), BACK width, SLEEVE LENGTH, and SHIRT LENGTH. If you don't have all these measurements, you can infer several from some basic measurements, but the inferral process assumes the man is of a "typical shape". Use the CHEST measurement as the baseline (or girth measurement, if this is bigger than the chest). Use the following equations : BACK = 0,25 * CHEST + 15 cm (or + 5 & 7/8 in.) ; NECK = 0,25 * CHEST + 15 cm (or + 5 & 7/8 in.) ; ARMSCYE DEPTH = 0,2 * CHEST + 4,4 cm (or + 1 & 3/4 in.) ; WAIST LENGTH = 0,1 * CHEST + 34,6 cm (or + 13 & 1/2 in.) ; SLEEVE LENGTH = 0,1 * CHEST + 75 cm (or + 29 & 1/4 in.) ; SHIRT LENGTH = 0,17 * CHEST + 64 cm (or + 25 in.) It should be noted that SHIRT LENGTH is really a question of individual choice - this estimate just provides a guide. Now draw the beginning of the left edge of the shirt, starting at a point A near the top (you should leave more than 15 cm or 6 in to the left of your point A - you will need this space later on when It comes time to set up the sleeve) and drawing straight down the ARMSCYE DEPTH plus 2,5 cm (1 in.) to point B.

Step 2 — Determine garment width

Measure 1/2 the CHEST measurement to the right of point B, add 8 cm (3 & 1/8 in.) and mark the point C. Connect points B and C. Note that this line is sometimes called the Armscye Depth Line, or simply the Armscye Line.

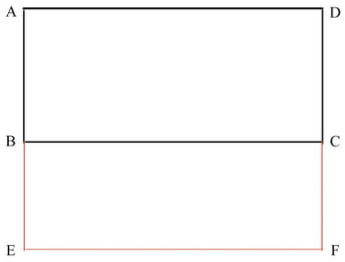
Step 3 — Draw top right side of block

Now draw a vertical line above point C to point D, located at the same height as point A.

Step 4 — Draw guide line at top

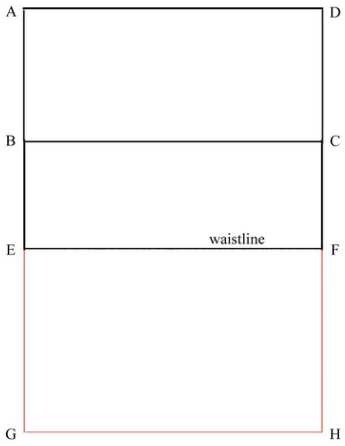
Now connect points A and D. Note that this line does not form part of the finished pattern - it is a guide line, and you might want to draw it in less heavily than the finished garment lines.

Step 5 — Draw in the waist line



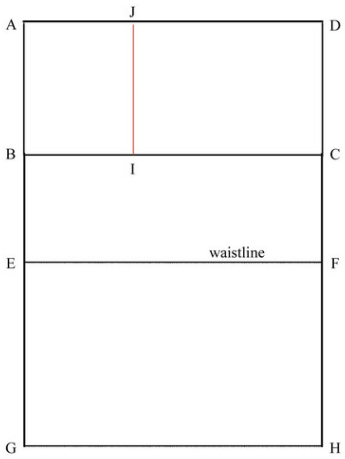
Extend the line from A to B downwards to point E, located the natural WAIST LENGTH, plus 1 cm (3/8 in.), below point A. Then draw a horizontal line the same length as line BC from point E to point F, and then up from point F to point C. This horizontal line is the Waist Line of the shirt.

Step 6 — Draw in the shirt outline below the waist



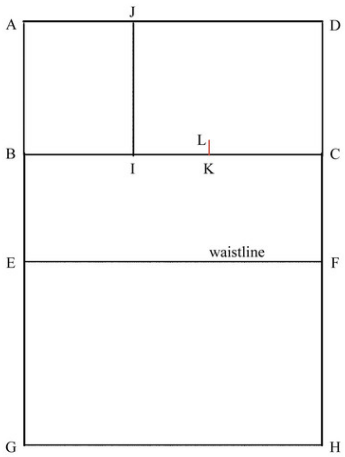
Now extend the line from A to E downwards again, to point G, located a distance of the SHIRT LENGTH plus 1 cm (3/8 in.) below point A. Draw horizontally the same distance as for lines BC and EF to the right of point G to point H, and then up to join point F. This is the hem line at the bottom of the shirt.

Step 7 — Draw guide line for back of armscye



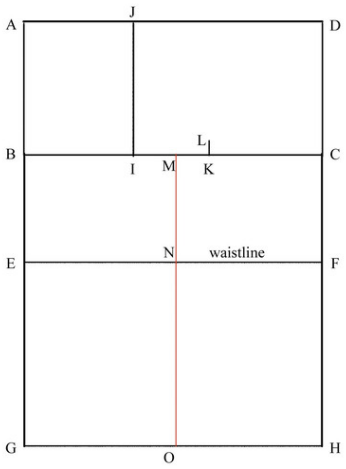
Measure from point B towards point C, along the Armscye Line, a distance of half the BACK plus 2,5 cm (1 in.) and mark the point (point I), then draw a vertical line up to the line connecting A and D and mark this point (point J).

Step 8 — Construction line for front of the armscye



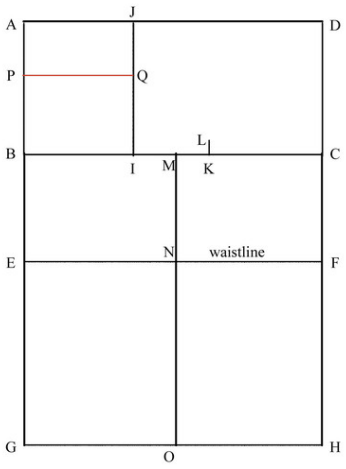
Measure from point B along the Armscye Line, a distance of one third the CHEST measurement, add 1,5 cm (5/8 in.), and mark the point K, then draw a vertical line upward from point K, 3,5 cm (1 & 3/8 in.), and mark the point L. The line KL is a very important construction line that will serve later on to help define the sleeve.

Step 9 — Draw in the side seam



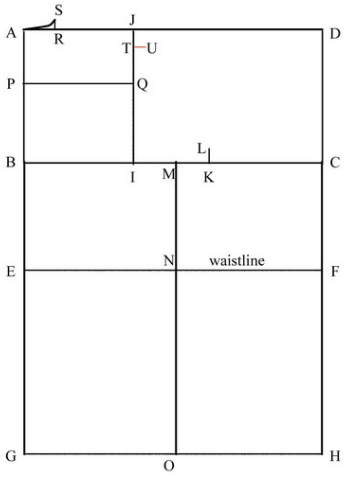
Measure the distance from point I to point K along the Armscyle Line. From point K, mark the point M to the left along the Armscye Line, a distance of half the IK measurement minus 0,5 cm (1/5 in.). Draw a vertical line down from this point, crossing the Waist Line at point N and meeting the Hem Line at point O.

Step 10 — Intermediate construction line



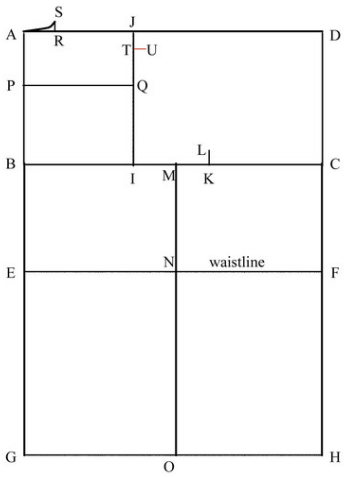
Locate the point P below point A a distance of one half the ARMSCYE DEPTH plus 1 cm (3/8 in.), and draw a horizontal line to point Q, at the intersection with the line connecting points I and J.

Step 11 — Constructing the back neckline



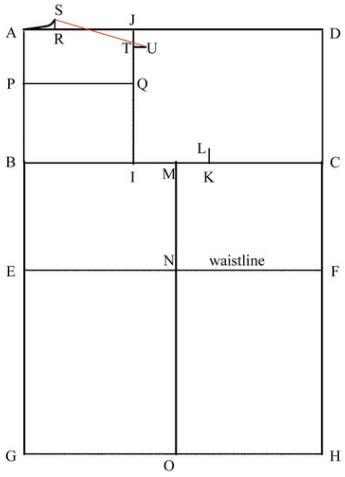
Measure one fifth of the NECK measurement minus 0,5 cm (3/16 in.) from point A to the right and mark off the point R. Draw a short vertical line from R upwards 2 cm (3/4 in.) to point S. Draw in a curved line from point A to point S - this delimits the back of the neck line.

Step 12 — The back shoulder seam - 1



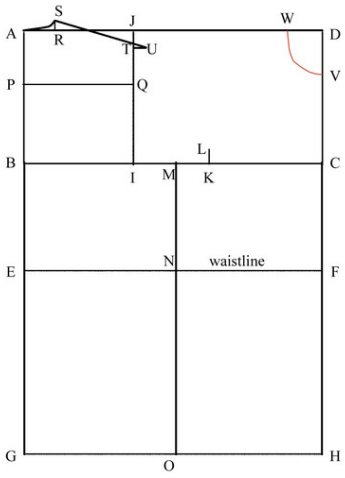
Measure one quarter of the ARMSCYE depth plus 4 cm (plus 1 & 9/16 in.) above point Q and mark the point T. Then measure 3,5 cm (1 & 3/8 in.) to the right of point T to mark the point U.

Step 13 — The back shoulder seam - 2



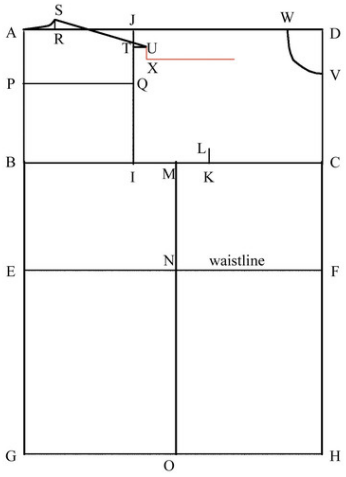
Now connect point S and point U with a straight line. This is the back shoulder seam and should be drawn in boldly.

Step 14 — Constructing the front neckline



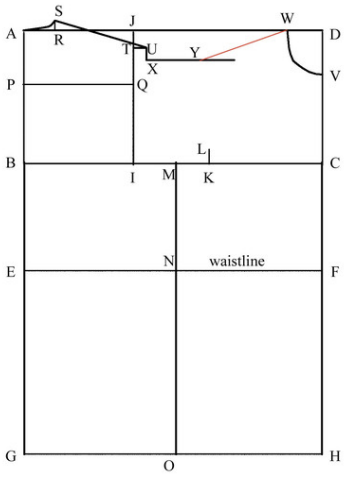
Measure one fifth the NECK size below point D and mark the point V. Measure one fifth the NECK size minus 1 cm (3/8 in.) to the left of point D and mark the point W. Draw in the neck curve boldly between points V and W.

Step 15 — Constructing the front shoulder seam - 1



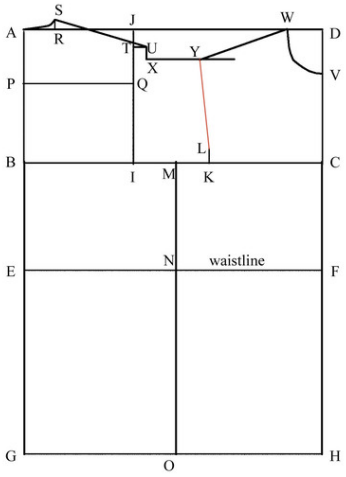
Draw a short construction line 2 cm (3/4 in.) vertically down from point U and mark the point X. Now draw a light construction line horizontally to the right of X about half way to the line CD.

Step 16 — Constructing the front shoulder seam - 2



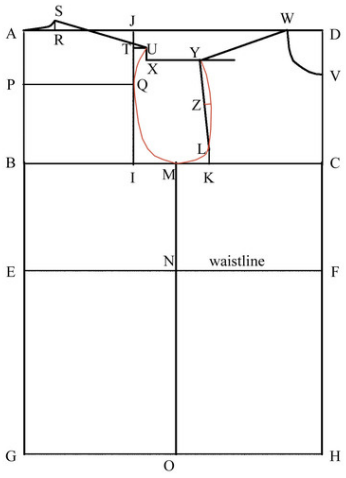
Measure the distance from point S to point U along the back shoulder seam and add 0,5 cm (3/16 in.). Pivot a ruler on point W so that it intersects with the horizontal construction line that runs through point X at this distance from point W, and mark this point Y. Draw in the front shoulder seam in a straight line from point W to point Y. The distance from point W to point Y is hence the distance from point S to point U plus 0,5 cm (3/16 in.).

Step 17 — Construction line for front of the armscye



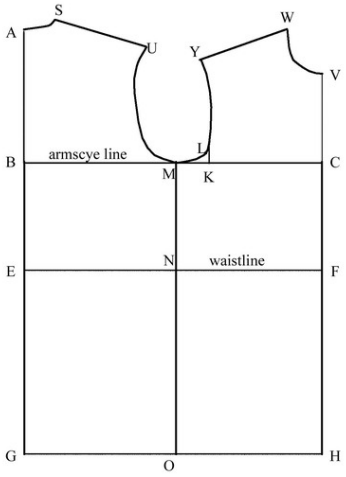
Connect points Y and L with a lightly drawn straight line. This is the construction line for the front part of the armscye (armhole).

Step 18 — Constructing the Armscye (Armhole)



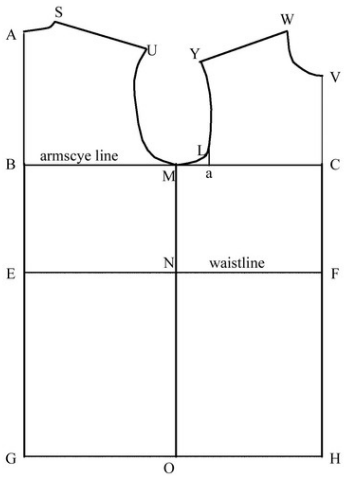
Connect points U, Q, M, L and Y with a curved line - this forms the armhole (also called the armscye). The curve should deviate a maximum amount of 1,25 cm (1/2 in.) outwards from the line connecting points L and Y at point Z, and should be inset roughly by 1,75 cm (11/16 in.) from point K on the diagonal inwards, and by 3 cm (1 & 3/8 in.) from point I on the diagonal inwards.

Step 19 — Suppressing construction lines



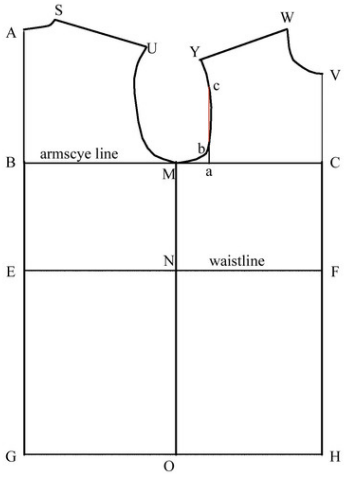
The shirt block is completed at this point. In this diagram, the construction lines that are no longer needed have been suppressed, showing the block in its (near) final form. We are now ready to begin to draft the sleeve. For the sleeve, you will need a new sheet of paper, which you will lay over the one you have used for drafting the shirt block. You will need, also, to trace out lightly the armhole curve onto the new sheet, that is, the curve from point U through Q, M, L and Y, along with the Armscye Line and the short construction line from point K to point L.

Step 20 — Renaming point K



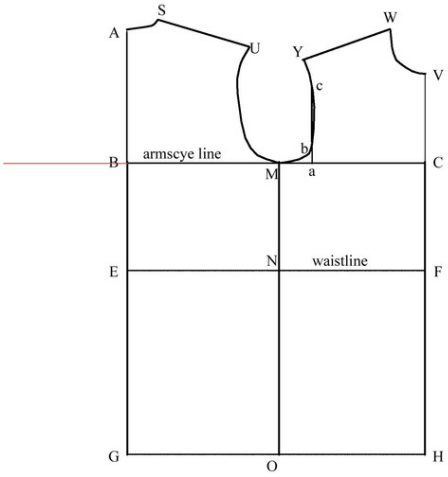
In order to use a consistent set of names for the points used in the drafting of the sleeve, we shall rename the points that are common to both the shirt block and the sleeve block. Hence we rename the point K from the shirt block, point "a" for the sleeve block.

Step 21 — Determining sleeve construction lines



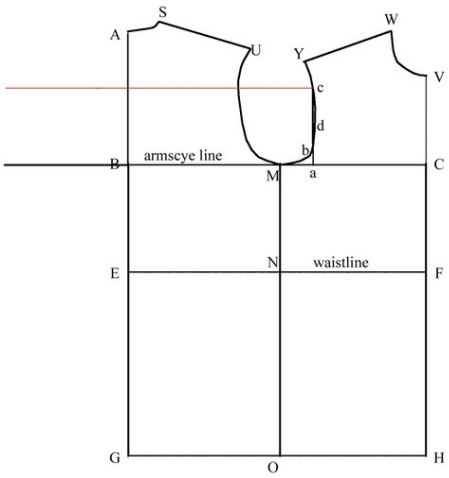
First, you will need to measure the armscye (that is, the distance along the curve from point U through point M to point Y). There are several ways of doing this. I sometimes use a ruler - I set the ruler up to measure the first 2 cm (inch) and then pivot this distance along the curve to measure the next 2 cm (inch), and so on. When the curve gets very steep, then I measure a shorter distance before pivoting. This results in a (somewhat imprecise) measurement. A better way is to use a cloth tape measure or a piece of thread or string (embroidery thread is good for this), and drape it around the curve, then use the straightened cord to measure off the distance. The next step consists of replacing the point L with the point b, and extending the line from point "a" to "b" upwards one third of the armscye measurement obtained by the means described above. Mark this point "c".

Step 22 — Extending the Armscye Line



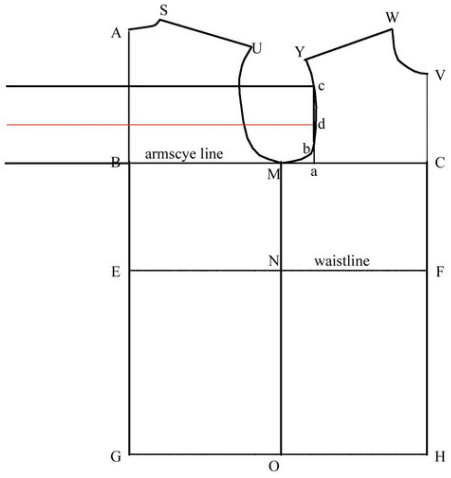
Now we are going to draw in three construction lines that will allow us to develop the sleeve cap (top of the sleeve). First we extend the Armscye Line to the left of point B.

Step 23 — Create the topmost construction line



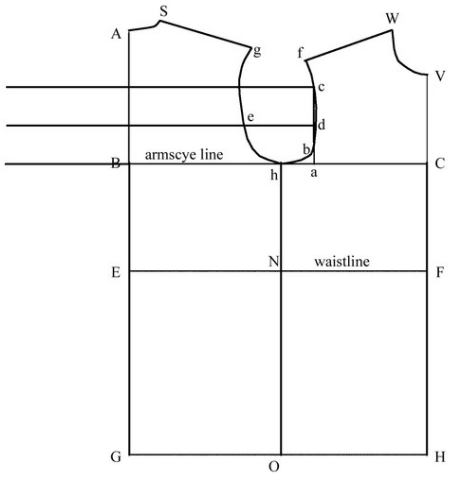
Next, we draw a horizontal line from point "c" to the left, roughly the same distance as we extended the Armscye line.

Step 24 — Create the middle construction line



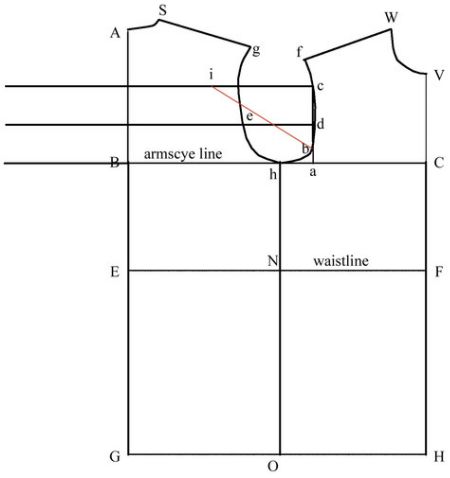
Halfway from point "a" to point "c", mark in an new point "d", and draw in another horizontal line left of point "d", the same length as the other two construction lines.

Step 25 — Mark in additional points



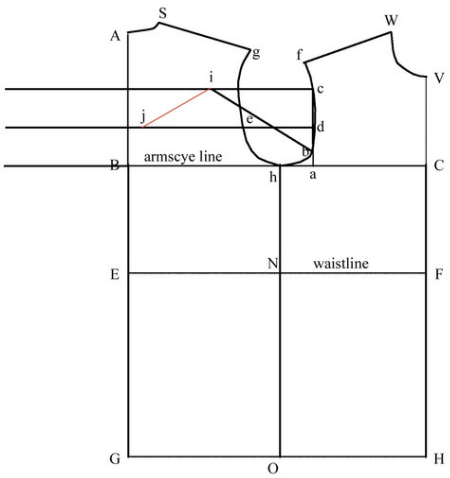
Where the horizontal line lift of point "d" intersects the back of the armscye line, mark the point "e". Also, let's change the designations for point Y to point "f", point U to point "g" and point M to point "h".

Step 26 — Drafting the top right sleeve cap construction line



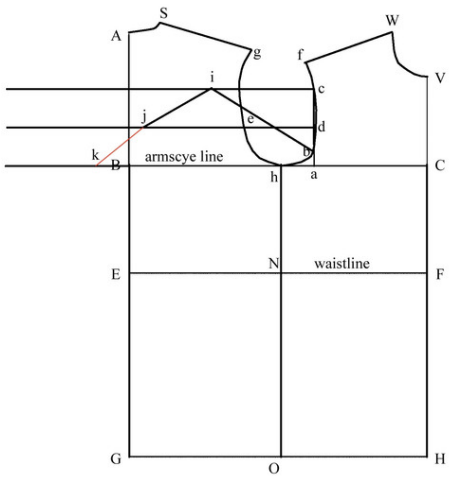
Measure the straight line distance between point "f" and point "b" and add 1,5 cm (5/8 in.) - now swivel a straight edge around point "b" so that it intersections the topmost construction line (the horizontal line passing through point "c") at this distance from point "b". Mark this point "i" and draw in the line.

Step 27 — Drafting the top left sleeve cap construction line



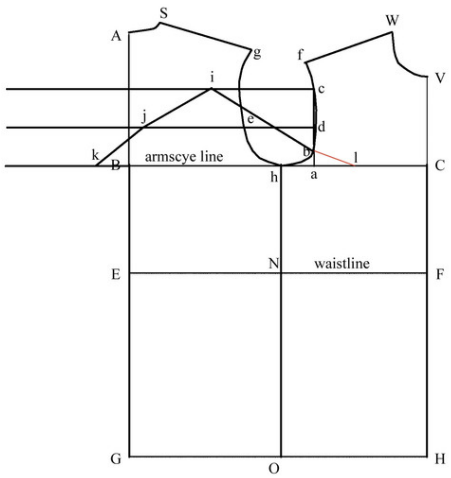
Measure the straight line distance between point "g" and point "e" and add 1,25 cm (1/2 in.) - now swivel a straight edged ruler around point "i" so that it intersects the middle construction line (the horizontal line passing through point "d") at this distance to the left of point "i". Mark this point "j" and draw in the line.

Step 28 — Drafting the bottom left sleeve cap construction line



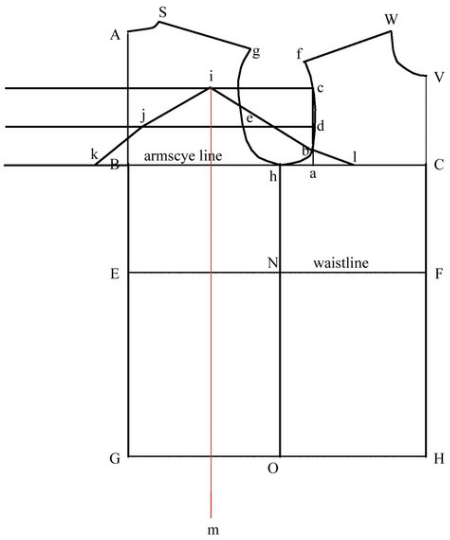
Measure the curved distance between point "e" and point "h" (i.e. the distance along the armhole curve) and add 1,25 cm (1/2 in.) - now swivel a straight-edged ruler around point "j" so that it intersects the Armscye Line (the horizontal line passing through point "a") at this distance to the left of point "j". Mark this point "k" and draw in the line between "j" and "k".

Step 29 — Drafting the bottom right sleeve cap construction line



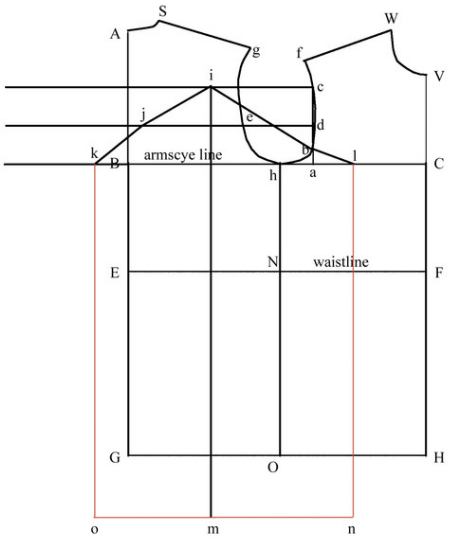
Measure the curved distance between point "b" and point "h" (i.e. the distance along the armhole curve), add 0,75 cm (5/16 in.), and swivel the straight-edged ruler around point "b" until it intersects the Armscye Line (the horizontal line passing through point "a") at this distance to the right of point "b". Mark this point "l" and draw in the line between "b" and "l".

Step 30 — Drafting the sleeve length



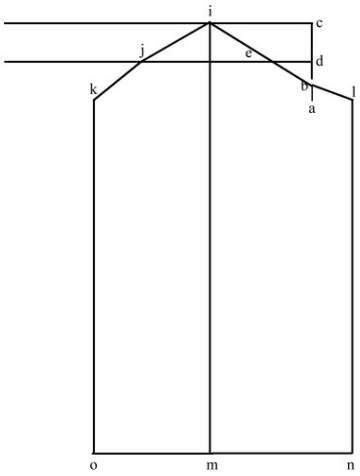
Now, draw a vertical line straight down from point "i" the distance SLEEVE LENGTH and mark the point "m" at the bottom.

Step 31 — Drafting the sleeve end



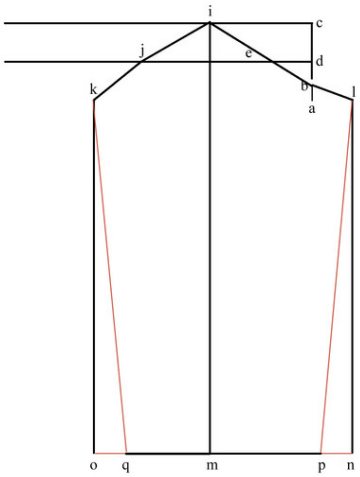
Now draw a horizontal line to the right of point "m" to the point "n" directly below point "l", and connect points "l" and "n". Then carry out a similar operation for the left size, drawing a horizontal line to the left of point "m" to the point "o" directly below point "k", and connect points "k" and "o".

Step 32 — Suppressing shirt block



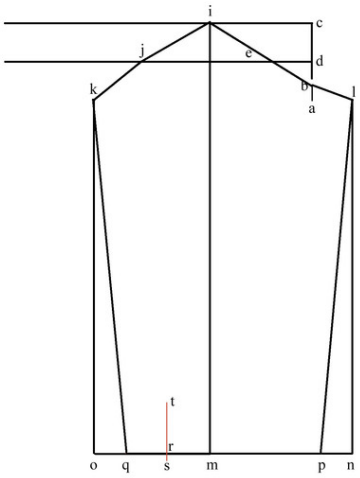
At this point, I have suppressed the shirt block lines. We could have done so earlier, but I wanted to show you how the sleeve length lays out against the shirt length. For the remainder of the construction elements, the removal of the shirt details from the diagram renders the later easier to read.

Step 33 — Shaping the sleeve



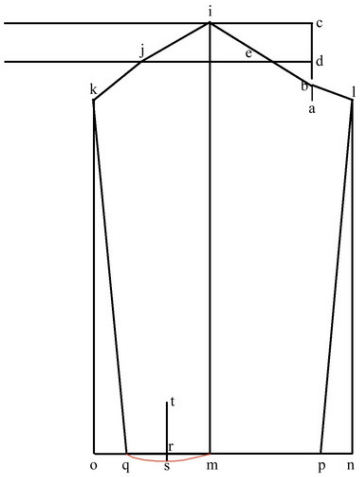
Measure 5 cm. (2 in.) in from point "n" towards "m" and mark the resulting point "p". Connect points "p" and "l". Likewise, measure 5 cm. (2 in.) in from point "o" towards "m" and mark the resulting point "q". Connect points "q" and "k".

Step 34 — Drawing in the sleeve slit



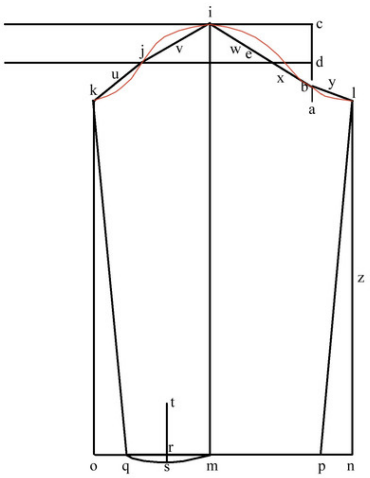
Halfway between points "m" and "q", mark the point "r". Now draw a short line 1 cm. (3/8 in.) straight down from point "r" and mark the point "s". Draw a vertical line straight up from the point "s" a full 10 cm. (4 in.) to point "t". This is where the sleeve slit will be located.

Step 35 — Finish the sleeve hem



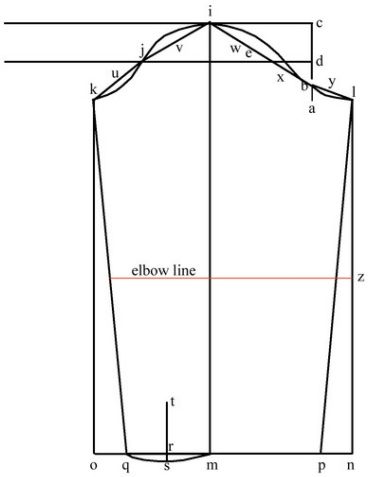
Now draw in a curved line from point "m", across point "s" and on to point "q" - this will form the sleeve hem around the plaquette.

Step 36 — Drawing the sleeve cap



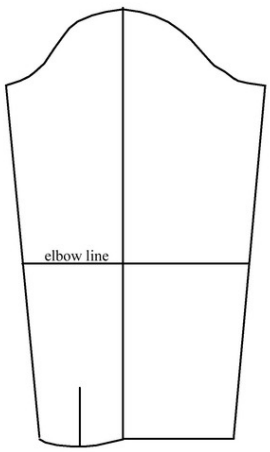
Draw in the curved line that forms the sleeve cap. It should curve downward to a maximum deviation of 0,75 cm (5/16 in.) between points "k" and "j" (i.e. at point "u"), then outwards a maximum deviation of 1,5 cm (5/8 in.) between points "j" and "i" (at point "v"), outwards by a maximum deviation of 2 cm. (3/4 in.) between points "i" and "b" (at point "w") and finally, curves inwards and downwards by a maximum deviation of 0,75 cm (5/16 in.) between points "b" and "l" (at point "y"). Note that the curve also passes through point "x" and follows a straight line from "x" to "b".

Step 37 — Add Elbow Line



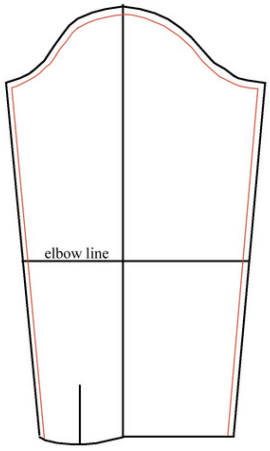
Mark the point "z" a distance of 2,5 cm (1 in.) above the halfway mark between points "n" and "l", and draw a horizontal line to the left side of the sleeve. This reference line marks the location of the elbow and is called the Elbow Line. For some constructions this line will be useful later on.

Step 38 — Clean up sleeve block diagram



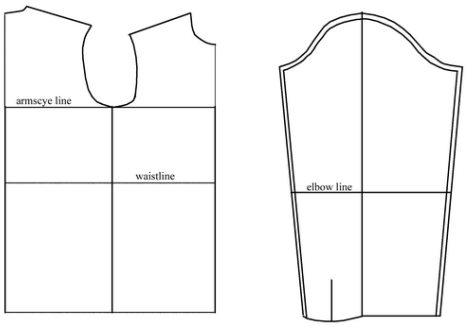
Now erase the various construction lines (or pencil in the sleeve outline in heavy pencil) to get the final sleeve block.

Step 39 — Add in seam allowance



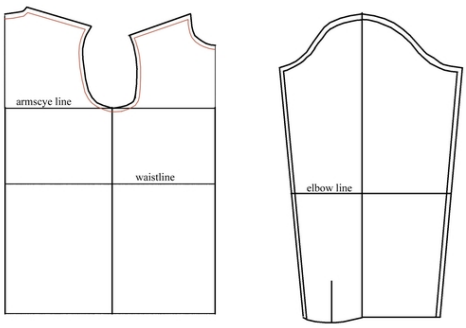
The sleeve block was constructed in such a way as to include a 1 cm (3/8 in.) seam allowance along all closed edges (i.e. excluding the sleeve hem).

Step 40 — Inlude both the sleeve and the shirt blocks



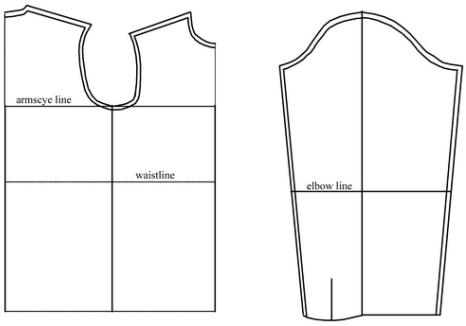
Now, let us slide the sleeve block across so as to show both blocks side by side.

Step 41 — Add in seam allowance on shirt block



Like the sleeve block, the shirt block includes a 1 cm. (3/8 in.) seam allowance along the top edge only.

Step 42 — Final shirt and sleeve blocks



Here are the final shirt and sleeve blocks. Note that to finish make a shirt using these blocks, four other small blocks are required, for the cuffs, the sleeve plaquettes, the collar and the collar stand. These will be uploaded into a separate Technique.

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Drafting the Men's Shirt Block