

# Chapter 5 “Easy line functions”

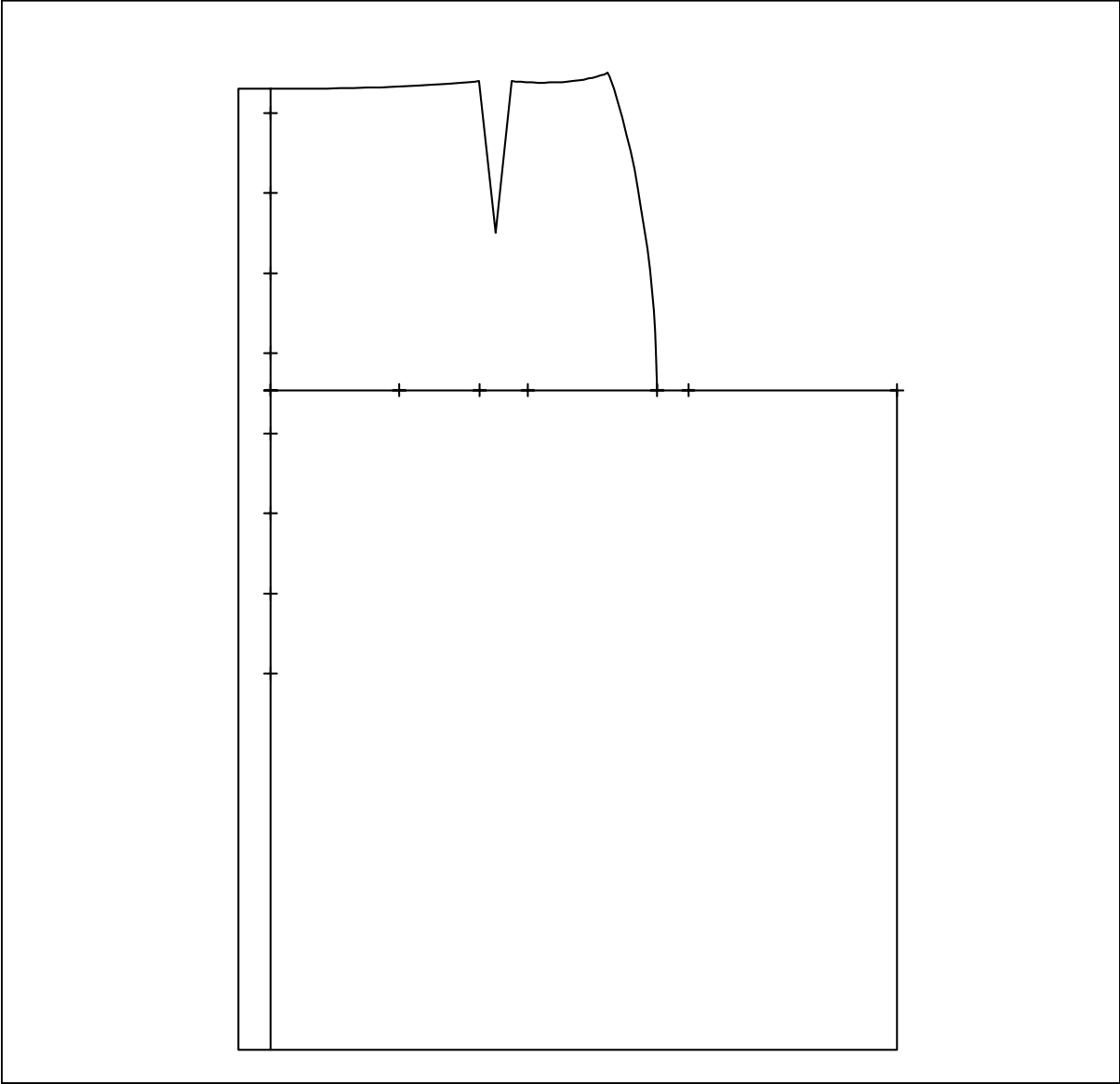
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Contents of this chapter are the functions for altering lines. Some of these are:

- linking lines,
- rastering, i.e. spreading points for button holes, notches and other markings along a line,
- length alterations and
- separating lines.

These very important functions must be mastered. Therefore, intensive practice is required.



## 5.1 Linking lines

### The *link* menu

The *link* menu is opened from the basic menu. It allows for the linking of lines or the joining of lines with curves.

### Step-by step guide

- In the case of *link* (with straight line)
- ⇒ Activate the option *single* or *chain*
  - ⇒ Click the lines to be linked following the right principle
  - ⇒ Correction (several possible) by clicking *reset*
  - ⇒ Terminate linking with *deposit*

In the case of *link with curve*

- ⇒ Activate *link with curve*
- ⇒ Click the two lines to be linked (right principle !)

### Linking lines (joining)

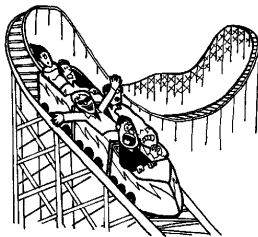
The first part of the menu is for linking lines by bridging the gaps between the lines with a straight line.

Linking lines is required when two or more lines are supposed to be treated as one during further construction steps.

First you have to choose between the options *single* or *chain*. With *chain* all tangential lines (without kink) will be linked automatically in one operation. At the beginning, the simpler option *single* is recommended.

*Reset* resets the individual linking operations step-by-step. The link operation is terminated only with *deposit* and treated as one construction step in the record.

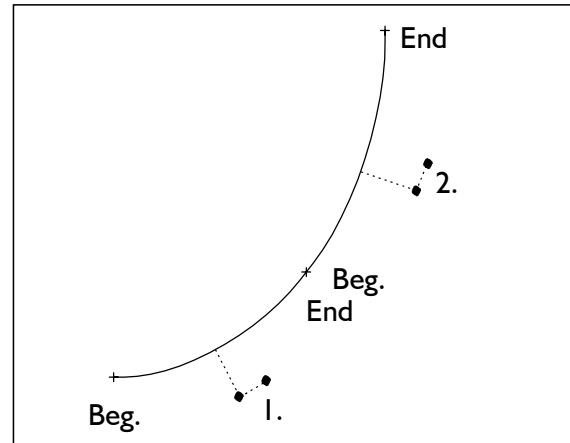
**The end of the already linked lines (= basic line) is linked to the beginning of the clicked line. For the determination of direction the right principle applies.**



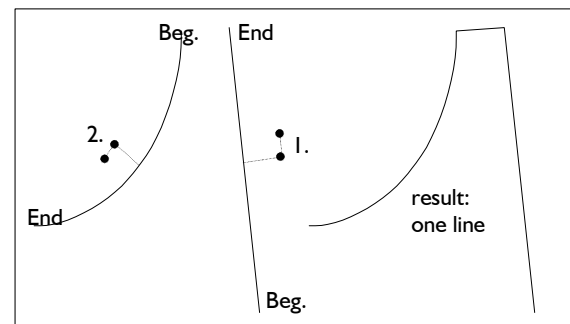
Picture 5-1 shows the linking of two lines with *single* or *chain*. Beginning and end of the lines are determined by the right principle. For further information read the explanations in sections 4.3 and 4.5.

Picture 5-2 shows linking of two lines which are not touching with a straight line. Here, also, the right principle is to be followed.

link
-----
link
single
chain
reset
-----
deposit
-----
link
with curve
-----
reset
measure
-----



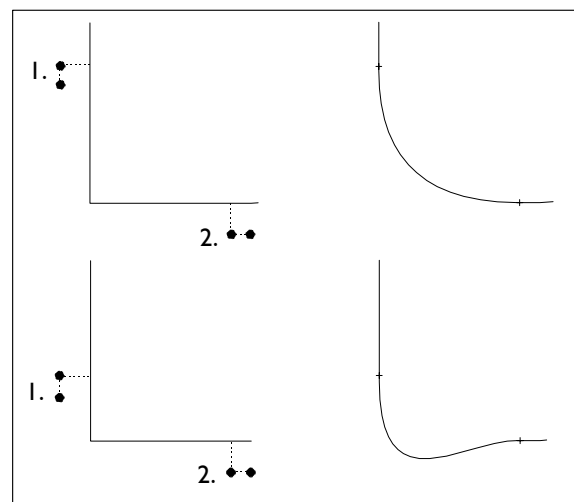
Picture 5-1



Picture 5-2

### Link with curve

With the second group of functions in the *link* menu two lines can be linked by a curve. This function can be used for linking separate hem lines, side seams or taking out darts for example.



Picture 5-3

After having activated *link with curve* the two lines to be linked have to be clicked, following the right principle. The new joining curve begins and ends at the respective click positions, thus, determining the shape of the curve (see picture 5-3).

If the joining curve does not fulfil your ideas, reset and link again. The shape of the curve is influenced heavily by the choice of beginning and final point. The curve form can be compared to a flexible steel band fixed and adjusted at the click points. Generation of a certain shape of curve requires practice and experience.

### Further functions

With *reset* the last construction step can be undone. The last construction step can be

- linking two lines with a curve or
- construction of a line from several lines with the functions *single* and *chain*.

With *measure* functions for measuring distances, lengths and directions can be called. These functions are explained in chapter 9.

**The right principle is of great significance in GRAFIS. It was explained in detail in sections 4.3 and 4.5. The “direction indicator” on the cursor is designed to make understanding and application of the right principle easier. Practise it with the link function, also. Click close to the lines, not on the beginning or final points. This allows the “direction indicator” to indicate clearly.**

### Exercises

#### 1st Exercise

Call the basic block “bodice after Hohenstein” and delete the back and all the points in the front. Create parallels to the armhole, shoulder, the dart lines and the neck with 10 mm distance. Perform the construction steps shown (picture 5-4):

*call*

*delete*

*parallel*

1. Link the parallels to the lower and upper lines of the armhole.

*link*

*single*                      *activate*

Click to the right of the lines in direction of travel. If you have made a mistake click

*reset*

(also repeatedly) and carry on. Terminate linking by clicking

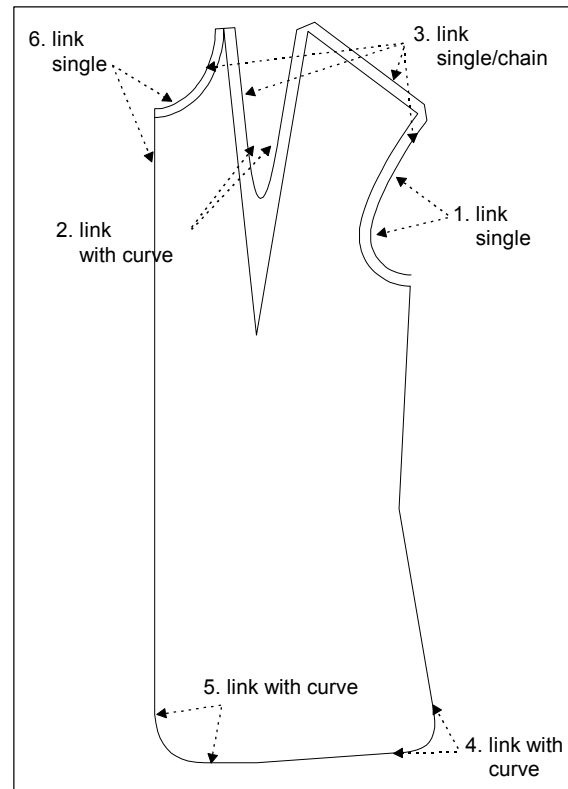
*deposit*

2. Link the parallels to the dart lines with a curve.

*link*

*link with curve*                      *activate*

Click to the right of the dart lines in direction of travel.



Picture 5-4

3. Link the parallels to the armhole, shoulder, dart, neck. Remember, you can zoom with <F2>.
 

*link*

*chain*                      *activate*

Begin with the armhole which is now a single line and continue with the shoulder, the dart lines and the neck. Undo each step by clicking *reset* (below *chain*)

With  the first line is also deactivated. Refresh the screen with <F4> and link the lines in the other direction, i.e. beginning with the neck through to the armhole. As you now have to click between the original line and the parallel it is possible that the wrong line is clicked, accidentally. Correct the mistakes with *reset*. Deposit the finished line as one joined line in your construction with *deposit*.
4. Link the side seam and hem with a curve.
 

*link*

*link with curve*                      *activate*

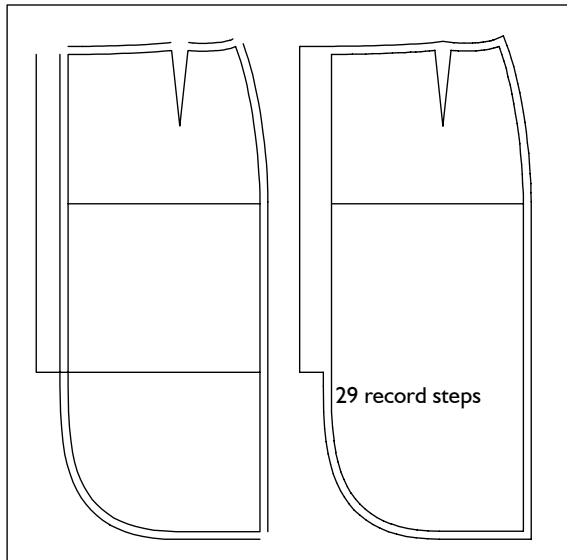
Click both lines. Reset with *reset* and repeat linking, varying the click positions.
5. Link the CF with the hem in the same way. Experiment with different click positions.
6. Link the parallel armhole to neck with the linked line centre front - side seam. Activate *single* and click both lines in the same direction.

**2nd Exercise**

Call the skirt 018 (Brü), delete the skirt back and construct a skirt front with a rounded centre. Use the following measurements:

- overlap centre front 40 mm
- overlap end 220 mm from hip line
- seam allowance hem, side seam and waist 10 mm.

Close the allowances with *corners*.



Picture 5-5

*call*  
*delete*  
*parallel*  
*link*  
*link with curve*  
*parallel*  
*corners*

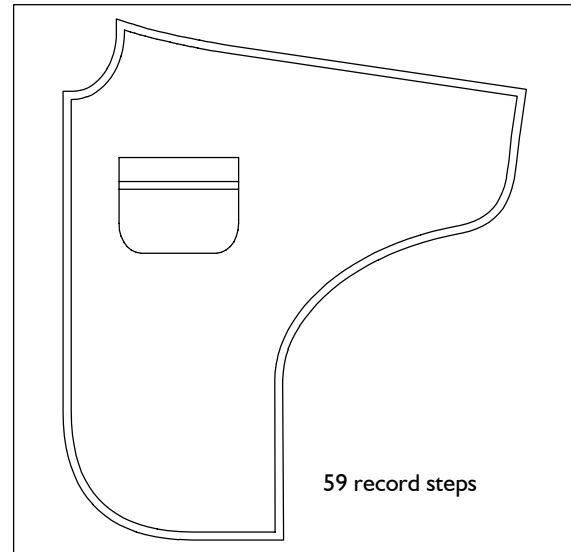
**3rd Exercise**

Call the basic block “kimono” and construct a short-sleeve kimono with patch pocket with the following measurements:

- pocket distance to centre front 60 mm
- pocket distance to hem 350 mm
- pocket opening 150 mm
- pocket height 120 mm.

*call*  
*delete*  
*parallel*  
*corners*  
*link*  
*link with curve*  
*parallel*  
*chain*

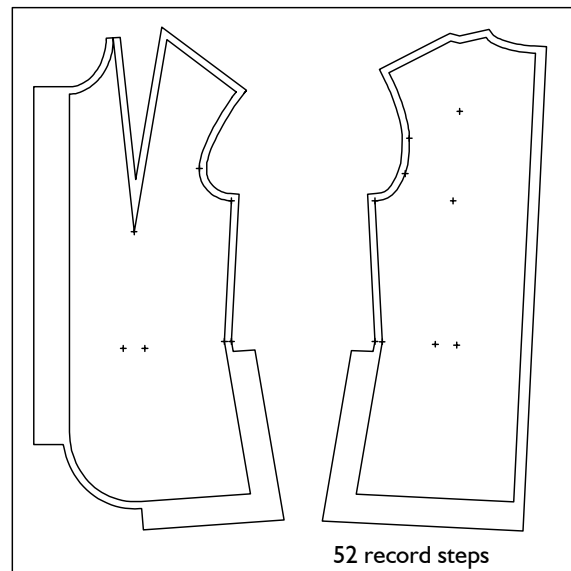
Grade in various sizes.



Picture 5-6

**4th Exercise**

Call the basic block “bodice after Hohenstein” and construct the following picture with *link* and *corners*:

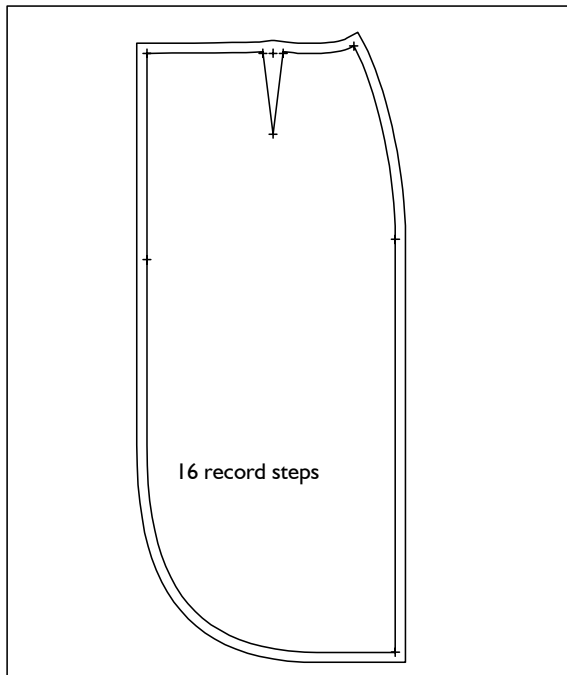


Picture 5-7

*call*  
*delete*  
*corners*  
*parallel*  
*corners*  
*link*

**5th Exercise**

Call the basic block 017 “skirt after Hohenstein” and construct a cut away front with *link with curve*. Generate a seam allowance of 10 mm (all around).



Picture 5-8

- call
- delete
- link
- link with curve*
- parallel
- chain
- delete
- corners

**5.2 Raster**

**The raster menu**

The *raster* menu offers five different principles for the construction of point sequences. The point sequences are generated along a line. The function *line* is the reverse function, changing a point sequence into a line.

**Step-by step guide**

Generate a point sequence:

- ⇒ Adjust parameters of the required *raster* type
- ⇒ Activate the required *raster* type
- ⇒ Adjust *+/-copy*
- ⇒ Click the line, following the right principle

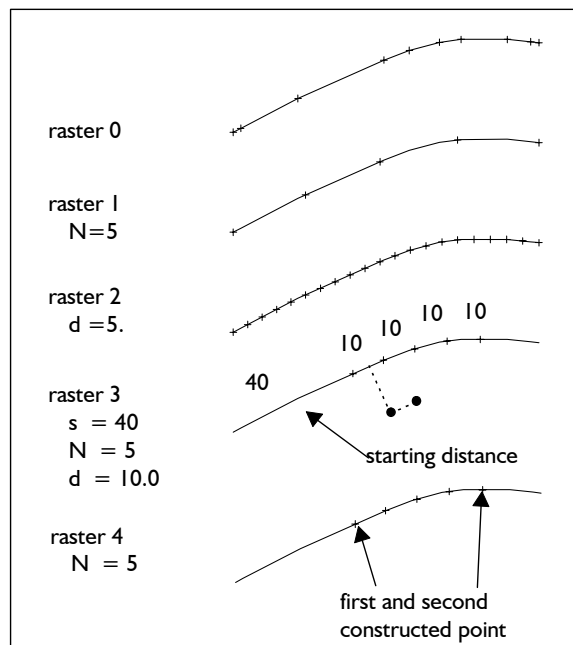
Create line from point sequence:

- ⇒ Activate *line*
- ⇒ Adjust *+/-copy*
- ⇒ Click the point sequence

raster
-----
raster 0
r l
N =5
raster 2
d = 20.0
raster 3
s =.0
N =5
d = 5.0
raster 4
N =5
-----
line
-----
- copy
reset
measure
-----


**raster 0**

In GRAFIS each line is a polygon (see section 4.3). With *raster 0* the fulcrums of a line are displayed. On a straight line this would be the starting and final point. Picture 5-9 shows an example for a curve.



Picture 5-9

**raster 1**

This function constructs a number of points with the same distance along a line. The number of points including starting and final points are to be set in the line  $N=...$  (picture 5-9). Click the line with  type the number of points and <ENTER>. After having activated *raster 1* the required line is to be clicked.

**raster 2**

With *raster 2* points with a pre-set distance  $d=...$  are constructed along a line. The distance is corrected by GRAFIS so that the points have the same distance from beginning to end (picture 5-9). Thus, the pre-set value is an approximation.

The required value is entered in the line  $d=...$ . After having activated *raster 2* the line is to be clicked.

**raster 3**

*raster 3* is one of the two buttonhole functions. For this function the starting distance  $s=...$  from the beginning of the line to the first point, the number of points  $N=...$  and the distance between the points  $d=...$  is to be entered (picture 5-9).

After having entered the values for  $s=...$ ,  $N=...$  and  $d=...$  and activating *raster 3* the required line is to be clicked following the right principle. The right principle was explained in detail in the sections 4.3 and 4.5.

**raster 4**

*raster 4* is the second buttonhole function. A number of points  $N=...$  is distributed evenly between two constructed points (picture 5-9).

First the number of points  $N=...$  is to be entered and the line is to be clicked. For construction of starting and final point of the raster area the sub-menu point construction appears which is explained in chapter 6, only. Practice the function *raster 4* only after having learned about point construction.

**Line**

The *line* function is the reverse function to the *raster* functions. Activating *line* and clicking a point sequence creates a line from the point sequence.

**Further functions**

With the *+/-copy* switch you decide whether or not the original object remains existent. When changing a line into a point sequence with

*+copy* both line and point sequence are existent,

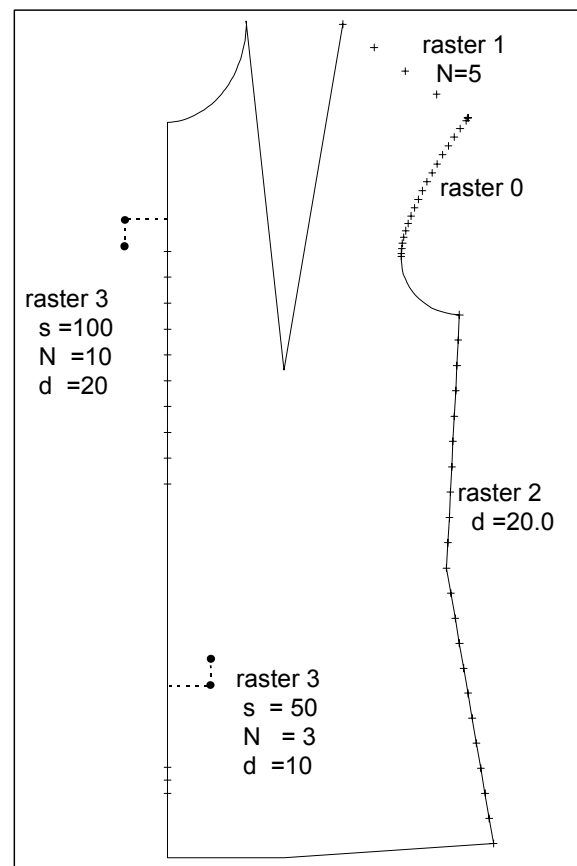
*-copy* only the point sequence is existent.

With *reset* the last construction step is undone.

The functions under *measure* are the contents of chapter 9 and are not to be discussed in advance.

**Exercises****1st Exercise**

Call the basic block 001, delete all points and generate the point sequences shown (picture 5-10):



Picture 5-10

*call*

*delete*

rastering the armhole:

*raster0*

*+copy* click upper armhole line

On the armhole line you can see the fulcrums with which GRAFIS works internally.

*reset*

*-copy*

Click the upper armhole curve again. The line is turned into its point sequence, directly. The original line is deleted.

Rastering the shoulder:

$N=5$  in the line below *raster 1*  
*raster 1* click the shoulder

Rastering the side seam:

$d=20$ . in the line below *raster 2*  
*raster 2* activate  
 +*copy* click side seam

Buttonholes centre front/neck:

$s=100$ . 100 mm from the neck; line below *raster 3*

$N=10$   
 $d=20$ .  
*raster 3* activate, click centre front  
 reset

Click on the inside. The points are now created on the centre front beginning at the hem. Follow the right principle and click outside the front. Refresh screen (<F4>).

Buttonholes centre front - base:

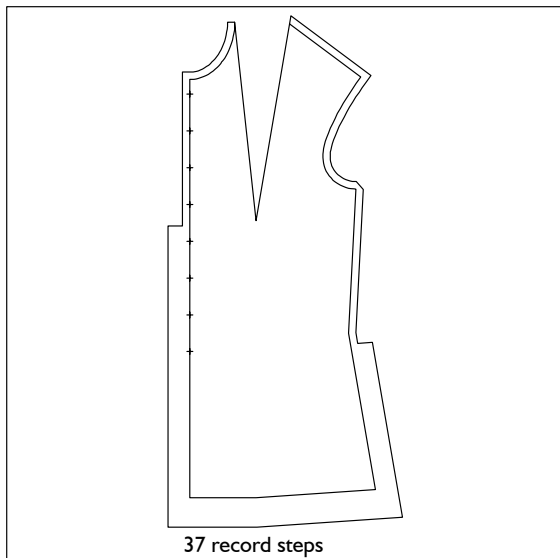
$s=50$ . in the line below *raster 3*  
 $N=3$   
 $d=10$ .  
*raster 3* activate, click centre front

Follow the right principle.

### 2nd Exercise

Call the basic block “bodice after Hohenstein” and construct the following seam allowances:

- CF and side seam 10 mm
- overlap CF 30 mm
- vent width side seam 30 mm
- hem 40 mm
- vent height side seam 200 mm
- overlap height CF 370 mm



Picture 5-11

Add seam allowances for neck, shoulder and armhole with a width of your choice. Close the seam

allowances with *link* or *corners*. Place 8 buttonholes onto the centre front with a distance of 50 mm. The first buttonhole is to be placed 20 mm from the neck (Picture 5-11).

*call*  
*delete* back  
*parallel*  
*corners*  
*link*  
*raster*

### 3rd Exercise

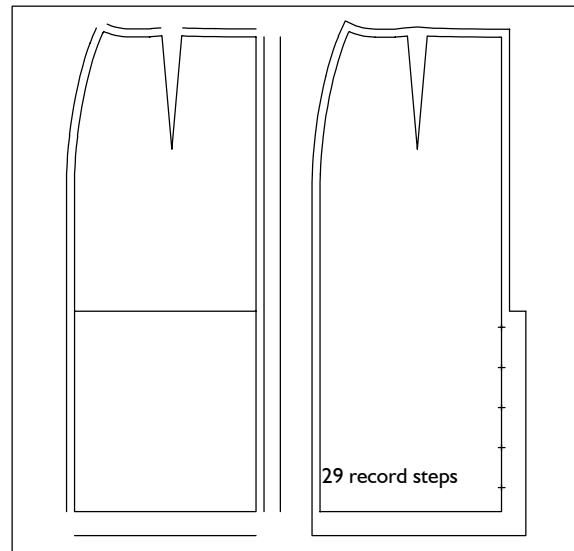
Repeat the 2nd exercise and construct the button catch with the first buttonhole 30 mm from the neck.

### 4th Exercise

Call the skirt after Hohenstein, delete the skirt front and all points in the skirt back. Construct the following seam allowances:

- side seam 10 mm
- waist 10 mm
- centre back 10 mm
- hem 35 mm
- CB vent width 30 mm
- vent height 250 mm.

Close the seam allowance, place five buttonholes on the centre back vent with a distance of 50 mm. The first buttonhole is to be placed 30 mm from the hem.



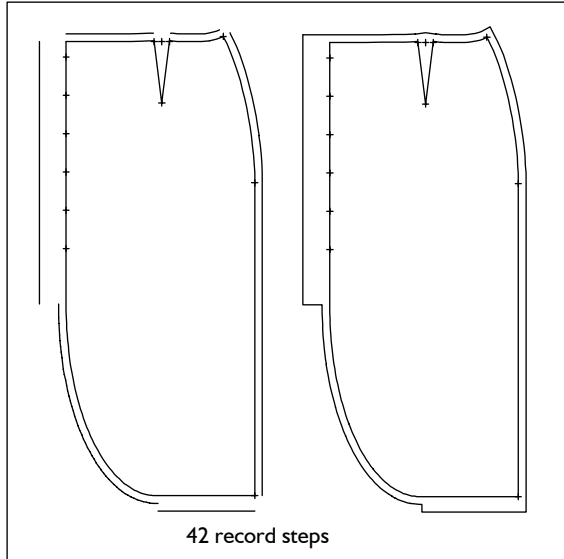
Picture 5-12

*call*  
*delete* skirt front  
*parallel*  
*corners*  
*raster*

### 5th Exercise

Call the basic block 017 “skirt after Hohenstein”, construct a button catch on the centre front and a cut away front (*corners with curve*). Use the following measurements:

- cut away hem from centre front 120 mm,
- cut away centre front from hem 250 mm,
- overlap 35 mm,
- hem 20 mm,
- seam allowance 10 mm.

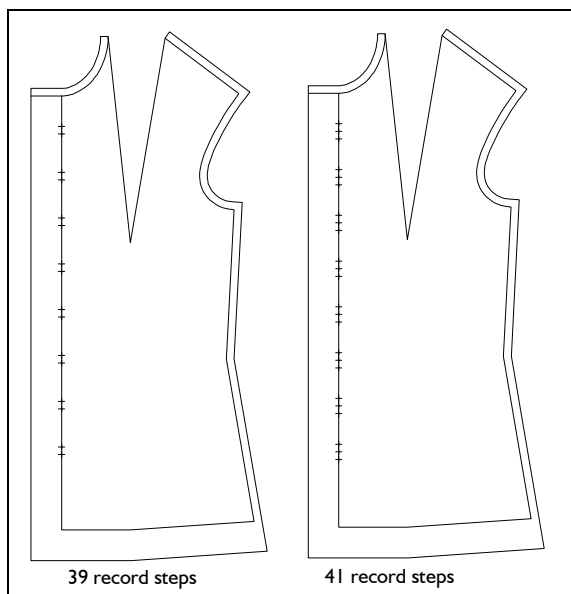


Picture 5-13

*call*  
*delete* skirt back  
*corners*  
*curve*  
*parallel*  
*raster*  
*raster 3* ( $s = 20, N = 6, d = 50$ )  
*link*  
*corners*

**6th Exercise**

Call the "bodice after Hohenstein", construct the seam allowances shown and place paired buttonholes on the centre front and then place buttonholes in groups of three.



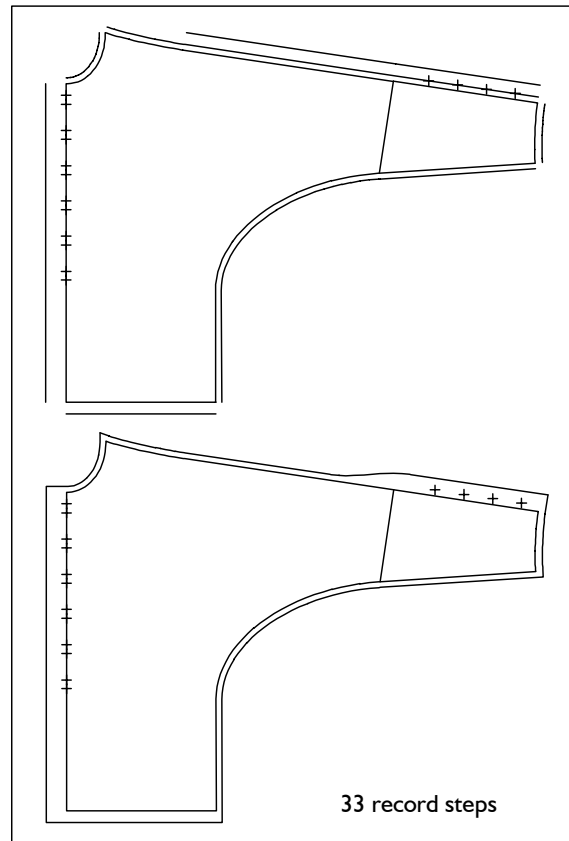
Picture 5-14

The buttonholes in picture 5-14 were set with the following measurements:  $s = 20, 30, 40$ ;  $N = 8$ ;  $d = 60$ .

**7th Exercise**

Call the basic block 009 "kimono", delete the back and all points. Create a button catch on the centre front with paired buttonholes and a fancy button catch on the sleeve.

- overlap centre front 35 mm,
- fancy button catch width sleeve 30 mm,
- seam allowance wrist 12.5 mm,
- hem 20 mm,
- all other seam allowances 10 mm.



Picture 5-15

*call*  
*delete*  
*parallel*  
*raster*  
*link*  
*link with curve*  
*corners*  
*grading*



### 5.3 Lengthening and shortening lines

#### The *lengthen* menu

The *lengthen* menu contains functions for lengthening and shortening lines at the ends (*linear*) or through alteration of the shape (*forming*). These functions are especially significant for the adjustment of line lengths such as side seams, body seams and crotch seams.

lengthen
-----
linear
-----
forming
-----
lengthen to lg= 100.
-----
lengthen by lg= 10.
-----
reset measure
-----

#### Step-by-step guide

- ⇒ Activate the required type of length alteration (*linear* or *forming*)
- ⇒ Enter the value for the alteration under *lengthen by* or *lengthen to*
- ⇒ Activate *lengthen by* or *lengthen to*
- ⇒ Click the line to be altered (with *linear* the right principle is to be followed)

#### Types of length alteration

There are two different options available for lengthening/shortening lines (Picture 5-16):

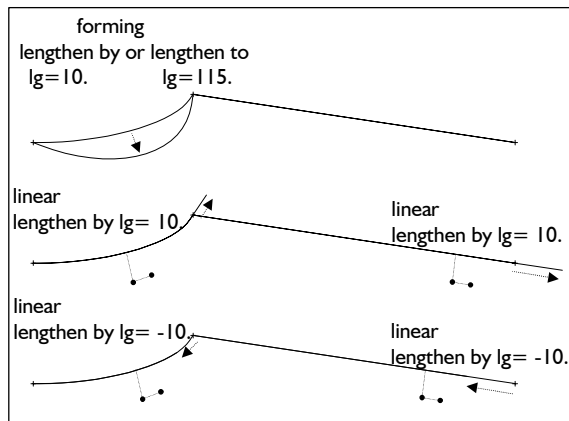
With *linear* the line is lengthened straight at its end or shortened along the line. The end of the line is determined according to the right principle when clicking.

With *forming* starting point and final point are fixed. The line is shaped to attain the pre-set length. *forming* does not apply to straight lines.



#### Lengthen to and lengthen by

With *lengthen to* a line is lengthened *linear* or *forming* to the pre-set length. The required length is pre-set accurately (Picture 5-16).



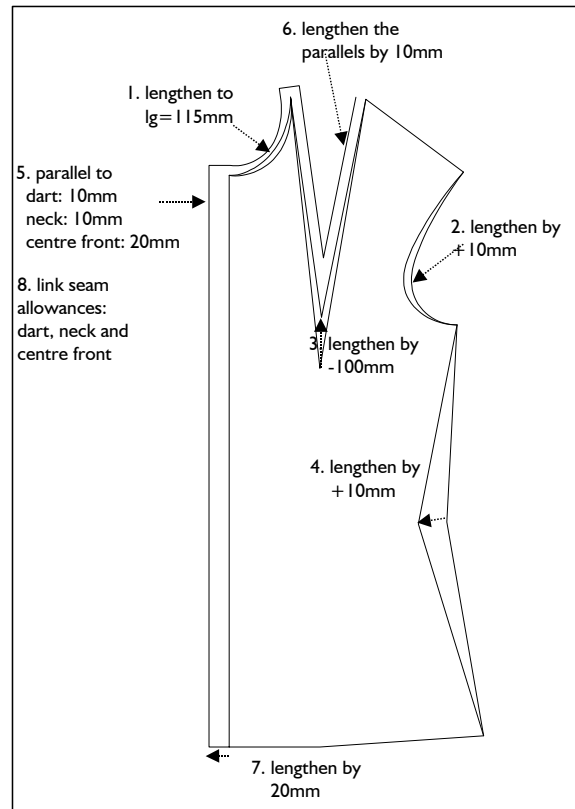
Picture 5-16

With *lengthen by* a line is lengthened (positive value) or shortened (negative value) *forming* or *linear* by a given amount.

#### Exercises

##### 1st Exercise

Call the basic block “bodice after Hohenstein“, delete the back and all points in the front and follow the instructions (Picture 5-17).



Picture 5-17

1. Lengthen the neck to 115 mm.  
*lengthen*  
*forming*  
 lg= 115. enter below *lengthen to*  
*lengthen to* activate  
 Click the neck. It will be shaped.  
 reset  
 Experiment with other values (115 again in the end).
2. Lengthen the armhole by +10 mm.  
*lengthen*  
*forming*  
 lg= +10. enter below *lengthen by*  
*lengthen by* activate  
 Click the armhole.  
 Depending on the click position only one part of the armhole is shaped.  
 reset  
*link* both armhole curves  
 Repeat lengthening the armhole. Try other values, also.

3. Link both dart lines and lengthen them by -100 mm.

*link* both dart lines

*lengthen*

*forming*

*lg=-100.* enter below *lengthen by*

*lengthen by* activate

Click dart lines.

4. Lengthen the side seam by +10 mm.

*lengthen*

*forming*

*lg=+10.* enter below *lengthen by*

*lengthen by* activate

Click the side seam.

5. Generate parallels to the dart lines (10 mm), the neck (10 mm) and the centre front (20 mm).

6. Lengthen the parallels at the corner neck/dart by +10 mm and the parallel to the centre front by +10 mm at the neck.

*lengthen*

*linear*

*lg=+10.* enter below *lengthen by*

*lengthen by* activate

Click near the parallels. With clicking you determine the direction of the line. Decide beforehand where you have to click.

7. Lengthen the hem and the neck line by +20 mm. Proceed as 6.

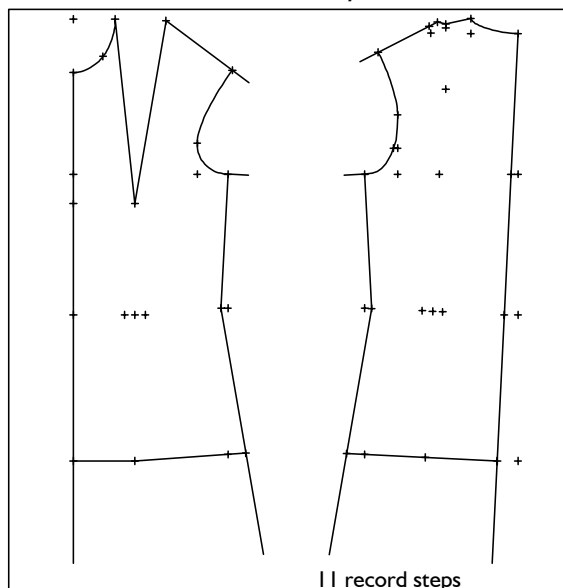
Click near the hem.

At the end, link the seam allowances of the dart, neck and centre front.

### 2nd Exercise

Lengthen the following in the bodice after Hohenstein (Picture 5-18):

- shoulder and armhole by 30 mm
- centre front and side seam by 150 mm
- centre back and side seam by 150 mm.

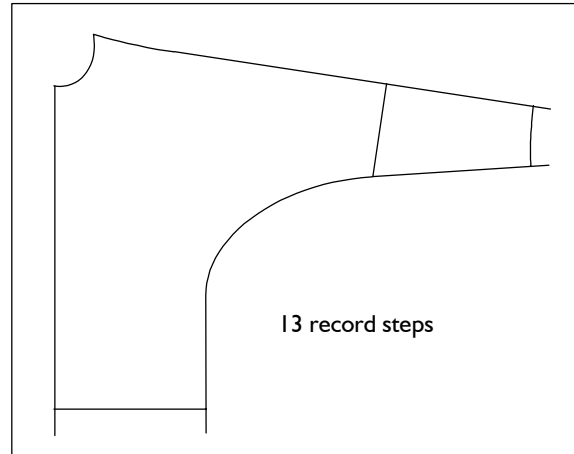


Picture 5-18

### 3rd Exercise

Call the basic block "kimono", delete the back and all points and lengthen as follows (Picture 5-19):

- shoulder by 30 mm (direction wrist)
- side seam by 30 mm (direction wrist)
- CF by 40 mm (direction hem)
- side seam by 40 mm (direction hem)
- neck to 130 mm

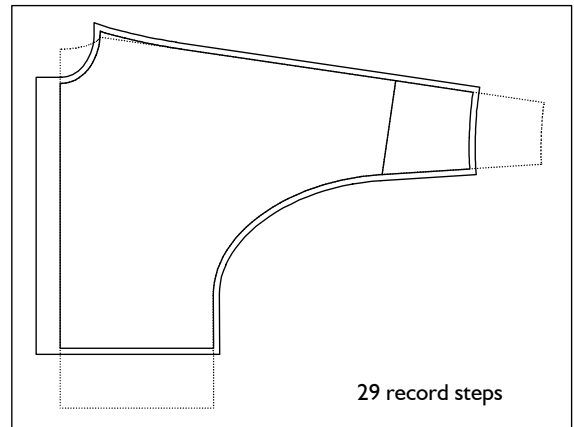


Picture 5-19

### 4th Exercise

Call the basic block "kimono", delete the back and all points in the front and lengthen as follows:

- shoulder by -150 mm
- side seam by -150 mm
- centre front by -80 mm
- side seam by -80 mm
- neck by 40 mm (for overlap).

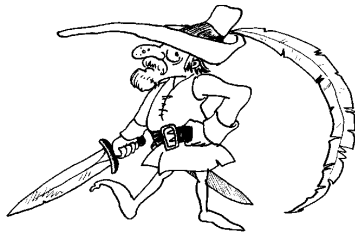


Picture 5-20

*call*  
*delete*  
*lengthen*  
*linear*  
*lengthen by*  
*parallel*

## 5.4 Cut, "cut on" and separate lines

### The separate menu



Cutting and separating lines can be called from the basic menu via *separate*.

**Separate** divides a line into two lines which touch at the separation position and can be processed individually. If the cut mark switch is set to *+cut mark* the separation position is marked by a large point.

**Cut** shortens or lengthens a line up to the intersection. Lengthening is called "cut on". **Reset** (last function in the menu) resets the last separation or cutting operation respectively.

separate
-----
cuttingline
click
p + digi
separate
cut
-----
separate in corner
-----
click line:
separate
cut
-----
+cut mark
reset
measure
-----

**separate** ⇒ 2 lines  
**cut / cut on** ⇒ 1 line

The separate/cut position can be determined in three different ways.

### Step-by-step guide

Separate or cut at a cutting line

- ⇒ Define/construct a cutting line with *click* or *p+digi*
- ⇒ Activate *separate* or *cut*
- ⇒ Adjust *+/-cut mark*
- ⇒ Click lines to be separated or cut.

Separate in a corner

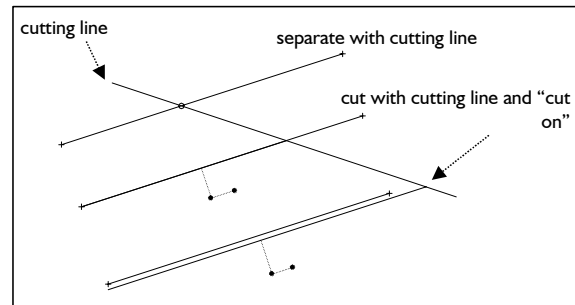
- ⇒ Activate *separate in corner*
- ⇒ Adjust *+/-cut mark*
- ⇒ Click the corner in which the lines are to be separated outside

Separate or cut with click line ("freehand" by eye)

- ⇒ Activate *click line / separate* or *click line / cut*
- ⇒ Adjust *+/-cut mark*
- ⇒ Click the line

### Separate / cut at a cutting line

Separating or cutting with a cutting line is the accurate option. First, a cutting line is to be determined. One or several lines can be separated or cut with it. "Separate with cutting line" belongs to the first group of functions in the menu.



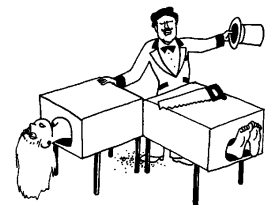
Picture 5-21

First, the cutting line is to be defined. GRAFIS offers two options:

1. With *click* an existing line is determined as cutting line.
2. With *p+digi* the first point of the cutting line is constructed and the other point is defined freehand by moving the mouse. As point construction is content of the next chapter, this option will be avoided in the following exercises.

The current cutting line is displayed in a different colour. Whether to cut or separate with this cutting line is determined by activating the appropriate function *cut* or *separate*.

1. With *separate* with cutting line the clicked line is divided at the intersection with the cutting line provided the two lines intersect. Practise this option with *+cut mark*.



The separation position is marked by a point and thus easier to recognise.

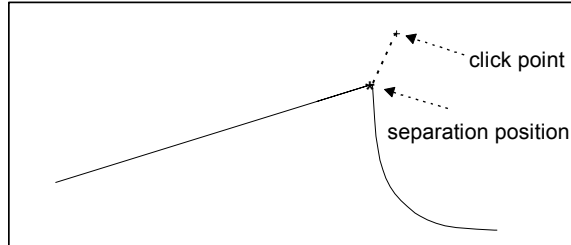
2. With *cut* with cutting line the part of the line beyond the cutting line in respect to the click position disappears. The click point defines the part of the line to remain existent. Result of this operation is one line, only.

It is not absolutely necessary for the cutting line and the line to be cut to intersect. A line ending before the cutting line is lengthened up to it when cutting with cutting line.



This is known as “cutting on” amongst GRAFIS operators. The different options are depicted in Picture 5-21. The original lines are dashed.

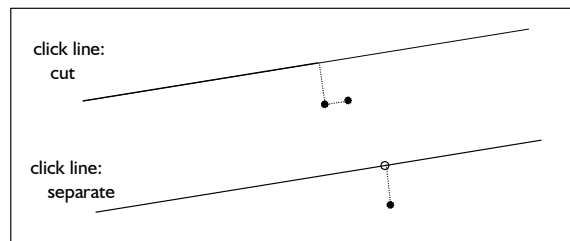
### Separate in a corner



Picture 5-22

This function separates a continuous line in a corner. The respective curve is to be clicked on the outside as GRAFIS separates at a point where an imaginary lightning would strike (lightning principle). As a result a small arrow is shown at the separation position for a short while (Picture 5-22).

### Separate or cut with click line (“freehand” by eye)



Picture 5-23

*Click line / separate* divides a line at the click position exactly. The same applies to *click line / cut*. Here, the right principle is to be followed. The part of the line beyond the click position according to the right principle disappears.

### Further functions

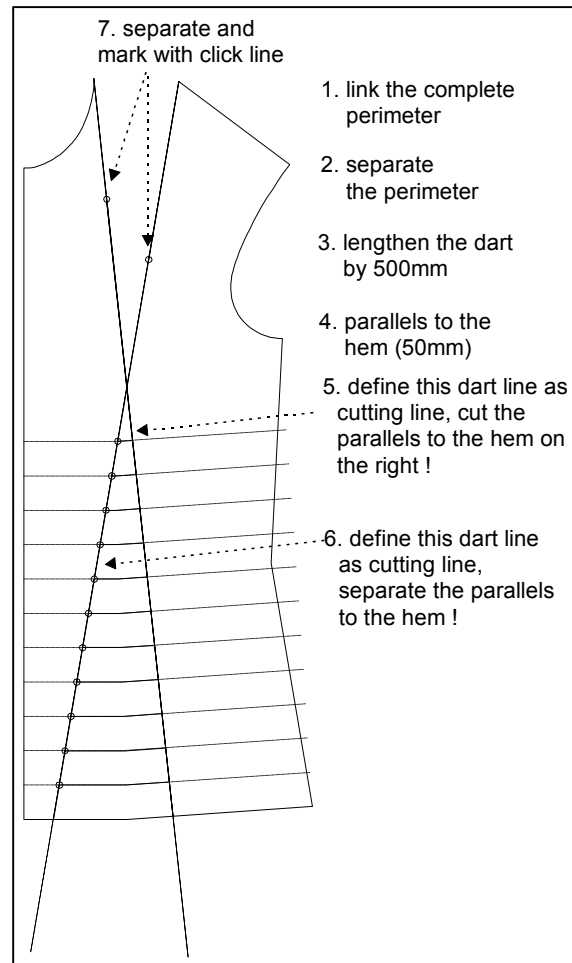
The *cut mark* switch decides whether or not a marker is to be set when separating lines. As a rule, use *+cut mark*, as it is easier to recognise the separation position. A cut mark is a point with the attribute “gr. point” (see section 7.3). The cut markers can be deleted as points.

*Reset* can undo the last construction step.

Under *measure* the same functions hide we have kept from you before. Please be patient until chapter 9.

### Exercise

Call the basic block “bodice after Hohenstein“, delete the back and all points in the front and follow the instructions (Picture 5-24).



Picture 5-24

*call*  
*delete*

1. Link the complete perimeter as one line.  
*link*
2. Separate the perimeter using *separate in corner*.  
*separate*  
*separate in corner*  
Click near the corner. Think about lightning striking. In this case all click points must be outside the piece. Only for the dart point you have to click inside the pattern.
3. Lengthen both dart lines by 500 mm direction hem.  
*lengthen*  
*lengthen by lg=500.*
4. Generate parallels to the hem with distance 50 mm.  
*parallel*

5. Define the dart line marked as cutting line.  
*separate*  
*click (cutting line)*  
 Click the dart line and then cut the parallels to the hem on the right of the cutting line.  
*separate*  
*cut (cutting line)*  
 Click next to the parallels. Think about the click position carefully as you have to determine the side to be cut. With *reset* you can correct mistakes, if necessary.
6. Separate the parallels at the other dart line and have the separation position marked.  
*separate*  
*click (cutting line)*  
*+cut mark*  
 Click the dart line.  
*separate (cutting line)*  
 Click next to the parallels.
7. Keep the switch on *+cut mark* and separate the dart lines roughly as displayed.  
*separate (click line)*  
 Click the lines.  
*-cut mark*  
 Separate another line. By creating a parallel to the divided line you can check the separation.
8. Activate  
*cut (click line)*  
 and cut various parts of the parallels to the hem by clicking.

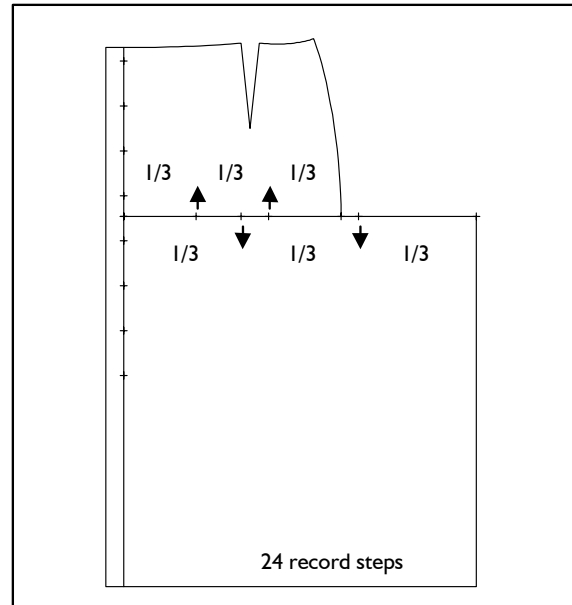
## 5.5 Exercises

### 1st Exercise

Author: B.Götting, Mönchengladbach

Call the basic block 018 “skirt”, delete the skirt back, construct two markings for gathering on the hip line, lengthen hip line and hem by 150 mm and then construct the other markings for gathering. Construct an overlap of 20 mm with 8 buttonholes with 50 mm distance, beginning 15 mm from the waist.

*call*  
*delete*  
*lines*                      delete back apart from hem  
*separate*  
*cutting line click*        side seam  
*cut*                              hem  
*raster*  
*raster 1*                      hip  
*lengthen*  
*linear*  
*lengthen by*  
*lg=150.0*  
*raster*  
*raster 1*                      hip

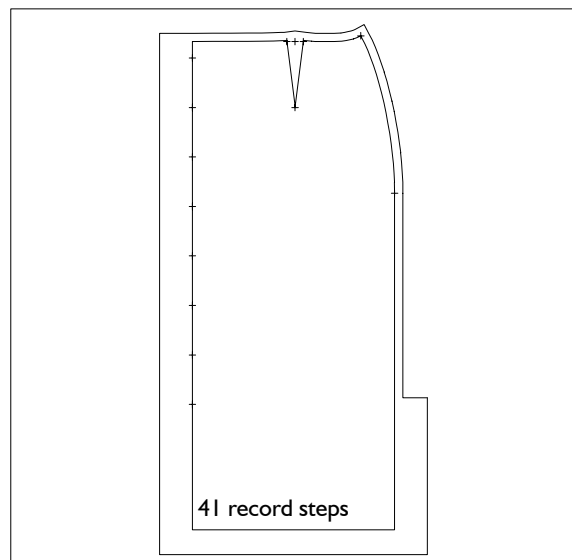


*paralle*                      side seam, overlap  
*corners*  
*corner*                      close overlap  
*raster3*  
*grading*

### 2nd Exercise

Call the basic block 017 “skirt”, delete the skirt back and create a button catch for the centre front and a vent at the side seam. Use the following measurements:

- seam allowance side seam 10 mm
  - seam allowance waist 10 mm
  - hem 30 mm
  - vent height 150 mm
  - vent width 40 mm
  - overlap centre front 40 mm
- button catch measurements:  $s = 20\text{mm}$ ,  $N = 8$  and  $d = 60\text{mm}$

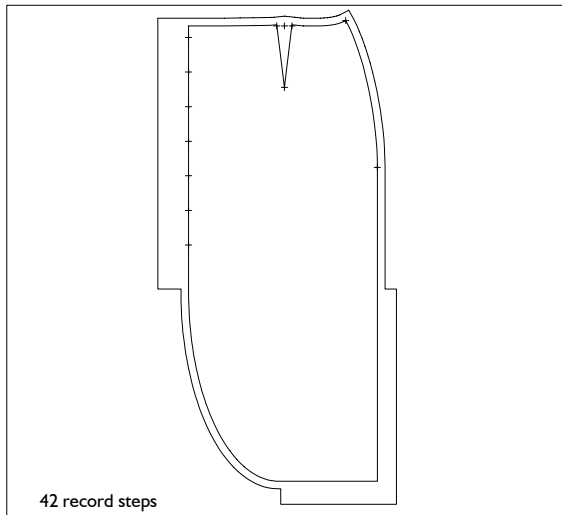


call  
 delete  
 lines delete back apart from hem  
 separate  
 parallel  
 corners  
 raster

**3rd Exercise**

Call the skirt 017, delete the skirt back and construct a skirt with button catch and a cut away in the centre front. Use the following measurements:

- seam allowance side seam, waist and cut away 10 mm
- cut away hem 120 mm
- cut away centre front 250 mm
- overlap centre front 40 mm
- hem 30 mm
- vent height side seam 250 mm
- vent width 30 mm
- button catch measurements:  $s = 20\text{mm}$ ,  $N = 7$  and  $d = 45\text{mm}$ .



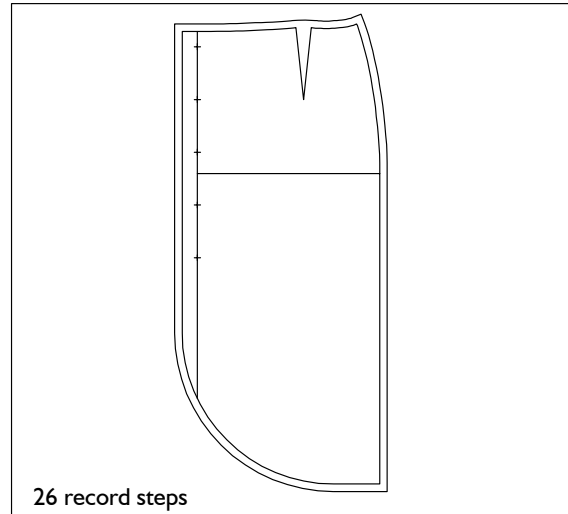
call  
 delete  
 lines  
 separate hem  
 parallel overlap  
 corners  
 circle arc overlap/hem  
 parallel seam allowance  
 link  
 link with curve dart  
 corners  
 raster

**4th Exercise**

Call the skirt 018, delete the skirt back, create a cut away front, add seam allowances and set a button catch onto the centre front. Use the following measurements:

- overlap centre front 30 mm
- seam allowance 10 mm

- cut away overlap/hem 200 mm
- button catch measurements  $s = 20\text{mm}$ ,  $N = 5$  and  $d = 70\text{mm}$ .

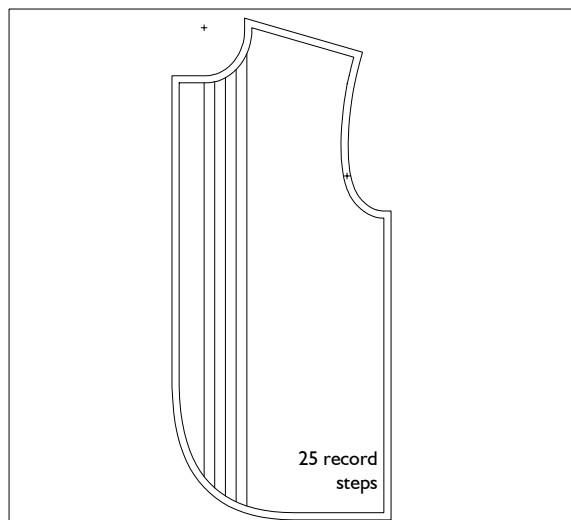


call  
 delete  
 separate hem  
 parallel overlap  
 corners  
 circle arc overlap/hem  
 parallel seam allowance  
 corners  
 separate  
 cut centre front  
 raster  
 raster3

**5th Exercise**

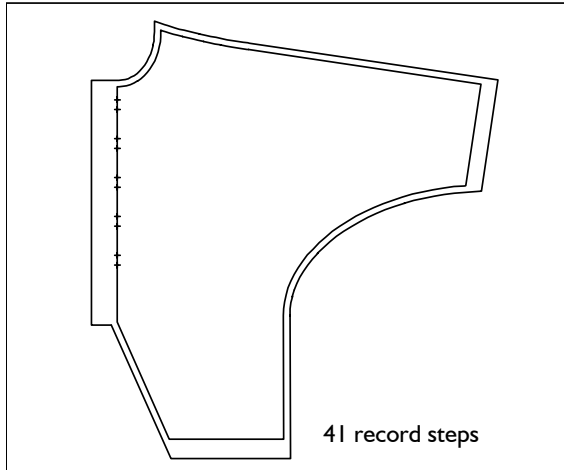
Call the basic block 010 “shirt blouse”, delete the back, create lines for pin-tucks in the front and a cut away centre front/hem. Add seam allowance and close the corners. Use the following measurements:

- overlap 35 mm
- pin-tucks 15 mm
- seam allowance 10 mm
- button catch measurements:  $s = 20\text{mm}$ ,  $N = 6$  and  $d = 55\text{mm}$ .



**6th Exercise**

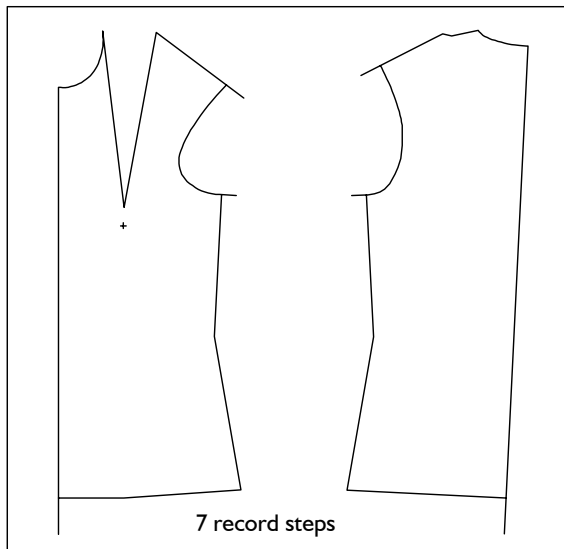
Call the basic block 009 “kimono“, delete the back and all points. Create a short-sleeve kimono at your own discretion with sloped centre front and paired button catch at the centre front.



**7th Exercise**

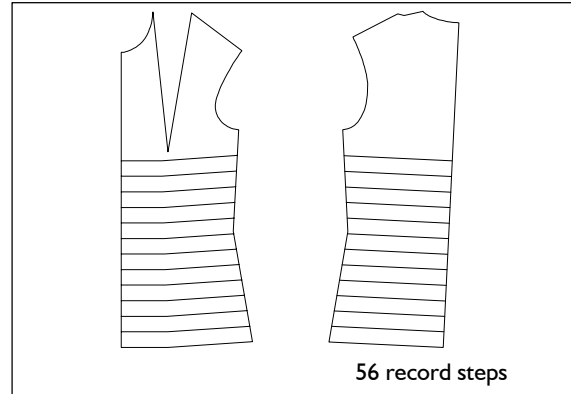
Call the basic block 001 “bodice after Hohenstein“ and construct with *lengthen*:

- shorten the dart by 50 mm (forming),
- lengthen the armhole curve to 210 mm (forming),
- lengthen the shoulder by 30 mm (linear),
- lengthen the armhole curve by 20 mm (linear),
- lengthen CF and CB by 50 mm (linear),
- lengthen the neck to 115 mm (forming).



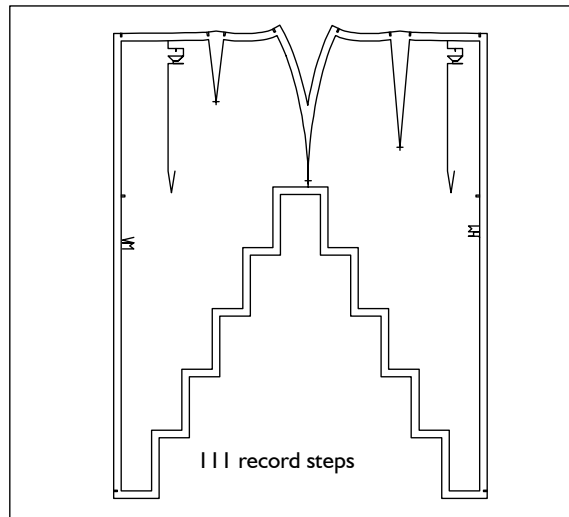
**8th Exercise**

Call the basic block 001, delete all points in front and back, construct parallels of 30 mm to the hem. Cut all projecting lines with the following result:



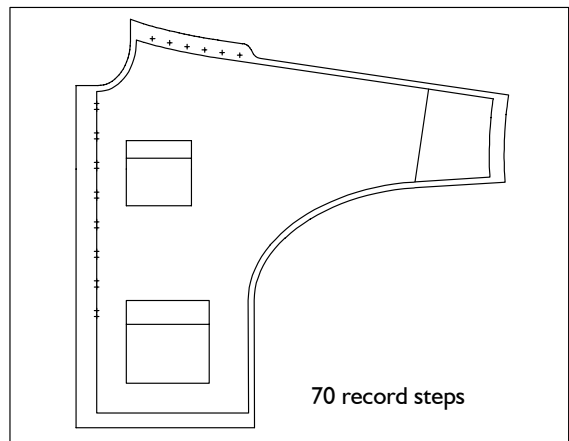
**9th Exercise**

Construct a skirt with crimping from basic block 017 (front/back), but without notches and annotation (grain, CF and CB).



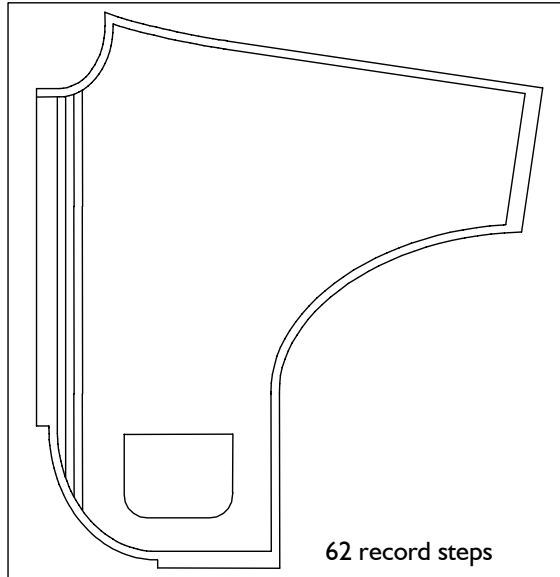
**10th Exercise**

Call the basic block 009 “kimono“, delete the back and all points. Create a short-sleeve kimono with overlap, patch pockets, button catch on the shoulder ( $s = 25, N = 6, d = 60$ ) and centre front ( $s = 20, 30; N = 8; d = 60$ ). Add seam allowance and close the corners.

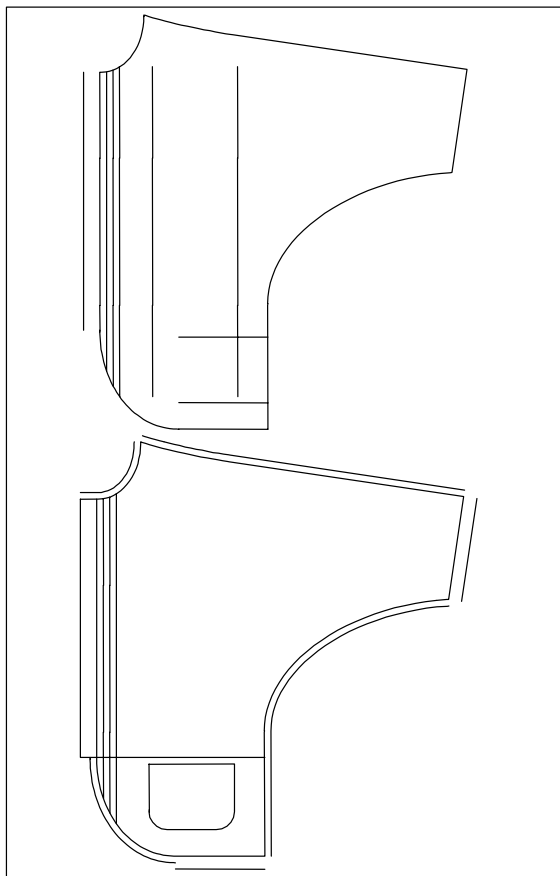


**11th Exercise**

Call the basic block 009 “kimono”, delete the back and all points. Create the short-sleeve kimono with overlap (25 mm), patch pocket and three ornamental seams with a distance of 10 mm. Construct 10 mm seam allowance and 20 mm at the hem and sleeve. Close the corners.



Step-by-step:



Construct the kimono shown as a variation to this exercise. As opposed to the steps of the previous style, side seam and elbow line are to be linked before constructing the seam allowance.

