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## Leena's Pattern Drafting Lessons: Drafting patterns for children's pants

➤ [Metric conversion table](#)

This lesson instructs you to draft baby basic pants patterns. With babies I mean children from 0 to approximately 2 years of age i.e. the children who use diapers (napkins). At the end of the instructions I give instructions of what are the differences when drafting pants for children from 3 to 14 years. The pattern drafting method used is the Scandinavian one but it has been slightly modified.

### Measuring

To draft patterns for children's pants, you have to take the measurements listed in the table below. To keep the pictures clear and readable the measurements are given only in centimeters. You can change centimeters to inches using formula 1 cm = 0.4 inches.

### Adding ease

The subject would not be able to wear the pants if the patterns were drafted exactly to his/hers body measurements. Therefore you have to add ease to some of the measurements.

ADD EASE TO THE WAIST CIRCUMFERENCE: 2 cm  
 ADD EASE TO THE HIP CIRCUMFERENCE: 4 cm  
 ADD EASE TO THE CROTCH HEIGHT: 2 cm (for diaper, napkin)

Do not add any ease to other measurements.

Write down the measurements in the table below

	Body measurement	Body measurement + ease
WAIST CIRCUMFERENCE	*	+ 2 cm=
HIP CIRCUMFERENCE	*	+ 4 cm=
Crotch height	*	+ 2 cm=
OUTSIDE SEAM LENGTH = side seam from waist to floor	*	
CUFF CIRCUMFERENCE The desired finished leg circumference at cuff	*	

Crotch height is measured in the following way. Let the child sit on a bench or a table and measure vertically from his/her waist to the bench/table at the side. Crotch height can also be measured from a pair of old, well fitting pants, crotch height is the difference between the outside and the inside seam of the pants.

All measurements are body measurements. DO NOT ADD ANY EASE when measuring. It is added later in the calculations.

Default measurements for children

It is not an easy task to measure a children or a baby. Therefore I give here the Scandinavian table measurements for the children. You can use these or measure your child yourself.

Child's height, cm	Waist circ	Hip circ	Crotch height	Knee circ	Cuff circ
BABIES, 0-2 YEARS, HEIGHT 62-98 CM					

62	48	53	16.5		26
68	49	54	17		26
74	50	55	17.5		26
80	51	56	18		26
86	52	57	18.5		27
92	53	58	19		28
98	54	60	19.5		29
<b>CHILDREN, 3-14 YEARS, HEIGHT 104-146 CM (girls/boys)</b>					
104	55	62	18	35	29/26
110	56	64	18.5	35.5	29.5/27
116	57	66	19	36	30/28
122	58	68	19.5	36.5	30.5/29
128	59/60	70	20	37	31/30
134	60/62	73/72	20.5	37.5	31.5/31
140	62/64	76/75	21	38	32
146	64/66	79/78	21.5	39	33

**DO THE FOLLOWING CALCULATIONS:**

**Round the measurements up to the nearest 0.5 cm.**

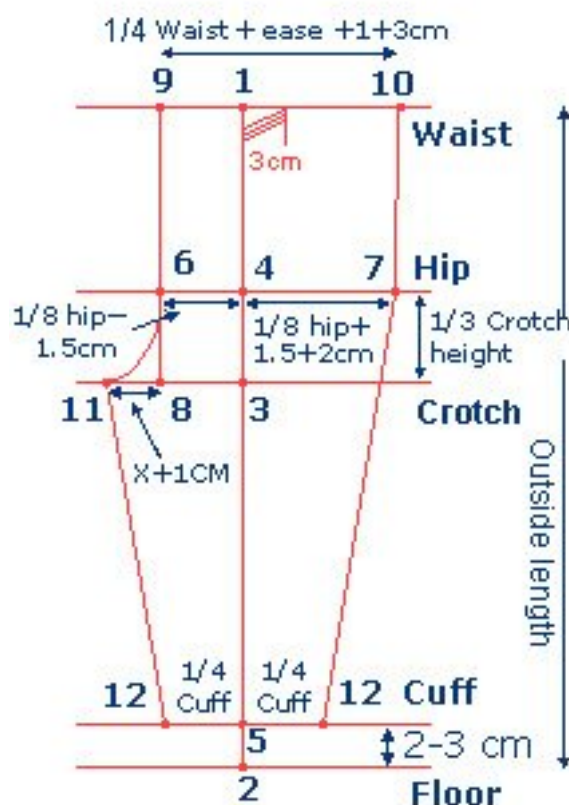
	Body measurement + ease	Divided by 4	Divided by 8	Divided by 20 = x

Waist circumference	*	*		
Hip circumference	*	*	*	*
Cuff circumference	*	*		

## Drafting the patterns

Follow the numbers in the picture. All measurements mentioned below are with ease.

### FRONT PANT



From 1 to 2 = Start by drawing a vertical line that corresponds to the outside length of the pants.

3 = Measure down from point 1 on the waist line a distance equal to the crotch height.

4 = Find the point equal to  $\frac{1}{3}$  crotch height up from the crotch line

5 = Measure up from point 2 a distance of 2-3 cm.

Draw horizontal lines to the left and to the right from point

1 = this is the waist line

3 = this is the crotch line

4 = this is the hip line

5 = this is the cuff line

6 = Measure from point 4 to the left on the hip line  $\frac{1}{8}$  hip circumference -

1.5 cm

7 = Measure from point 4 to the right on the hip line  $\frac{1}{8}$  hip circumference + 1.5 cm + 2 cm

8 = Draw a vertical utility line from point 6 down to the crotch line

9 = Draw a vertical line from point 6 up to the waist line

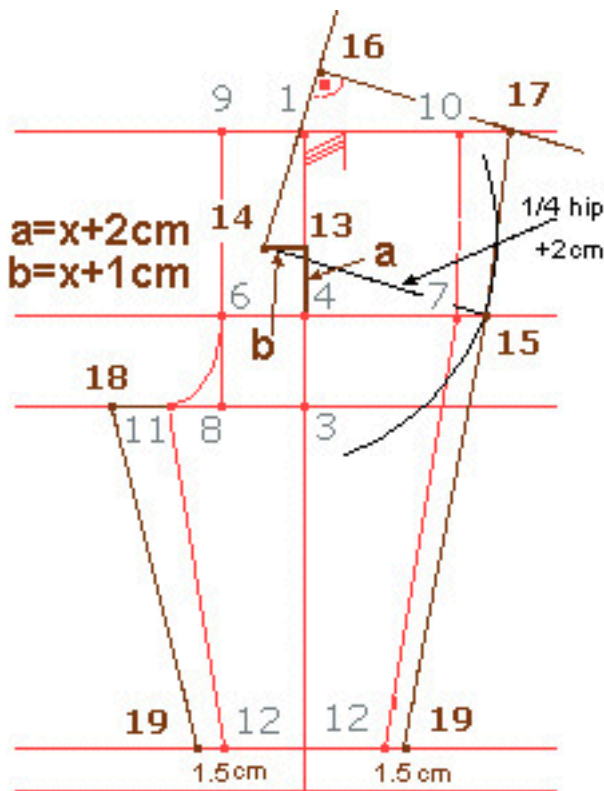
10 = Measure from point 9 to the right  $\frac{1}{4}$  waist circumference + 1cm (this moves the side seam 1 cm to the back) + 3cm (this is for the waist pleat)

11= Measure from point 8 to the left on the crotch line "x" (calculated above) + 1 cm; distance from point 8 to 11 is the length of the front crotch curve. Draw the curve between points 6 and 11 as in the picture.

12 = Measure from point 5 to the left and to the right  $\frac{1}{4}$  cuff - 0.75 cm (the seams move 0.75 cm to the front)

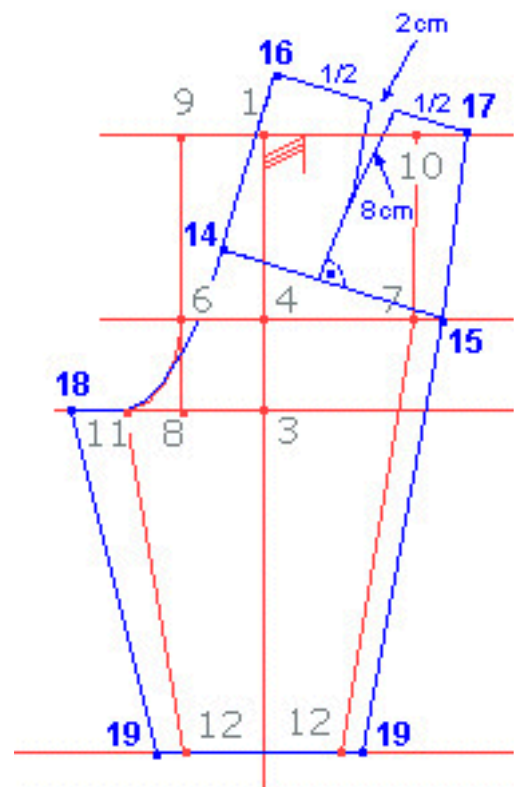
Draft the front pattern according to the picture along points 9 - 6 - 11 - 12 - 5 - 12 - 7 - 10 - 1. Curve a bit outwards between points 7 and 10. Measure from point 1 to the right 3 cm and mark the waist pleat here.

### BACK PANT



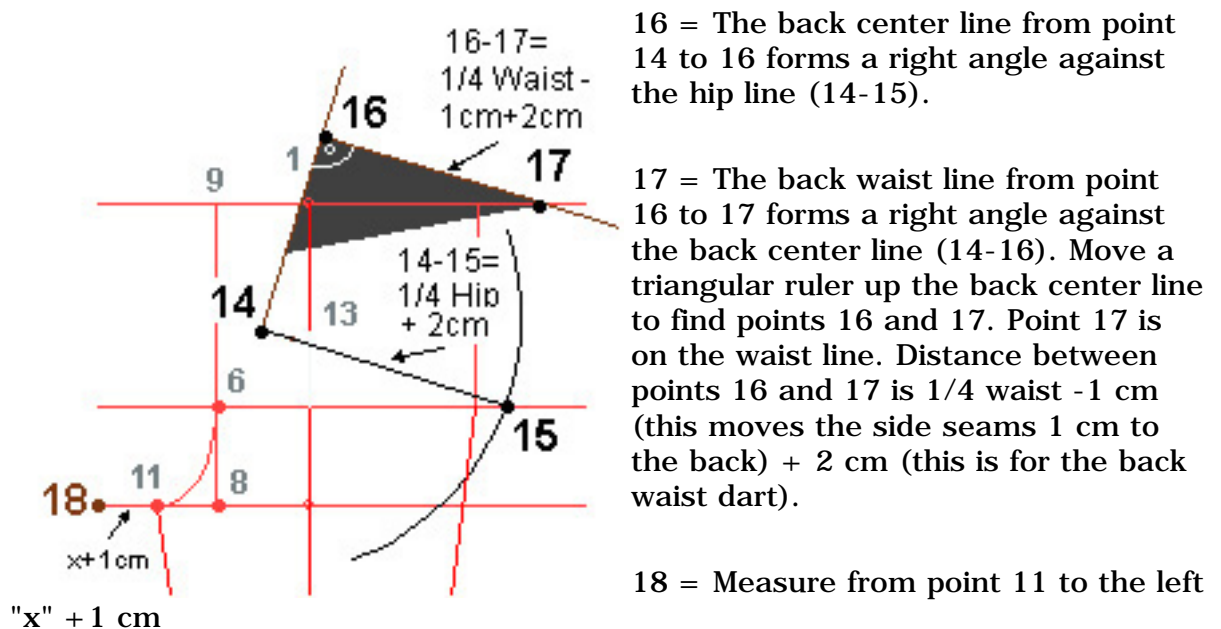
Draft the back pattern on top of the front pattern.

13 = Measure from point 4 up "x" + 2 cm (distance between points 4 and 13 is marked in the picture with "a"). "X" is calculated above.



14= Measure from point 13 to the left "x" (distance between points 13 and 14 is marked in the picture with "b")

15 = Trace the hip point of the back pant by drawing a line which equals to the length of  $\frac{1}{4}$  hip circumference + 2 cm from point 14 and meets the front hip line.



19 = measure from the front cuff points (12) to the left and to the right 1.5 cm.

Draft the back pattern according to the picture along points 16 - 14 - 11 - 18 - 19 - 5 - 19 - 15 - 17. Find the point midway between points 16 and 17 and draw a dart there. The dart is 2 cm wide and 8 cm deep. The dart apex is on a line which forms a straight angle against the hip line.

Draw the back grain line: it is in the same place where it is on the front piece.

Check that all the curved lines curve smoothly.

## PANTS FOR CHILDREN FROM 3 TO 14 YEARS OF AGE

Pants for children over 3 years differ from the babies' pants because children over 3 years do not need diapers and their figure is somewhat different compared to the figure of the babies.

The differences are mentioned here.

ADD EASE TO THE WAIST CIRCUMFERENCE: 1 cm

ADD EASE TO THE HIP CIRCUMFERENCE: 4 cm

DO NOT ADD EASE TO THE CROTCH HEIGHT

Do not add any ease to other measurements.

The measurements between the points which are different compared with those of the babies' pants are:

FRONT:

1-9 =  $\frac{1}{8}$  waist circumference - 0.5 cm

1-10 =  $\frac{1}{8}$  waist circumference + 0.5 cm + 1 cm + 2.5 cm; raise side seam point with 1 cm

4-7 =  $\frac{1}{8}$  hip circumference + 1.5 cm + 1.5 cm

$$8-11 = x$$

BACK:

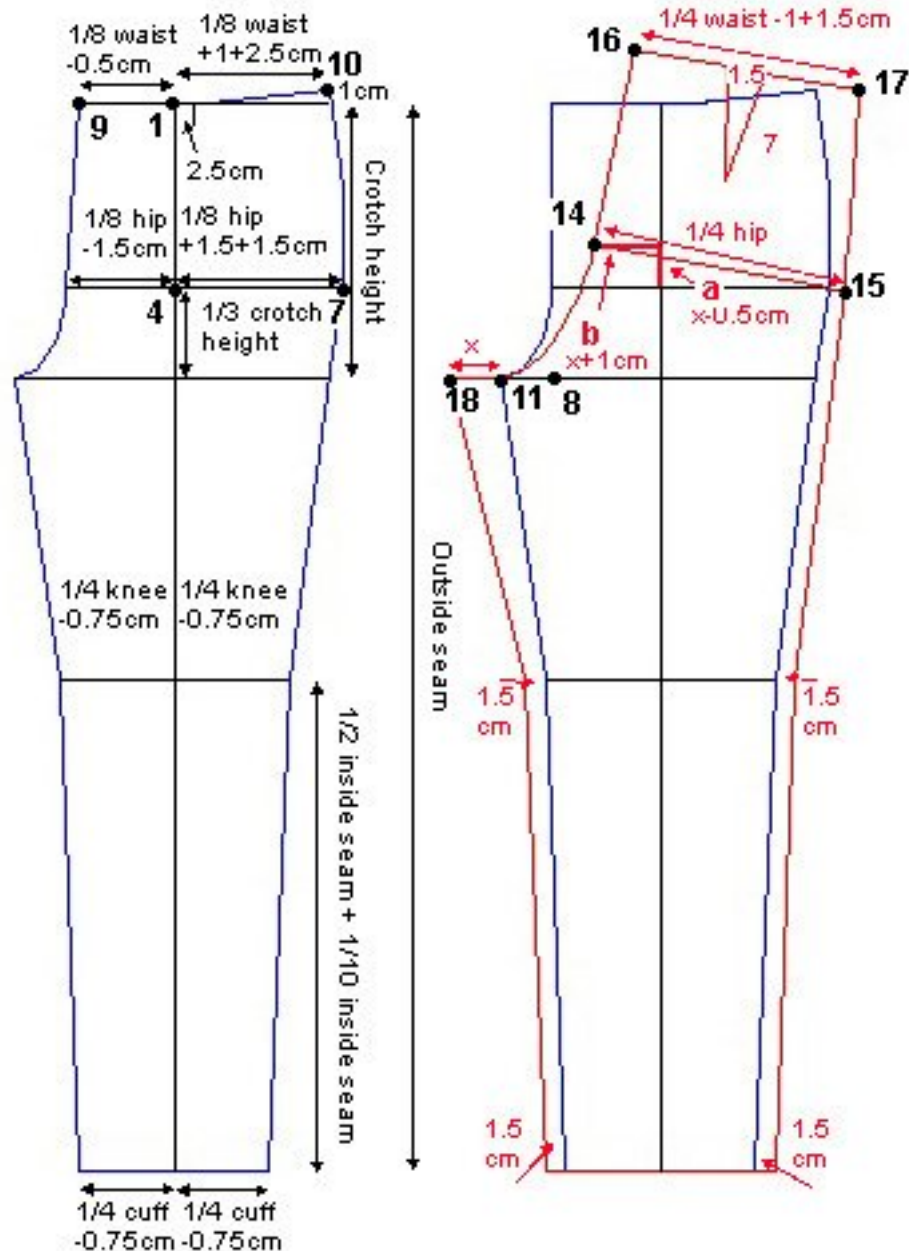
$$a = x - 0.5 \text{ cm}$$

$$b = x + 1 \text{ cm}$$

$$14-15 = 1/4 \text{ hip circumference}$$

$$16-17 = 1/4 \text{ waist circumference} - 1 \text{ cm} + 1.5 \text{ cm; raise side seam point with 1 cm}$$

$$11-18 = x$$



Calculate the place of the knee to curve the legs inwards there. Do it with help of the inside seam length of the pants. The inside seam length is the outside seam length subtracted with the crotch height.

The place for the knee is

$$1/2 \text{ inside seam length} + 1/10 \text{ inside seam length measured from the floor.}$$

The width of the leg at the knee is drafted the same way as at the cuff i.e.

- at the front the desired finished leg circumference at the knee divided by 2 - 1.5 cm i.e.  $\frac{1}{4}$  knee circumference - 0.75 cm to the left and to the right from the center line
- at the back the desired finished leg circumference at the knee divided by 2 + 1.5 cm i.e.  $\frac{1}{4}$  knee circumference + 0.75 cm to the left and to the right from the center line.

The width of the front pleat is 2.5 cm to the right from the front center line. The width of the back dart is 1.5 cm and the depth of the back dart is 7 cm.

Sewing instructions are also included on this web site. To view them ➤ [click here](#)

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