



Pattern Grading
for T-shirt
using REACH CAD



REACH Technologies

STEP-001

MEASUREMENTS OF BASIC ROUND NECK T-SHIRT GRADING SPC

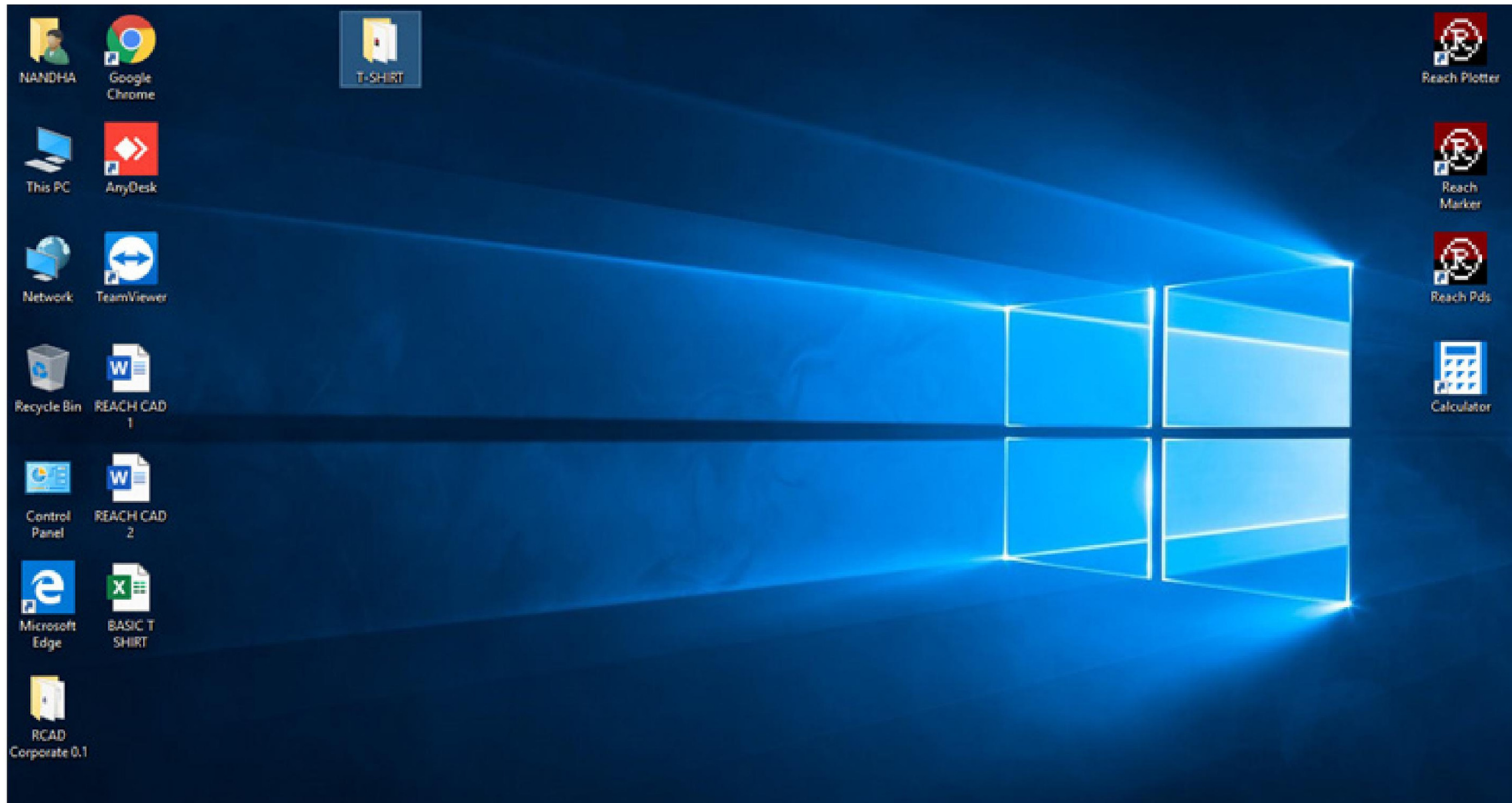
The screenshot shows an Excel spreadsheet with the following data:

		ROUND NECK T-SHIRT				
		INCHES				
	SIZE	S	M	L	XL	XXL
1	1/2 CHEST WIDTH	19	20	21	22	23
2	1/2 BOTTOM WIDTH	19	20	21	22	23
3	BODY LENGTH FROM HSP	27	28	29	30	31
4	SHOULDER 1/2	4.5	4.75	5	5.25	5.5
5	1/2 ARMHOLE	8.5	9	9.5	10	10.5
6	1/2 SLEEVE OPEN	6	6.5	7	7.5	8
7	SLEEVE LENGTH	8	8.5	9	9.5	10
8	NECK OPENING	6	6.25	6.5	6.75	7
9	DROP NECK FRONT	3.75	3.75	4	4.25	4.25
10	DROP NECK BACK	1	1	1	1	1
11	SHOULDER DROP	1	1	1	1	1

STEP-002

OPEN FOLDER NAMED T-SHIRT

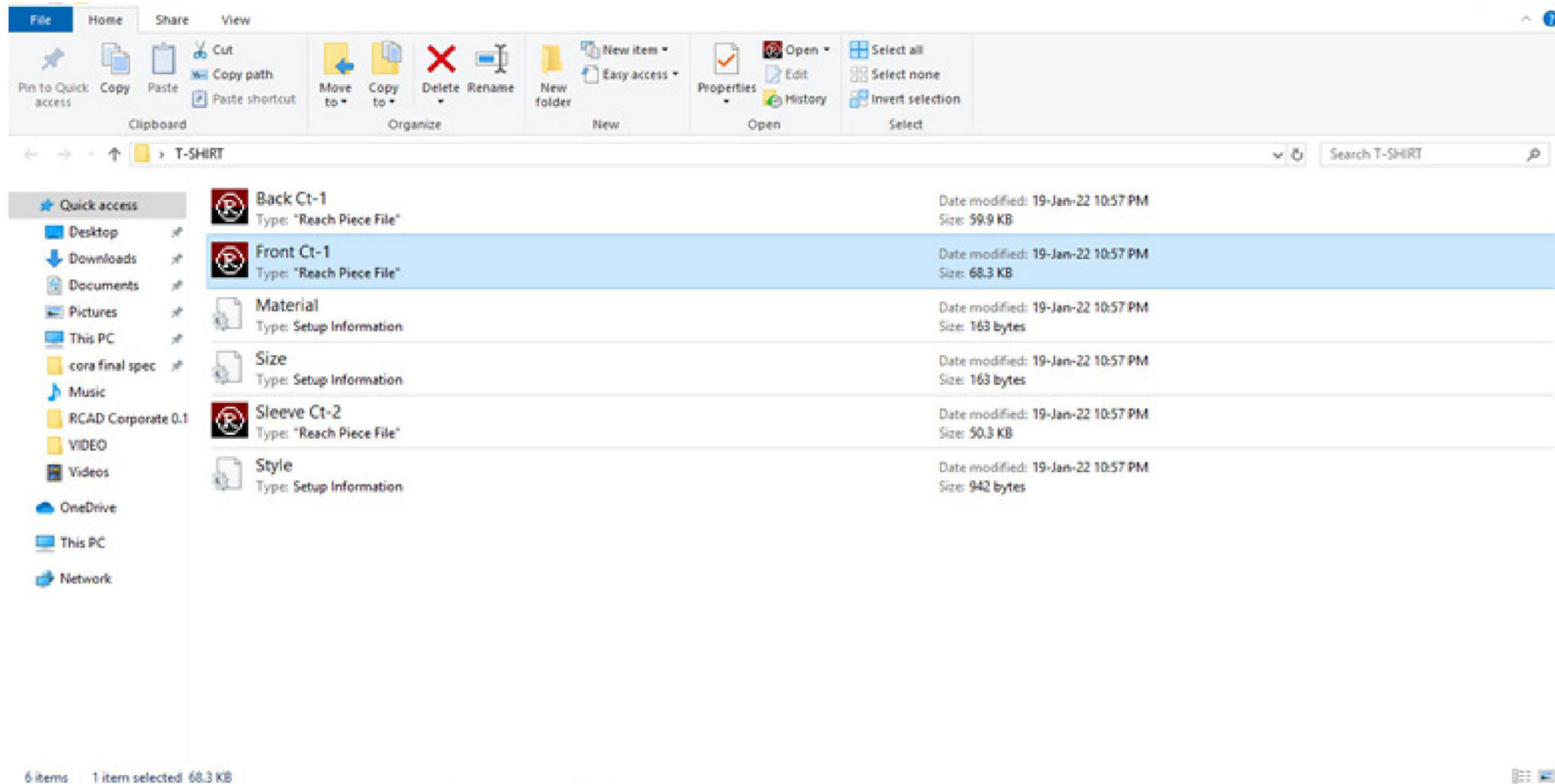
REACH CAD



STEP-003

CLICK ON ANY OF THE REACH PDS FILES

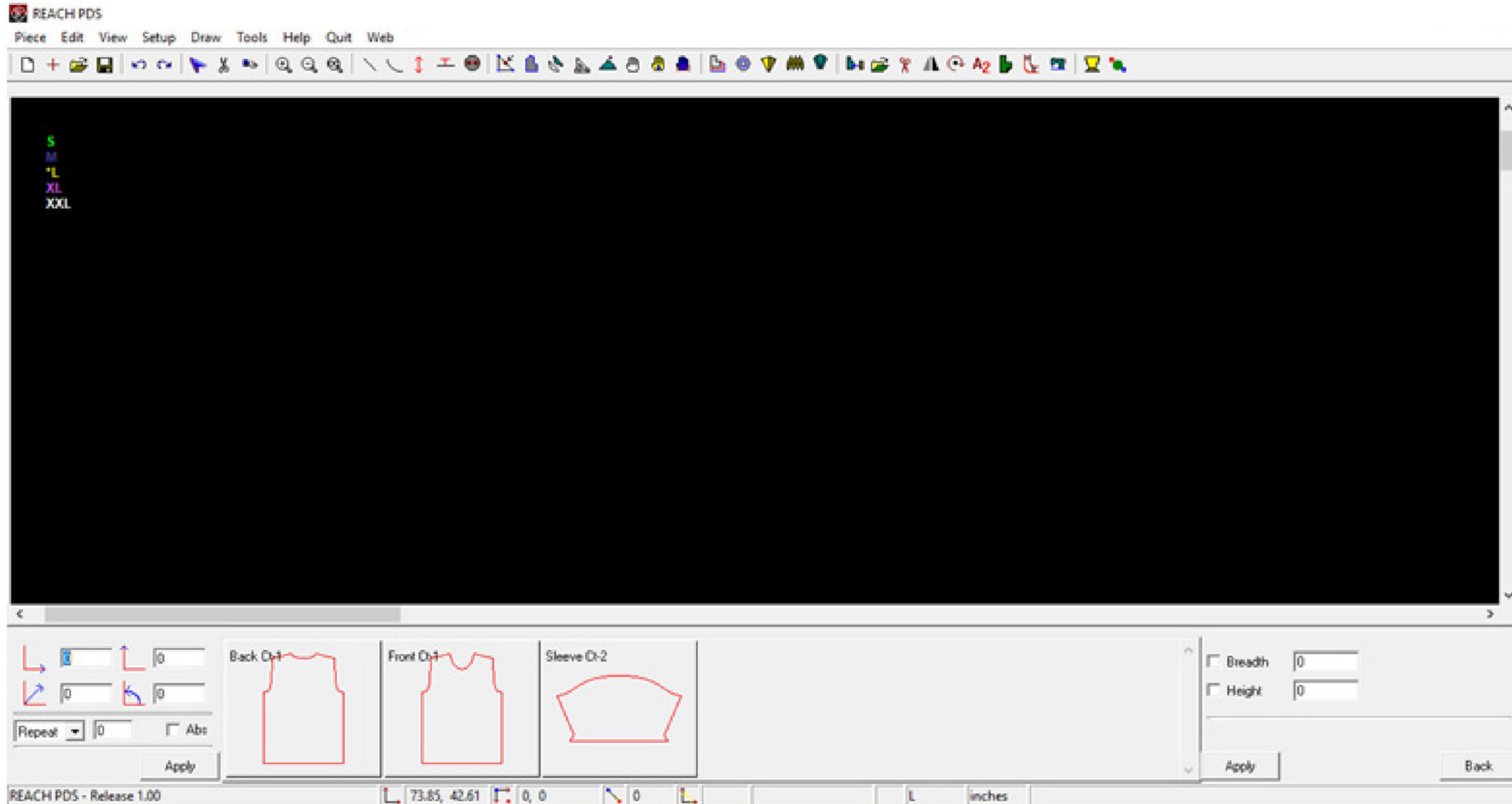
REACH CAD



STEP-004

OPEN T-SHIRT IN REACH PDS

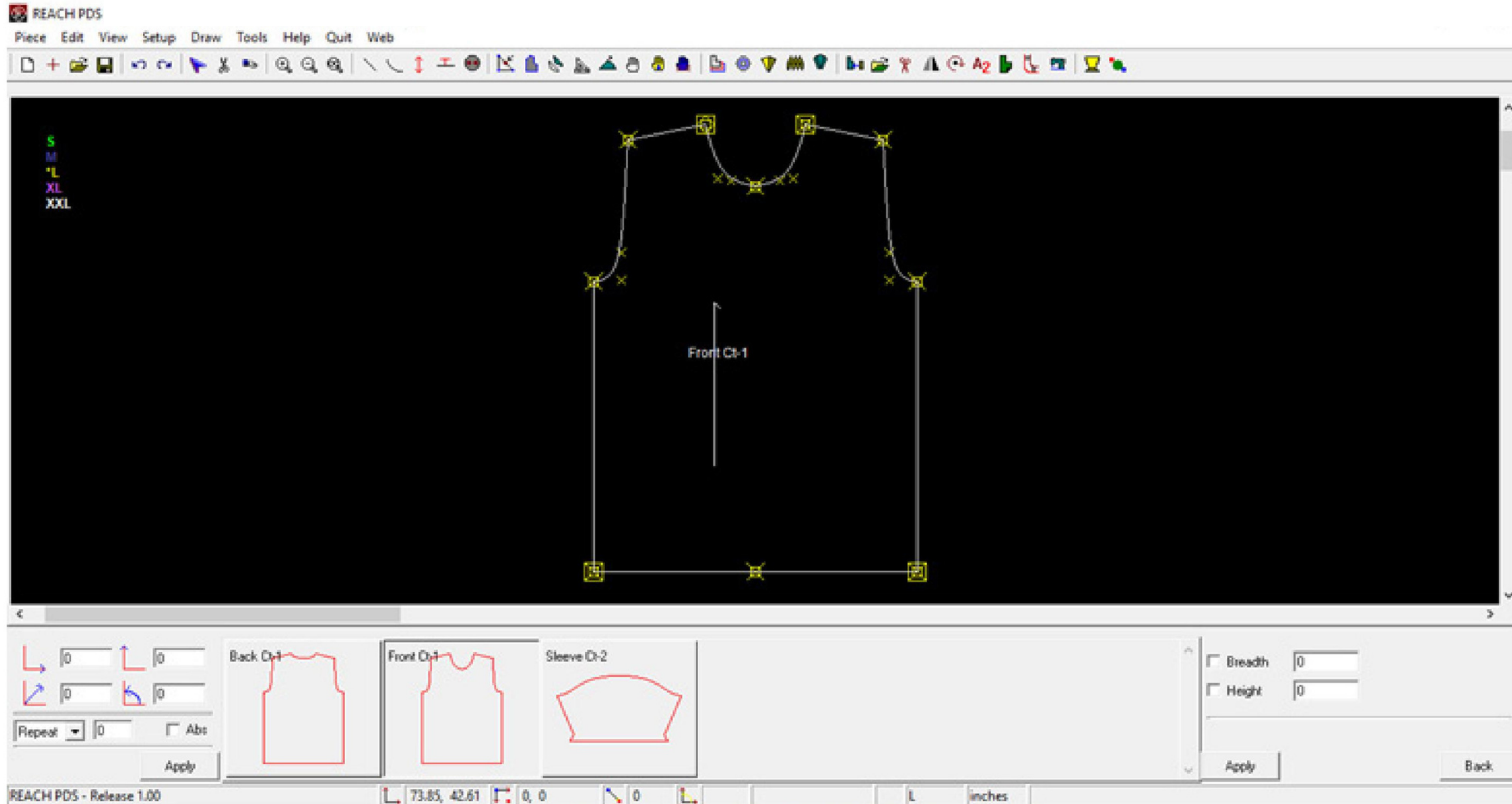
REACH CAD



STEP-005

CLICK ON FRONT PATTERN FIRST

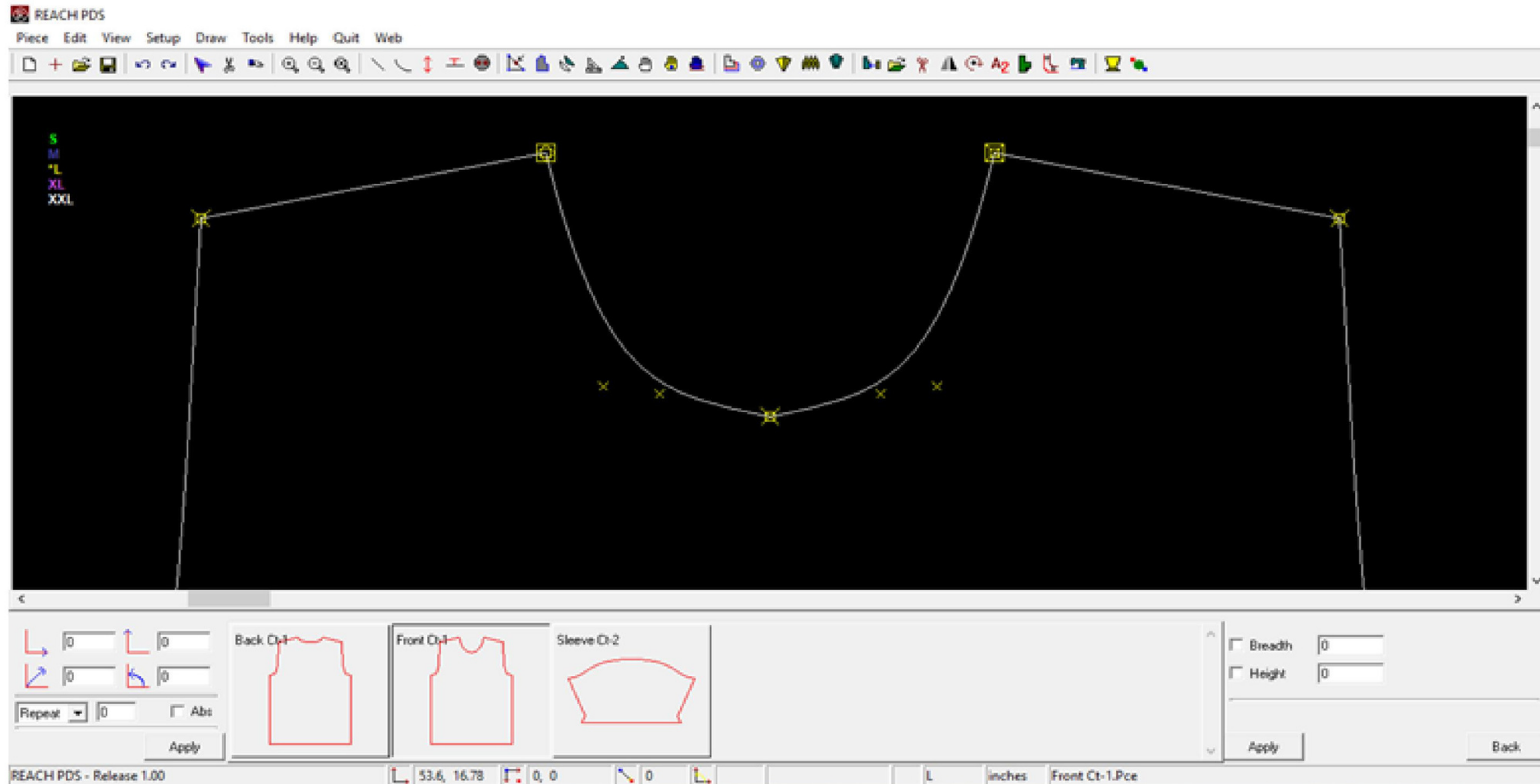
REACH CAD



STEP-006

CLICK '+ZOOM; AND ZOOM IN ON THE NECK PART.

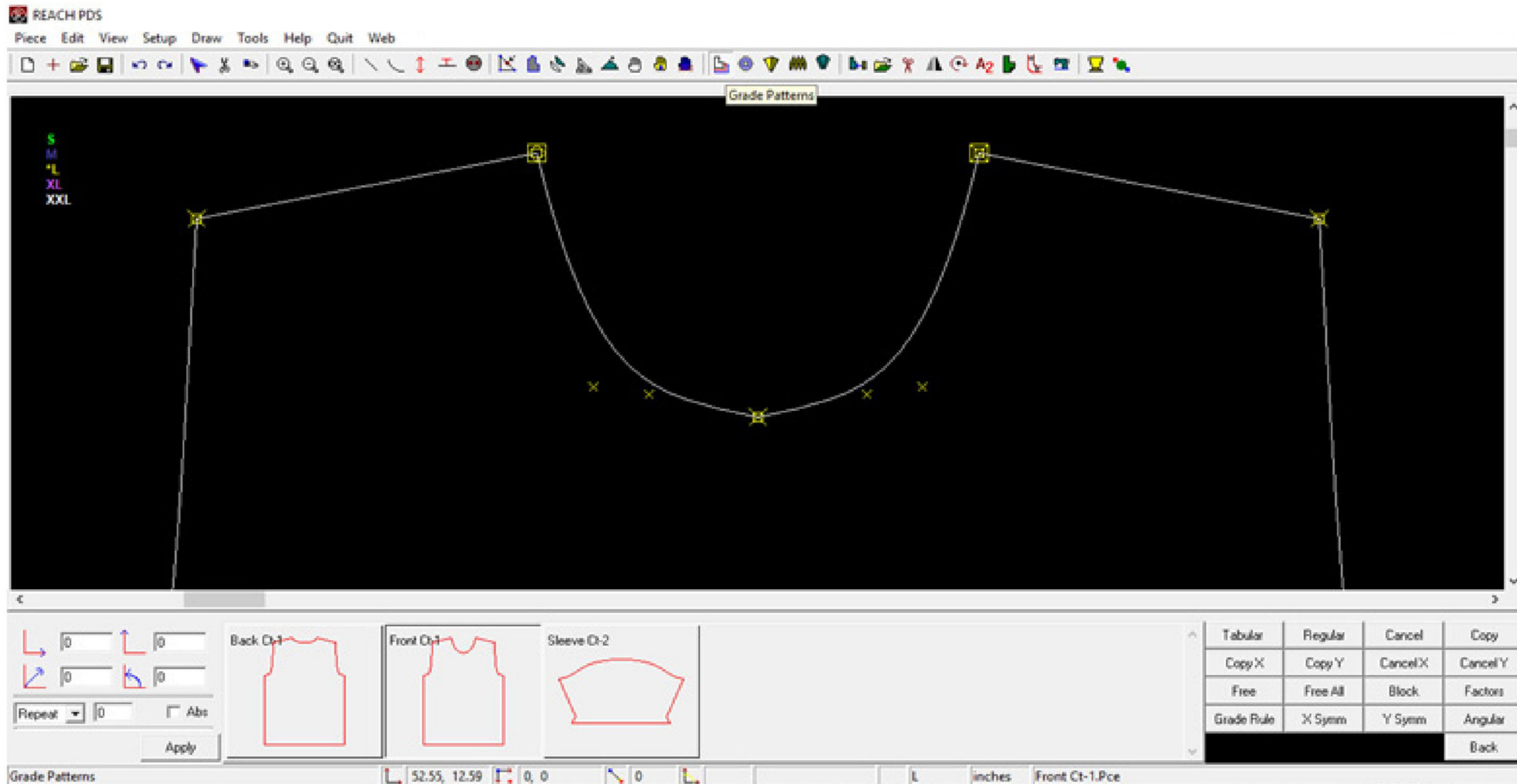
REACH CAD



STEP-007

CLICK ON GRADING TOOLS

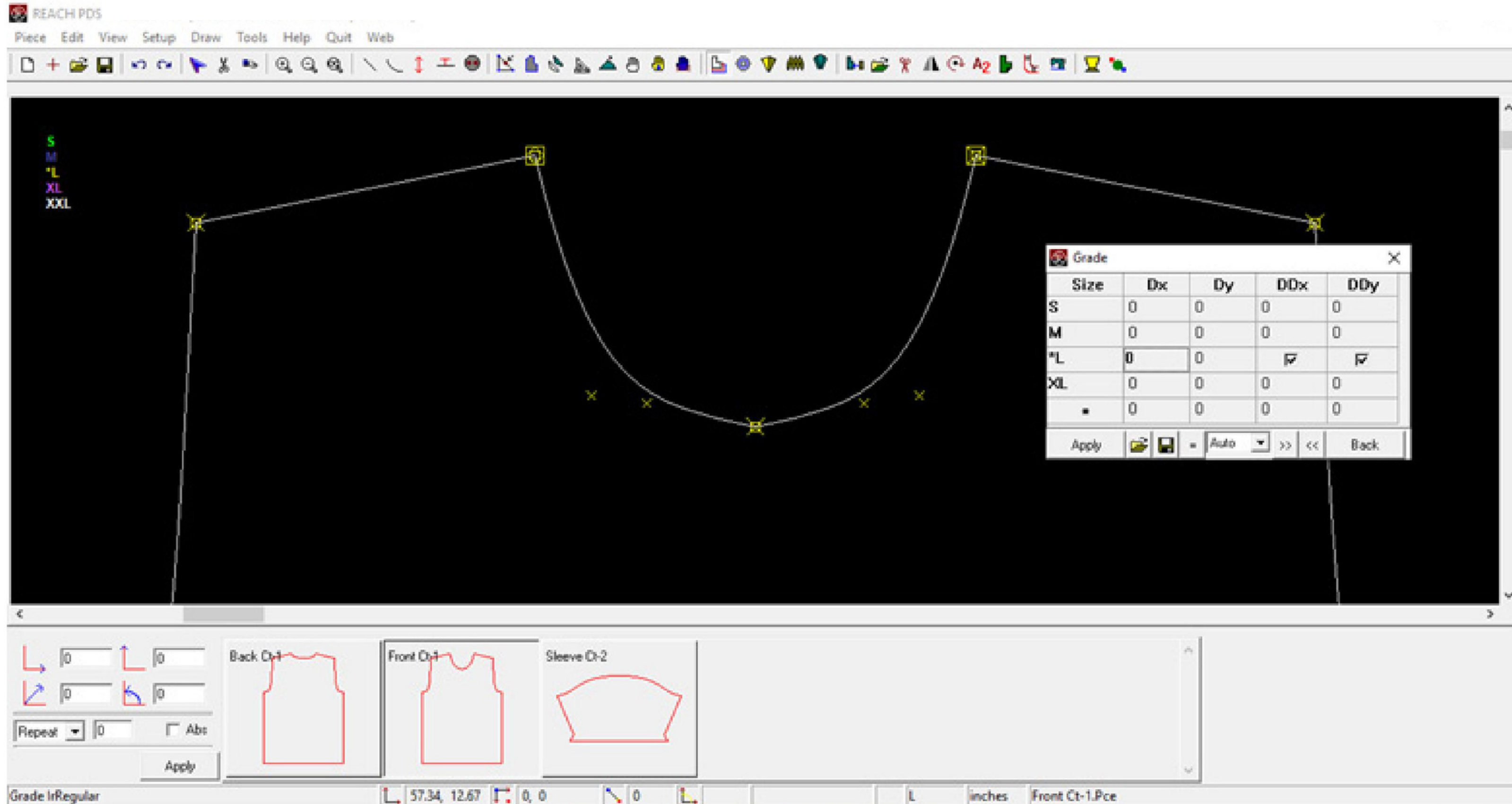
REACH CAD



STEP-008

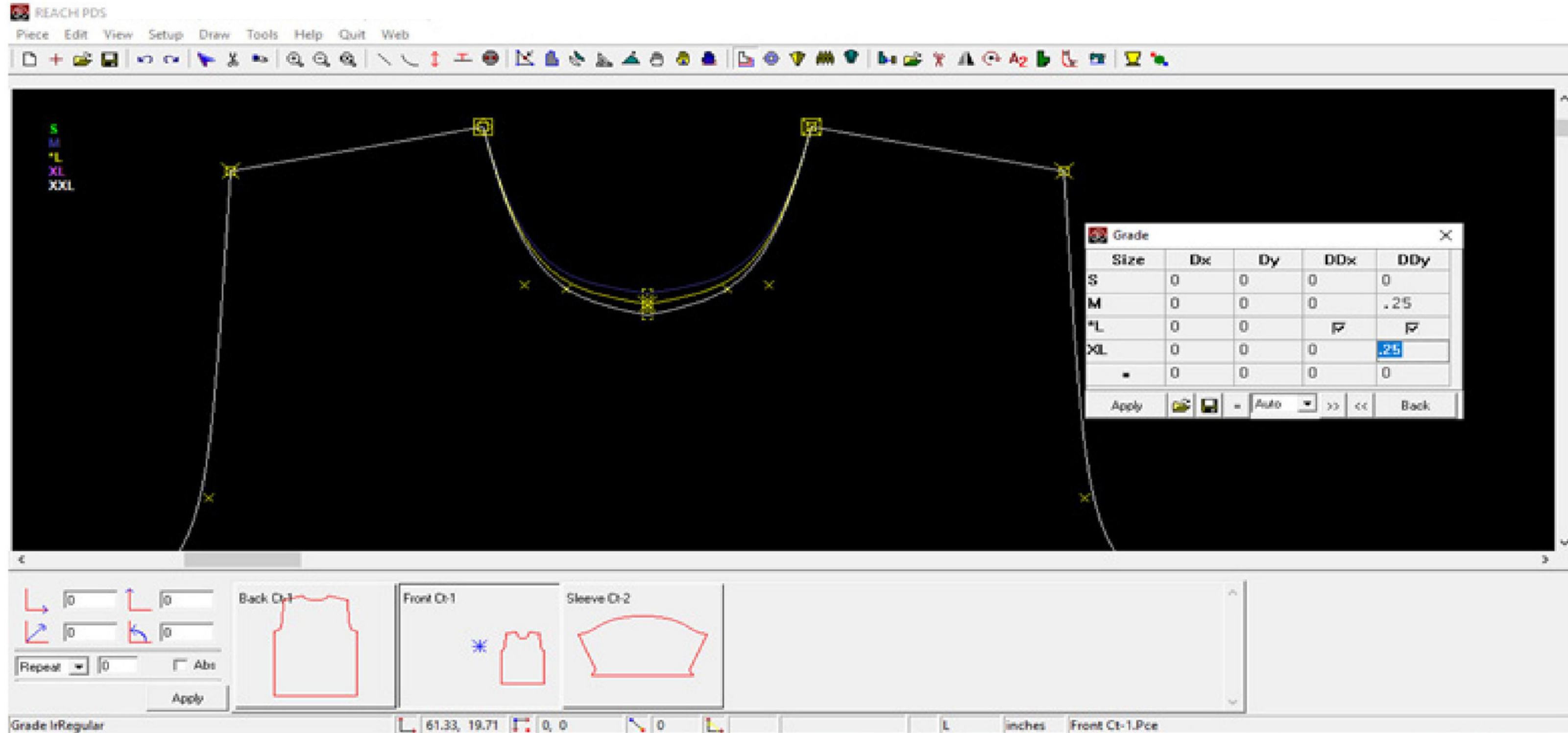
CLICK ON THE TABULAR TOOL ON THE RIGHT SIDE.

REACH CAD



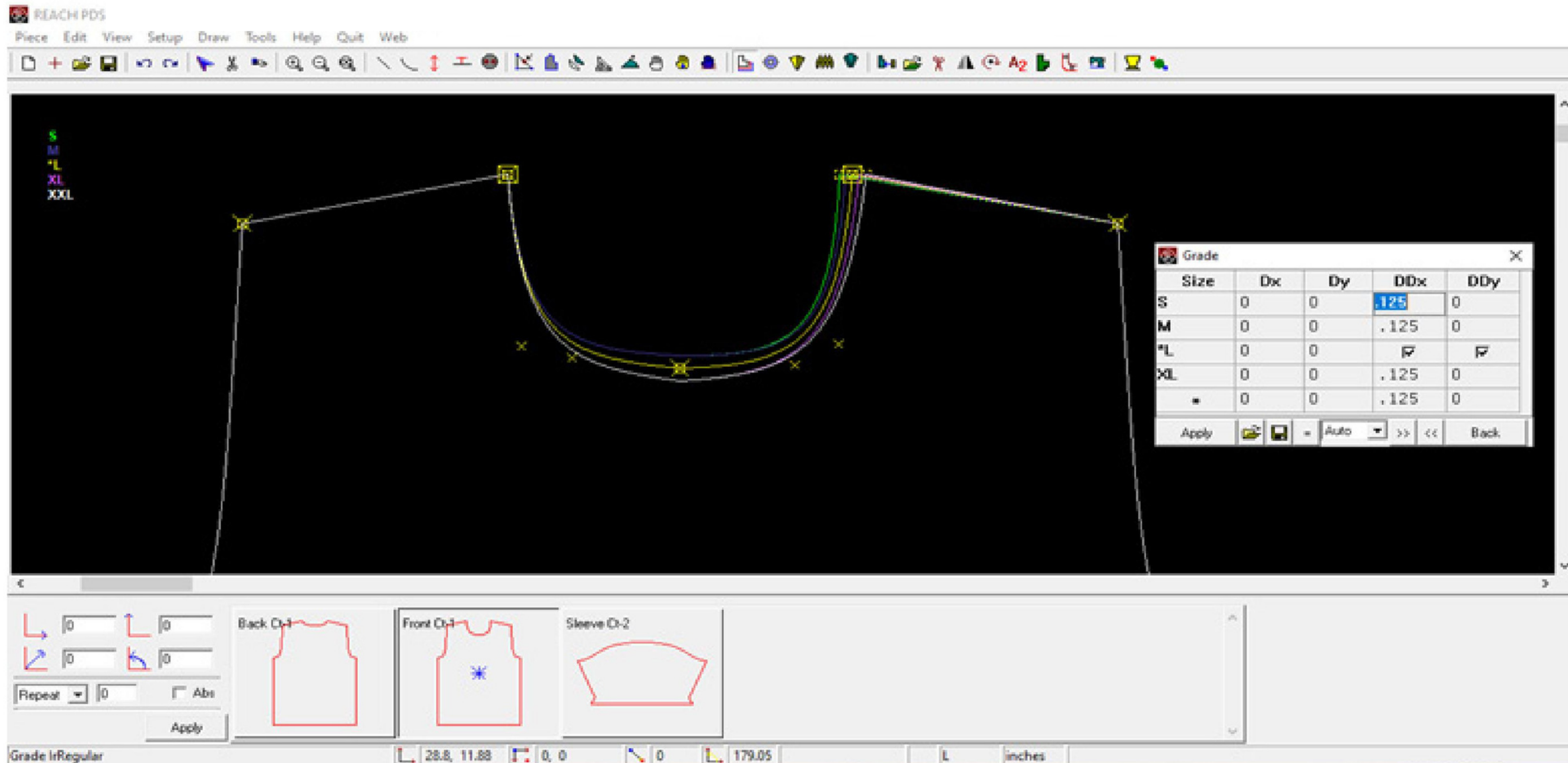
STEP-009

CLICK ON THE NECK DROP POINT AND WRITE THE MEASUREMENT IN THE 'DDY' COLUMN IN THE TABLE AND APPLY.



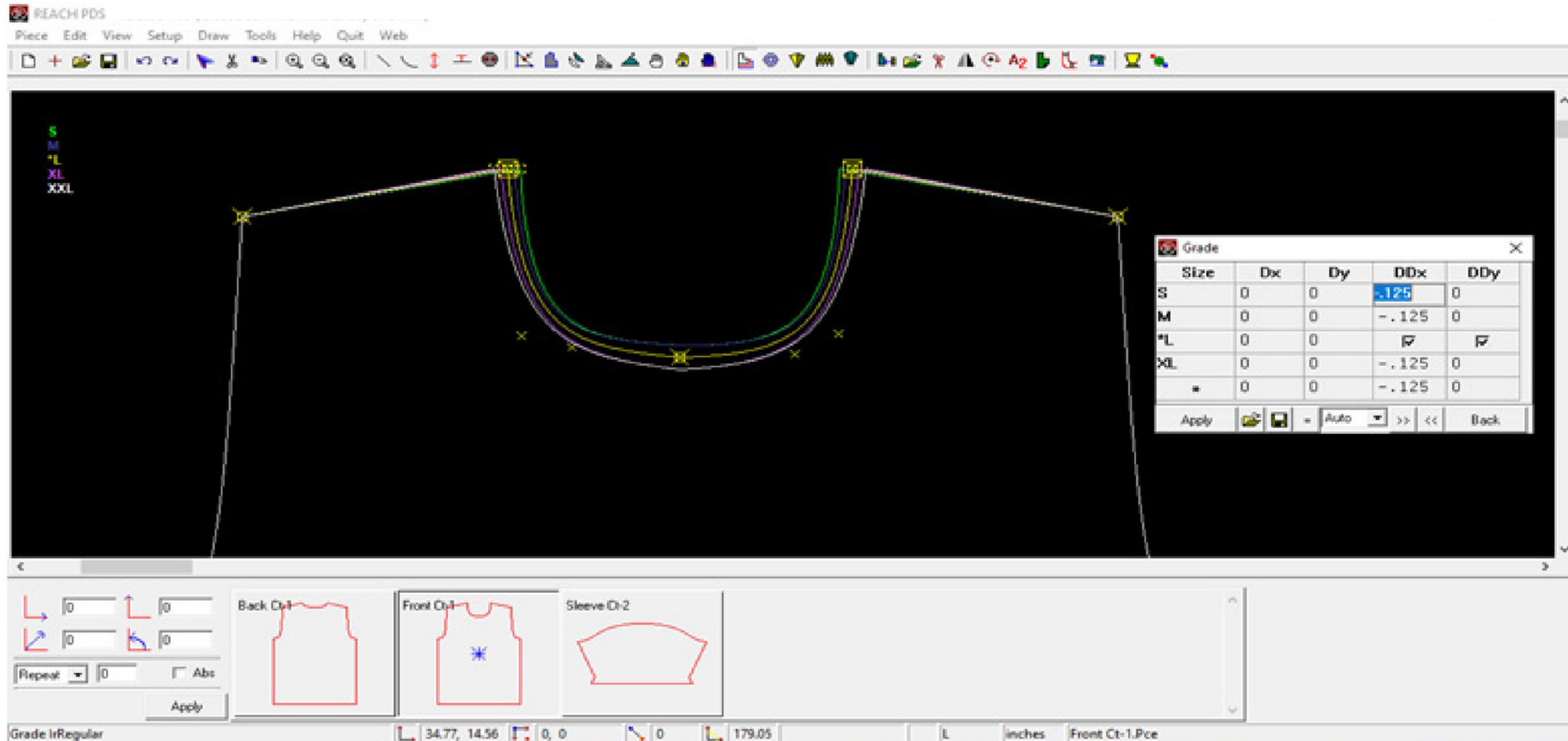
STEP-010

CLICK ON THE RIGHT POINT OF NECK WIDTH BLINK AND IN THE TABLE INPUT MEASUREMENT $\frac{1}{2}$ DDX (.125) AND CLICK ON APPLY



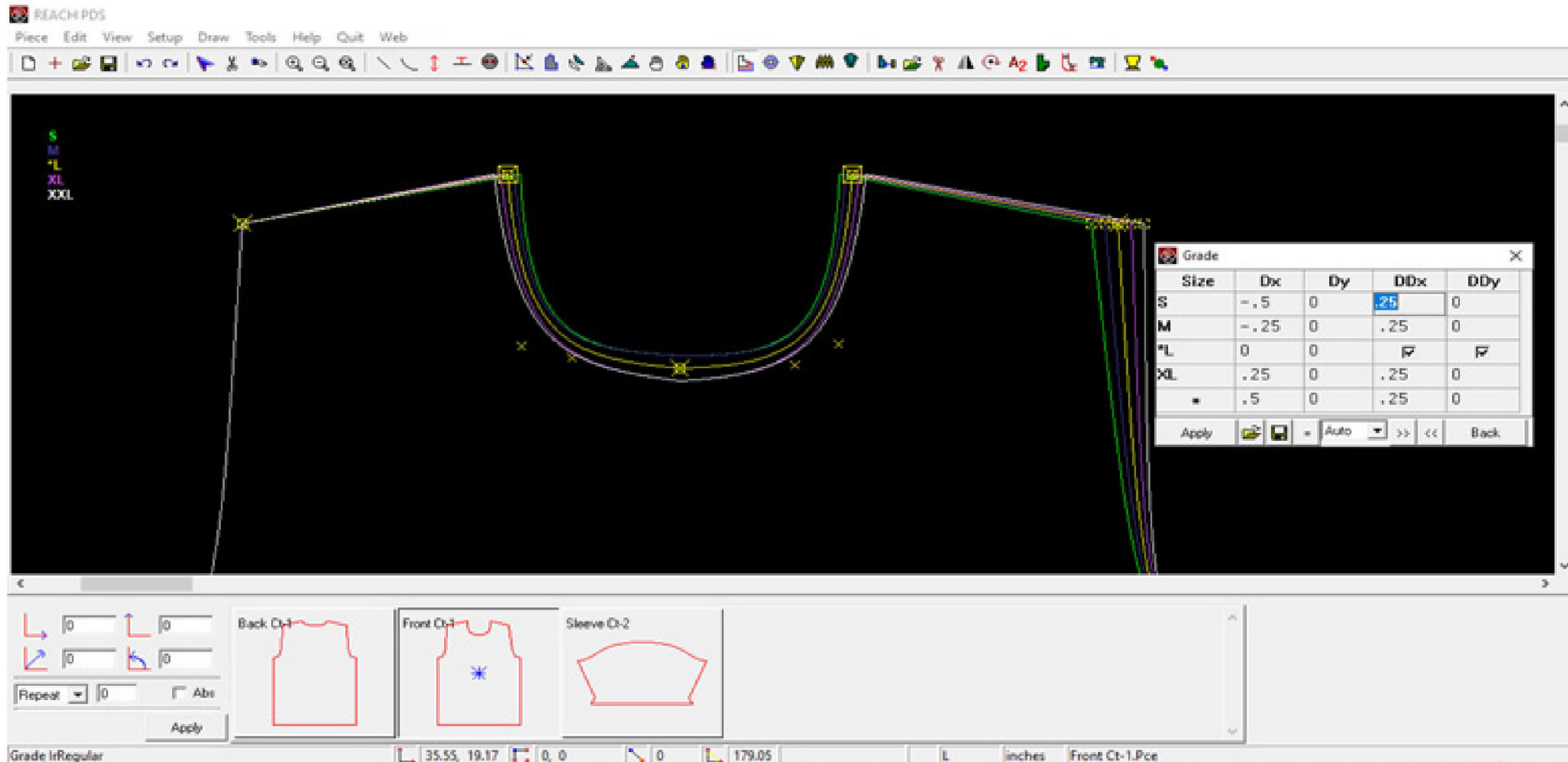
STEP-011

CLICK ON NECK WIDTH LEFT POINT BLINK ON TABLE APPLY ON MEASUREMENT $\frac{1}{2}$ DDX (-.125) APPLY



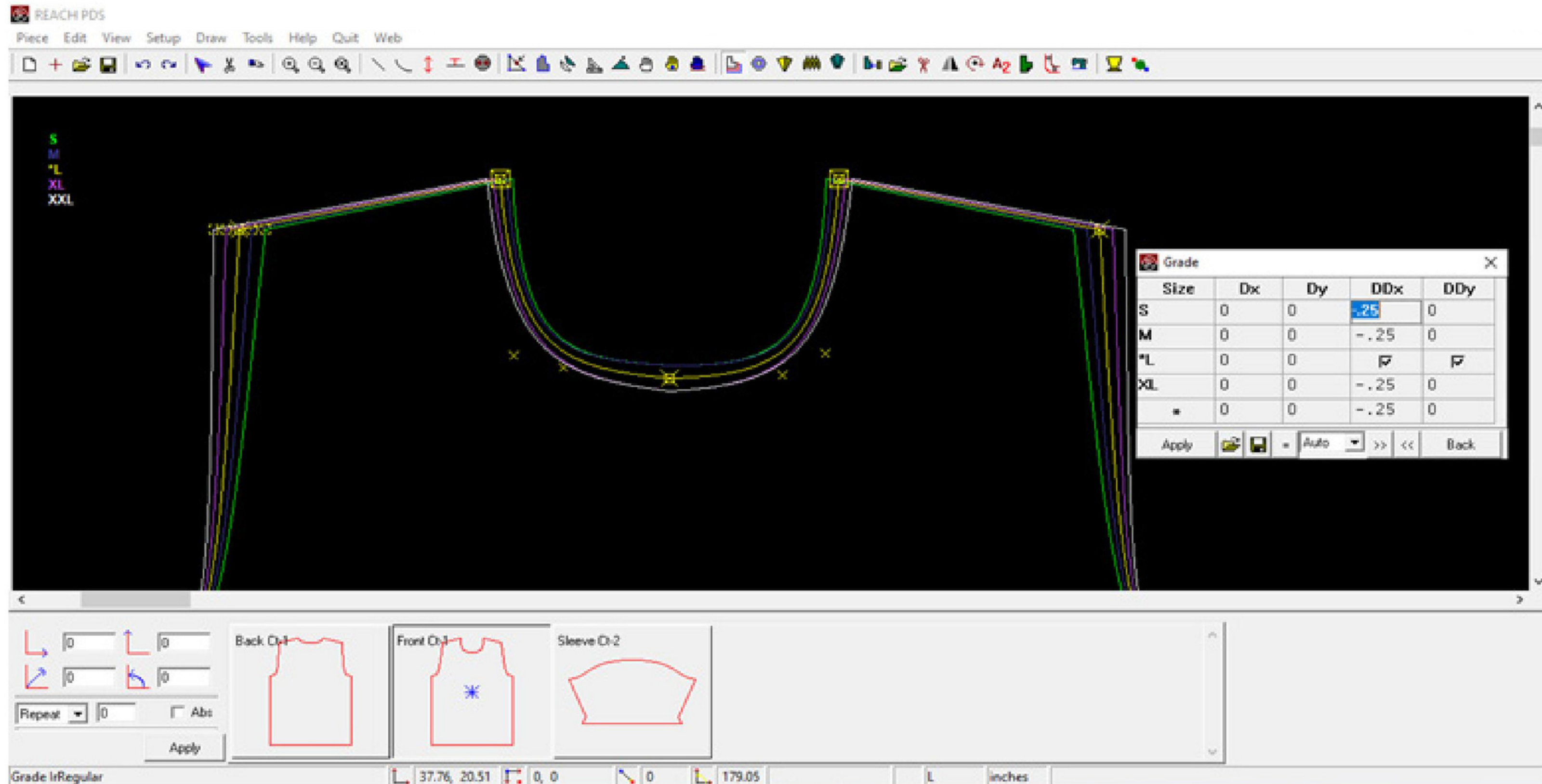
STEP-012

CLICK ON THE SHOULDER POINT ON RIGHT SIDE AND APPLY THE MEASUREMENT IN DDX AS (.2T5)



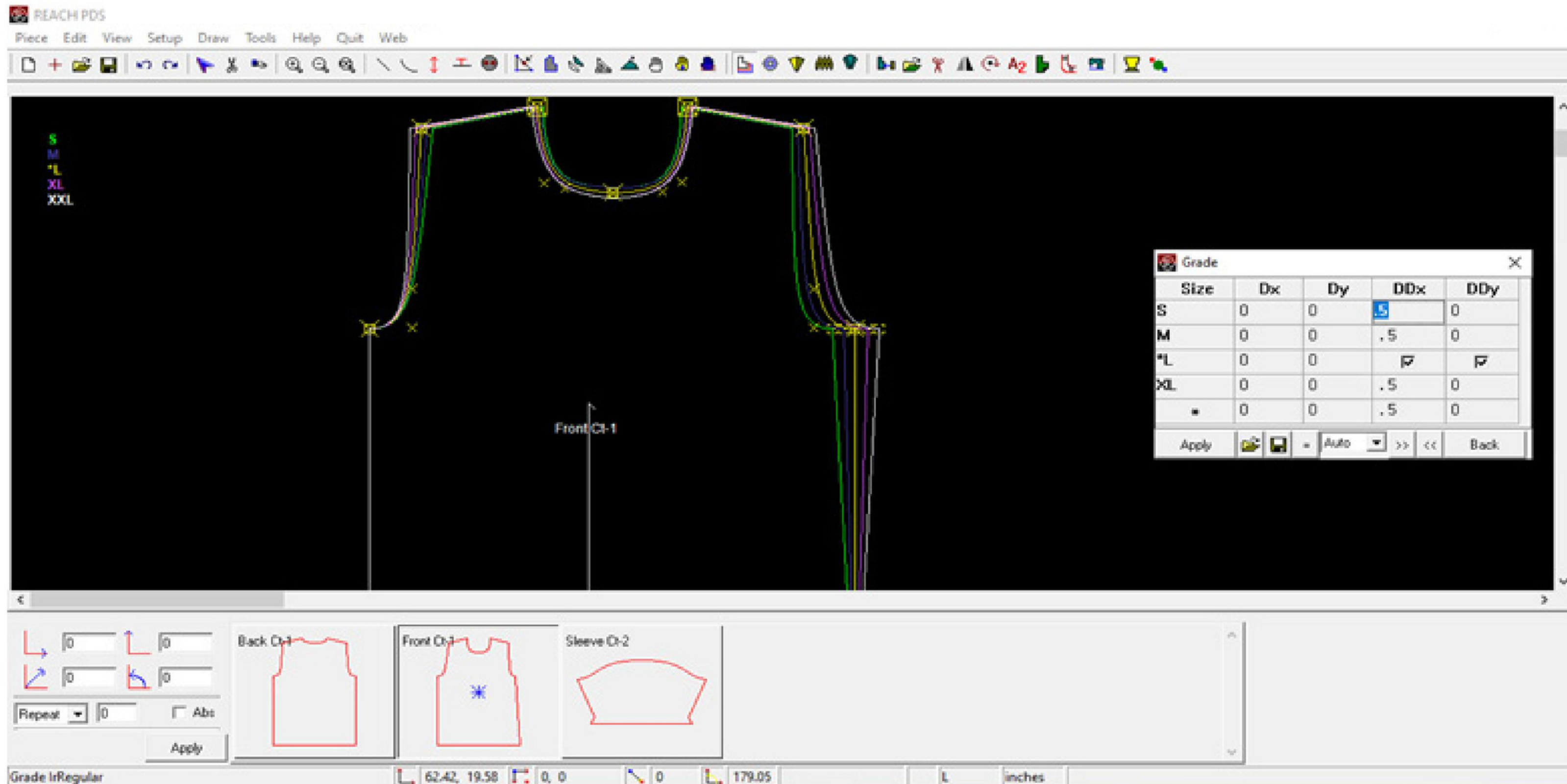
STEP-013

CLICK ON THE SHOULDER POINT ON LEFT SIDE AND APPLY THE MEASUREMENT IN DDX AS (-.25)



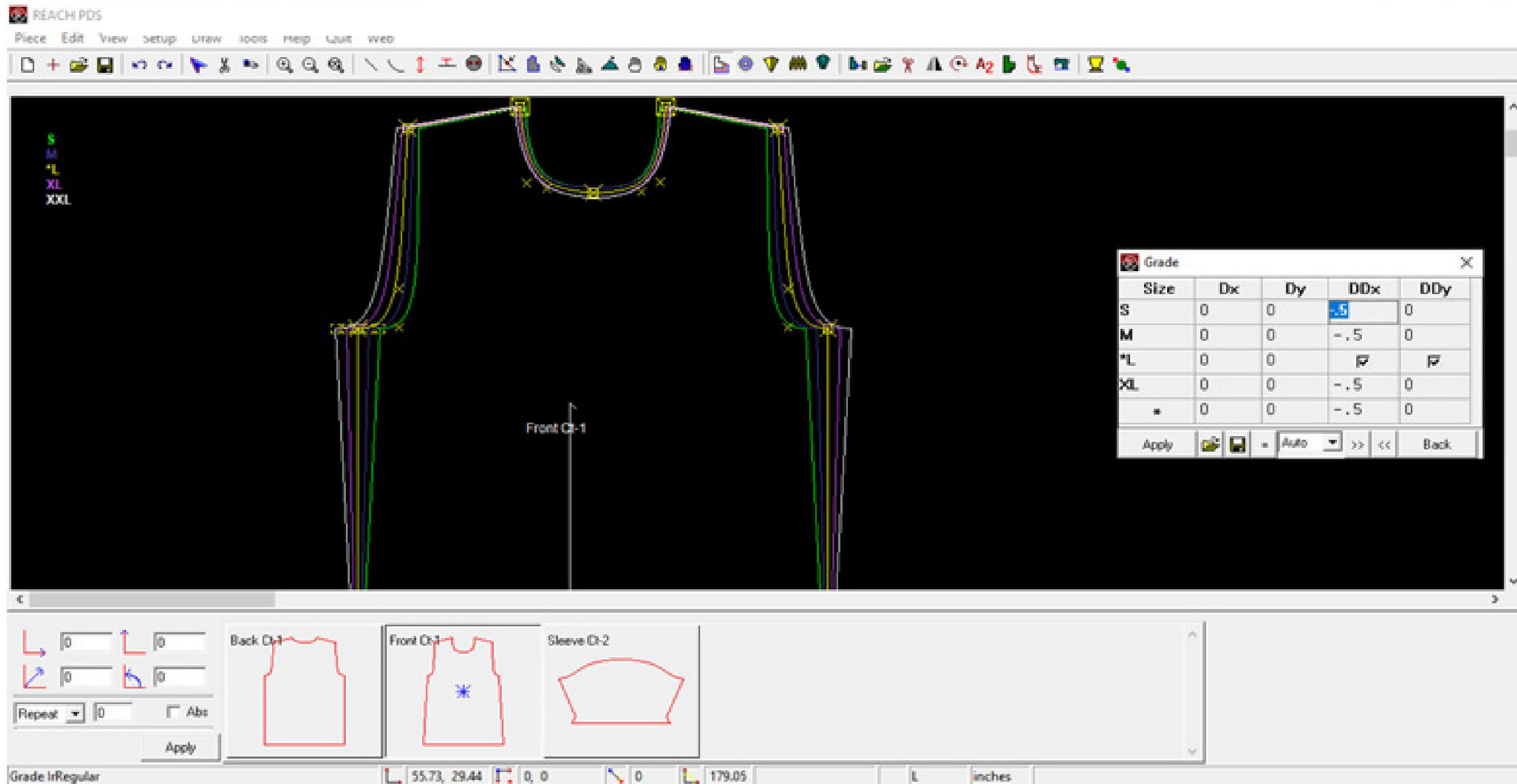
STEP-014

CLICK ON RIGHT CHEST POINT AND APPLY MEASUREMENT OF (.5) IN DDX COLUMN AND APPLY



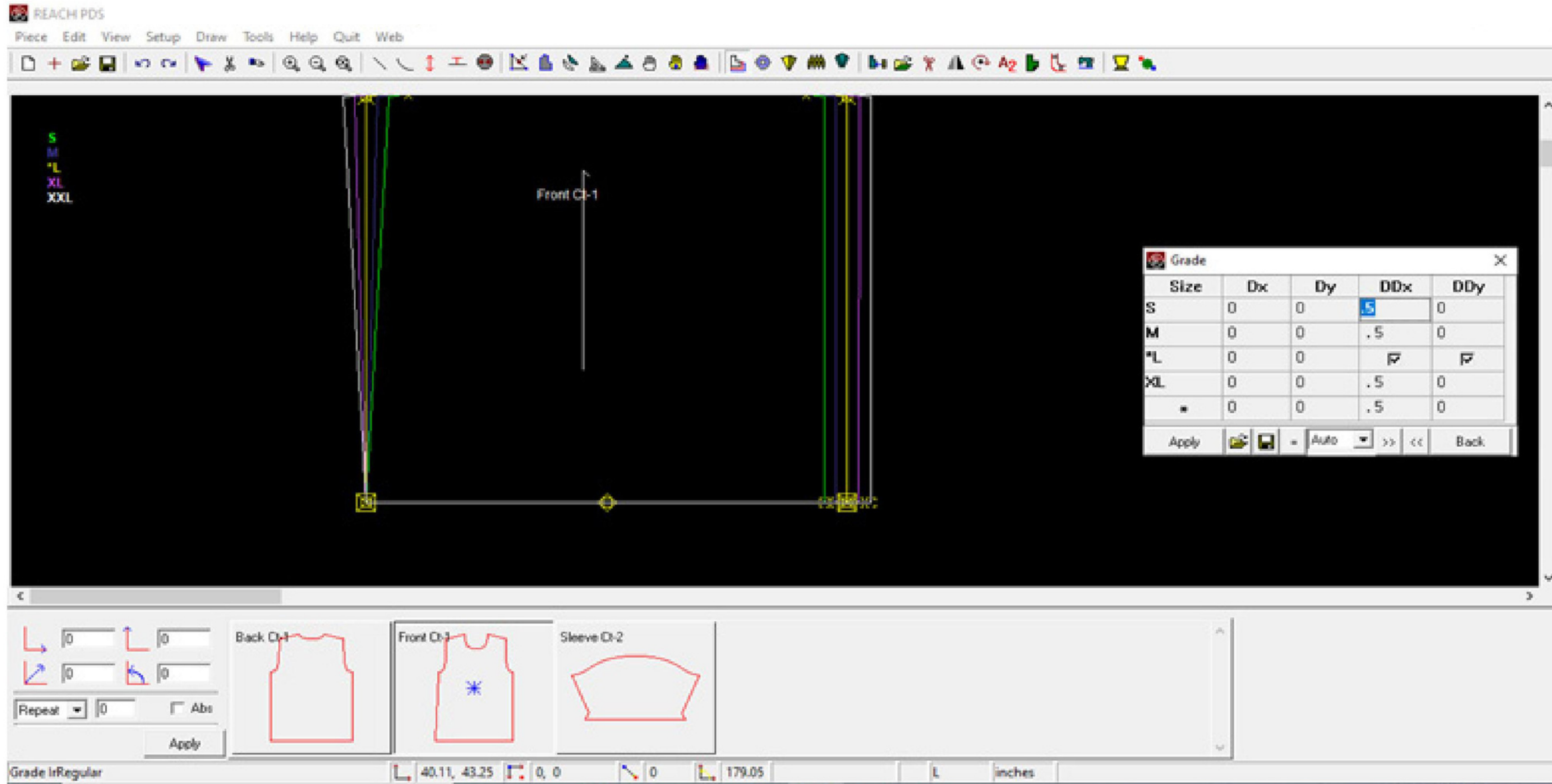
STEP-015

CLICK ON THE LEFT CHEST POINT AND ENTER MEASUREMENT OF (-.5) IN THE DDX COLUMN AND APPLY



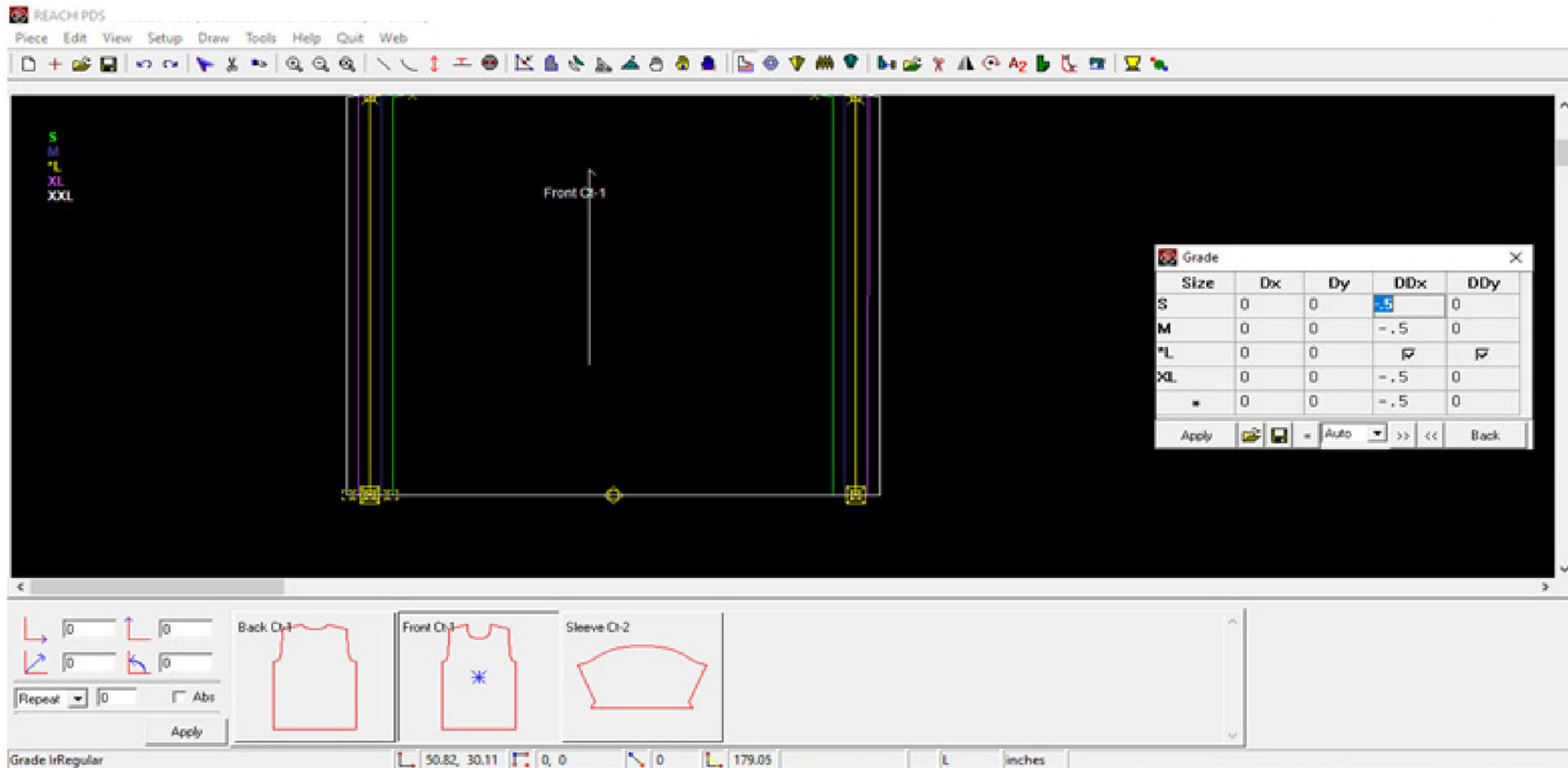
STEP-016

CLICK ON THE LEFT POINT IN THE BOTTOM HALF AND ENTER A MEASUREMENT OF (.5) IN DDX COLUMN AND APPLY.



STEP-017

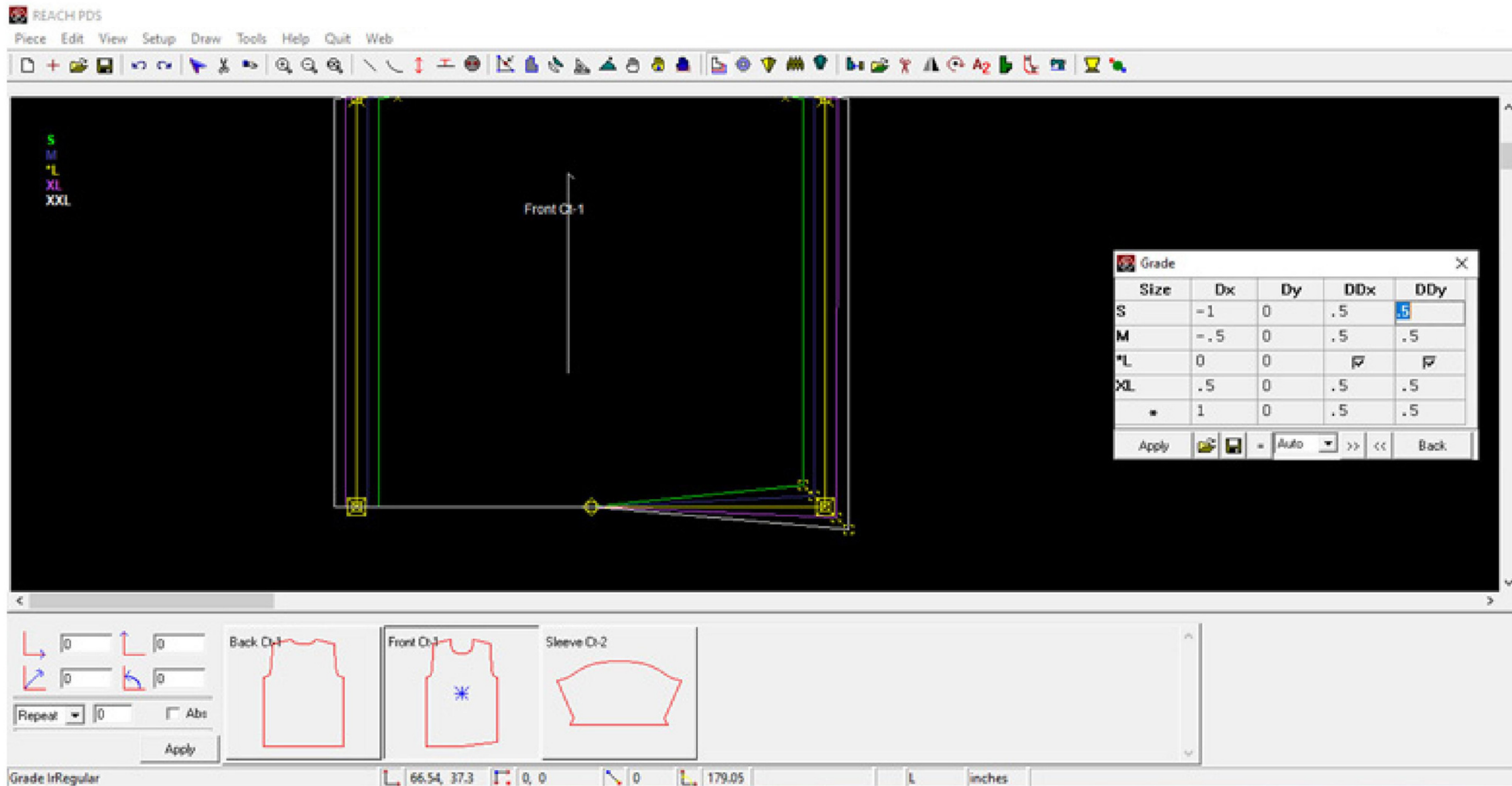
CLICK ON THE RIGHT POINT IN THE BOTTOM HALF AND APPLY MEASUREMENT OF (-.5) IN THE DDX COLUMN AND APPLY.



STEP-018

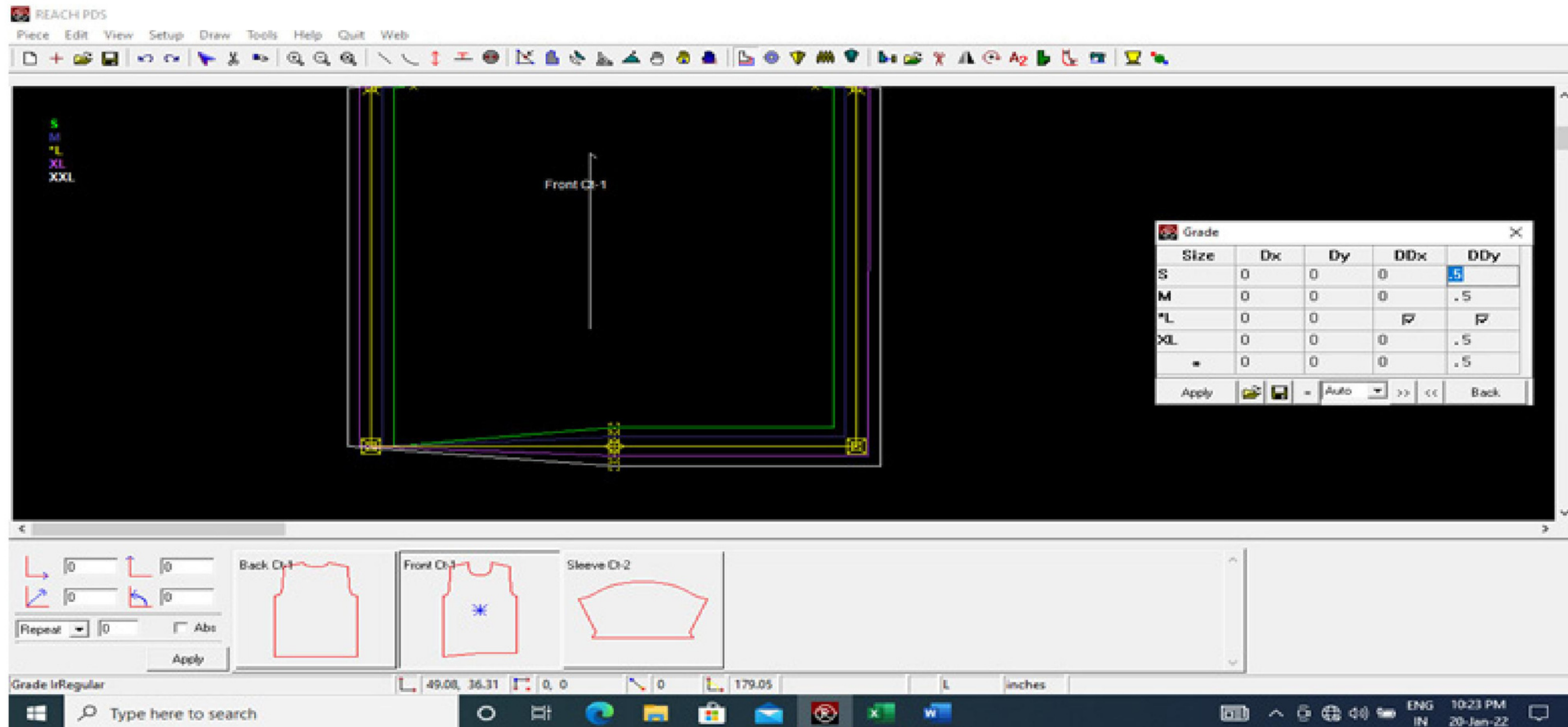
REACH CAD

CLICK ON THE POINT IN RIGHT SIDE OF BOTTOM HALF AND APPLY A LENGTH MEASUREMENT OF .5 IN THE DDY COLUMN AND APPLY.



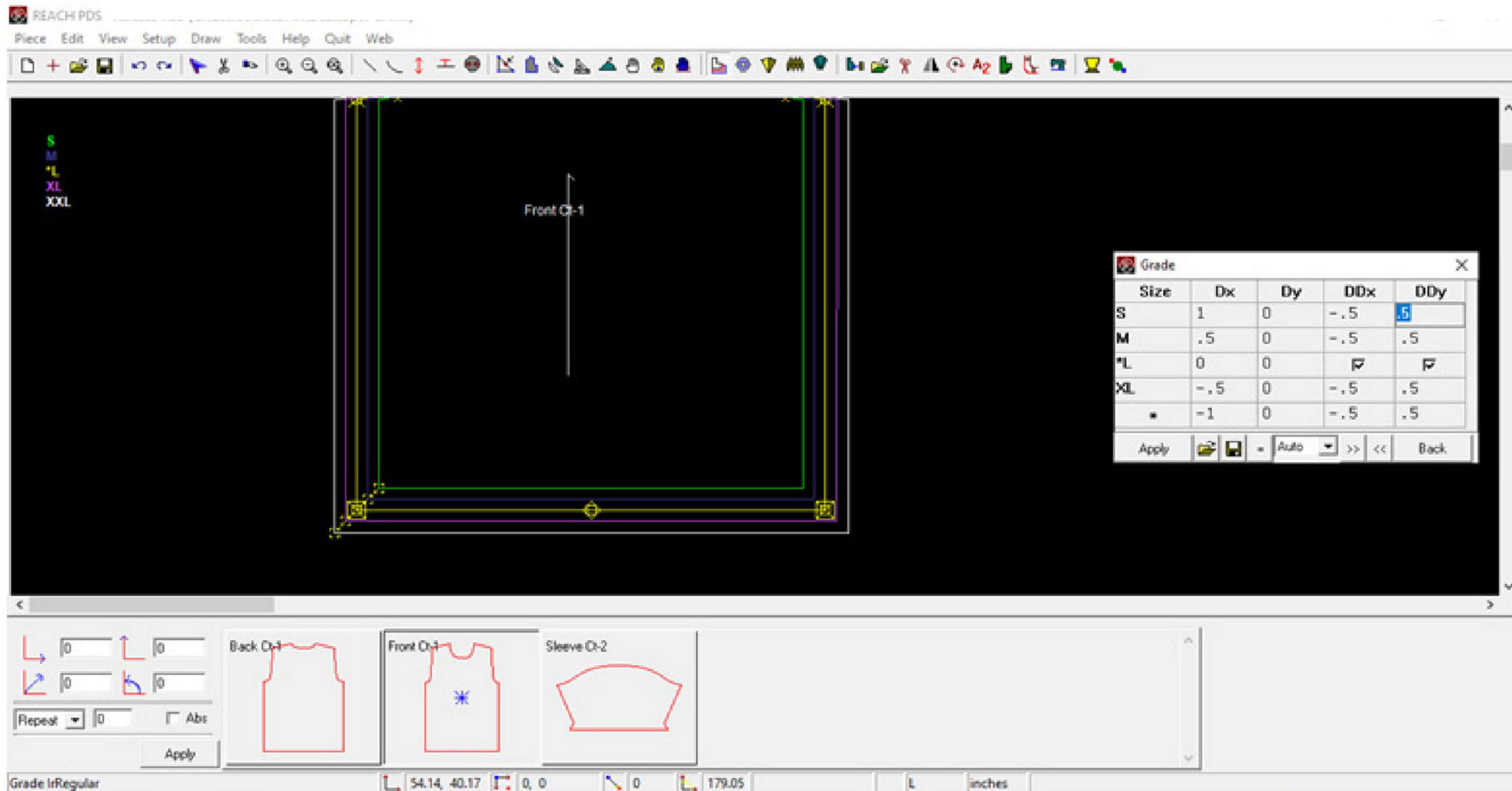
STEP-019

CLICK ON THE CENTER POINT IN BOTTOM AND APPLY A LENGTH MEASUREMENT OF .5 IN THE DDY COLUMN AND APPLY.



STEP-020

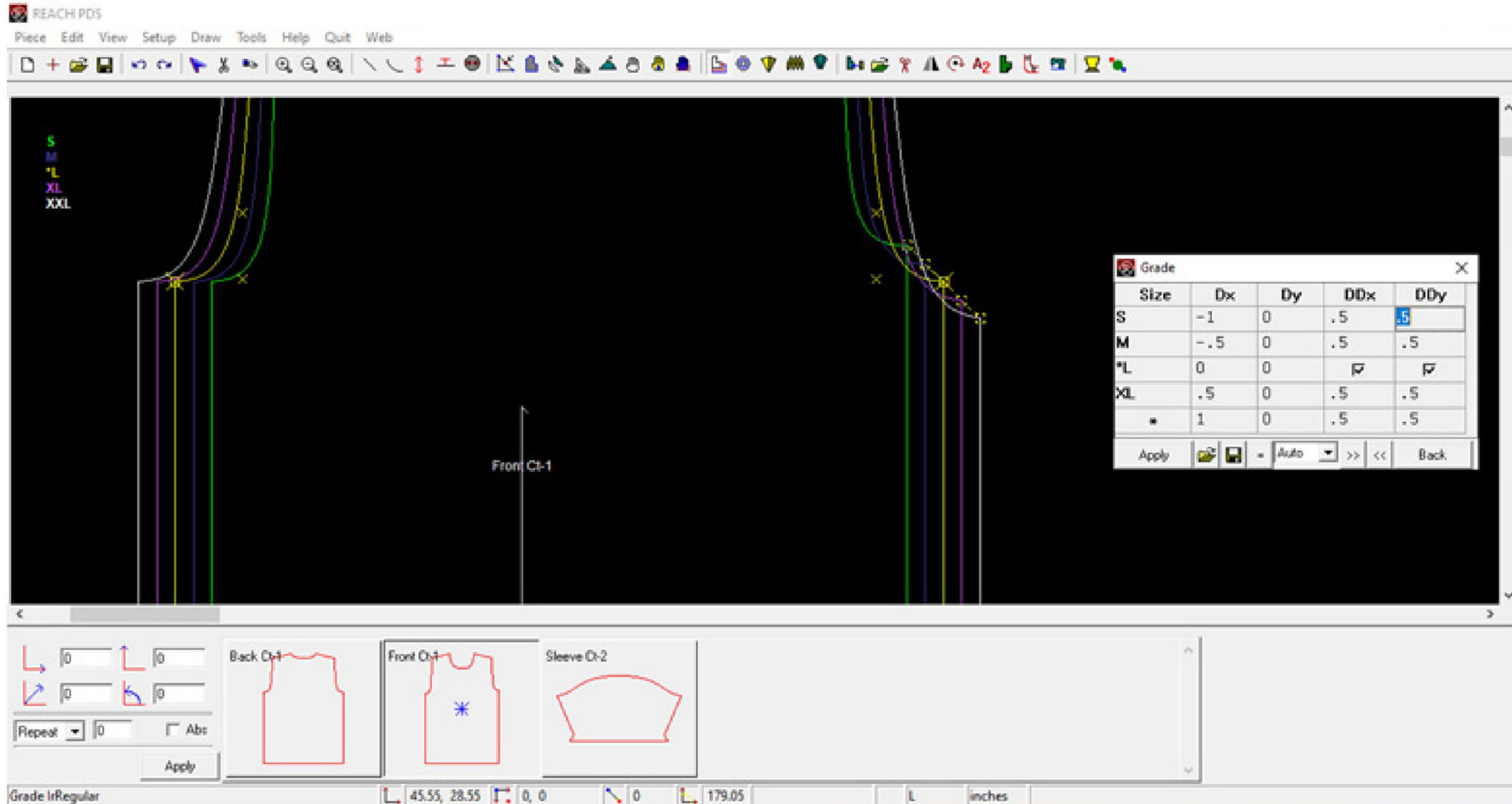
CLICK ON THE LEFT POINT IN BOTTOM AND APPLY A LENGTH MEASUREMENT OF .5 IN THE DDY COLUMN AND APPLY.



STEP-02 I

ZOOM TO CHEST POINT AND APPLY AN ARMHOLE MEASUREMENT OF DDY (0.5)

REACH CAD



STEP-022

DO THE SAME FOR THE LEFT SIDE

REACH CAD

REACH PDS

Piece Edit View Setup Draw Tools Help Quit Web

S
M
L
XL
XXL

Size	Dx	Dy	DDx	DDy
S	1	-1	-.5	.5
M	.5	-.5	-.5	.5
L	0	0		
XL	-.5	.5	-.5	.5
XXL	-1	1	-.5	.5

Apply [Icons] = Auto >> << Back

Front Ct-1

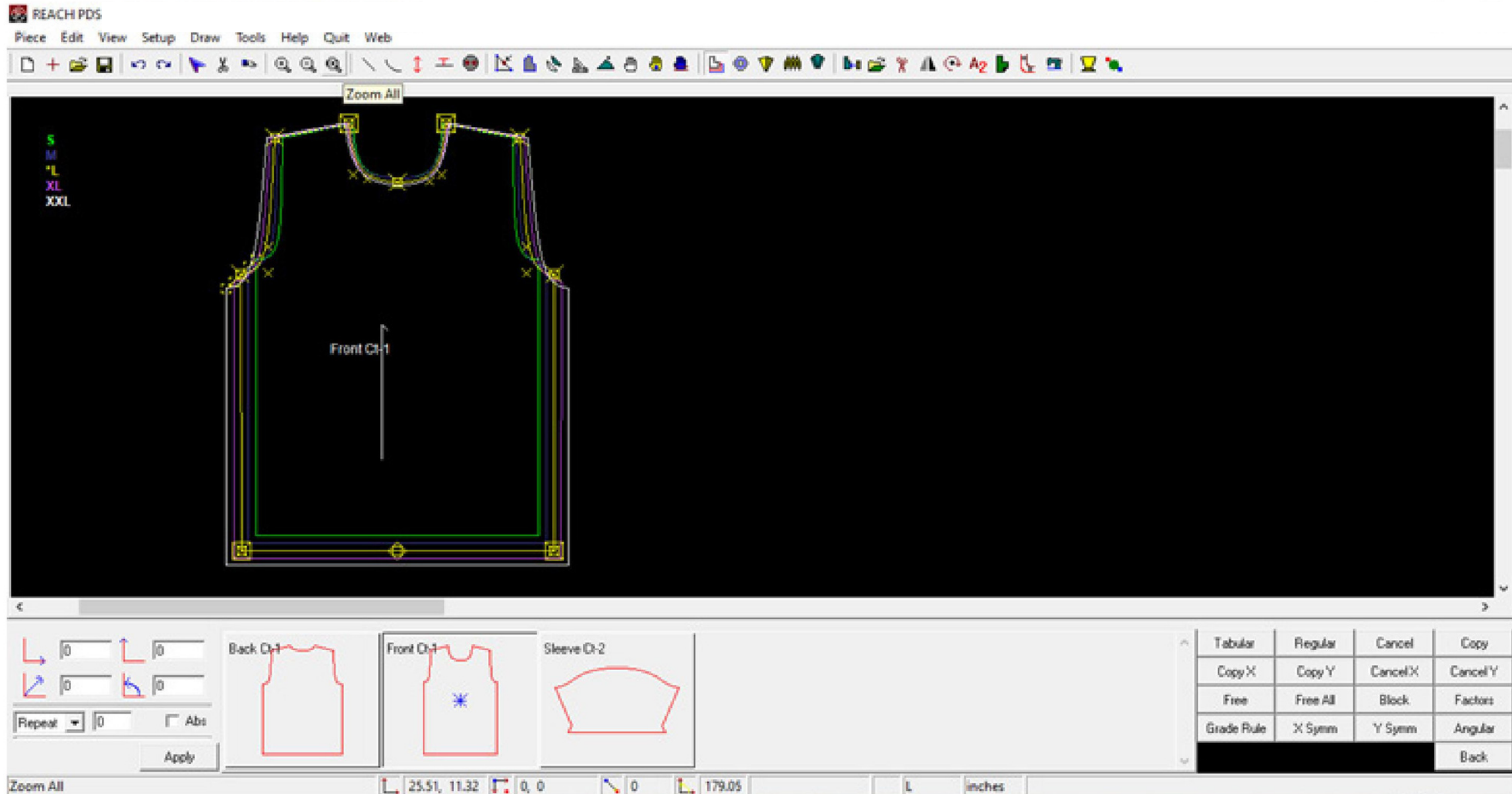
Back Ct-1 Front Ct-1 Sleeve Ct-2

Grade IrRegular [Icons] 30.77, 20.09 [Icons] 0, 0 [Icons] 0 [Icons] 179.05 [Icons] L inches Front Ct-1.Pce

STEP-23

CLICK ON 'ZOOM ALL' TO SEE ALL OF THE FRONT PATTERN.

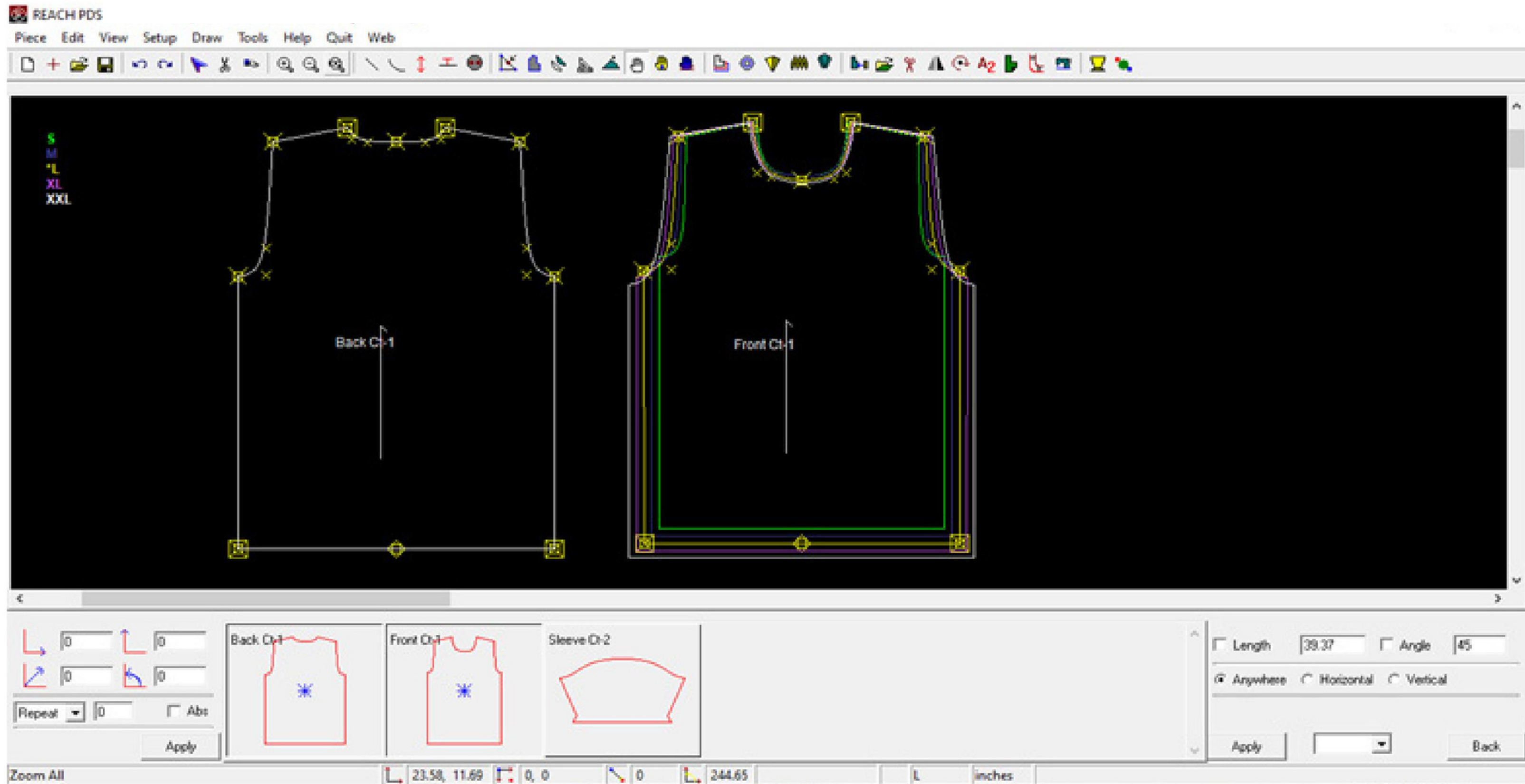
REACH CAD



STEP-024

CLICK ON THE BACK PATTERN.

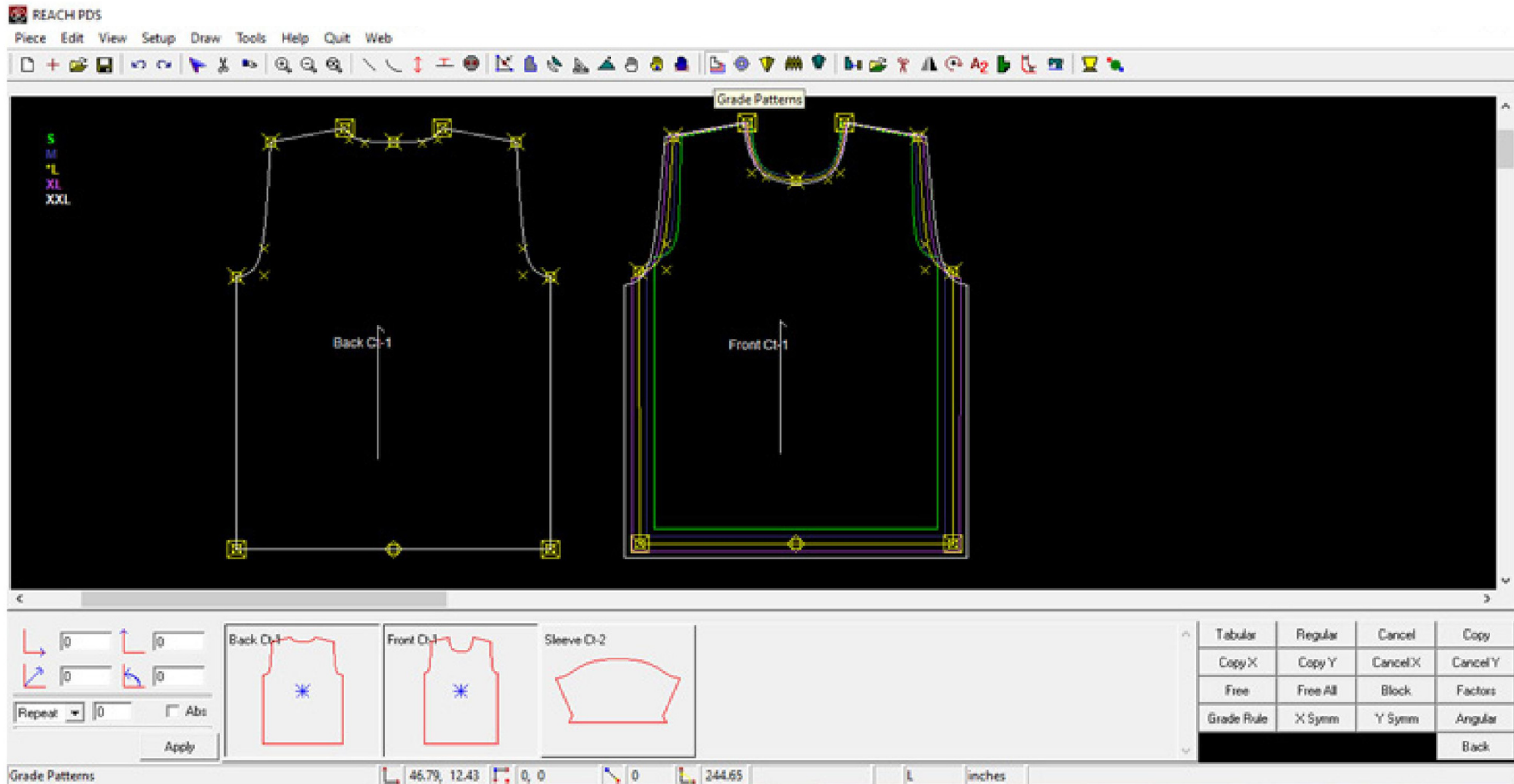
REACH CAD



STEP-025

GO TO GRADING TOOLS.

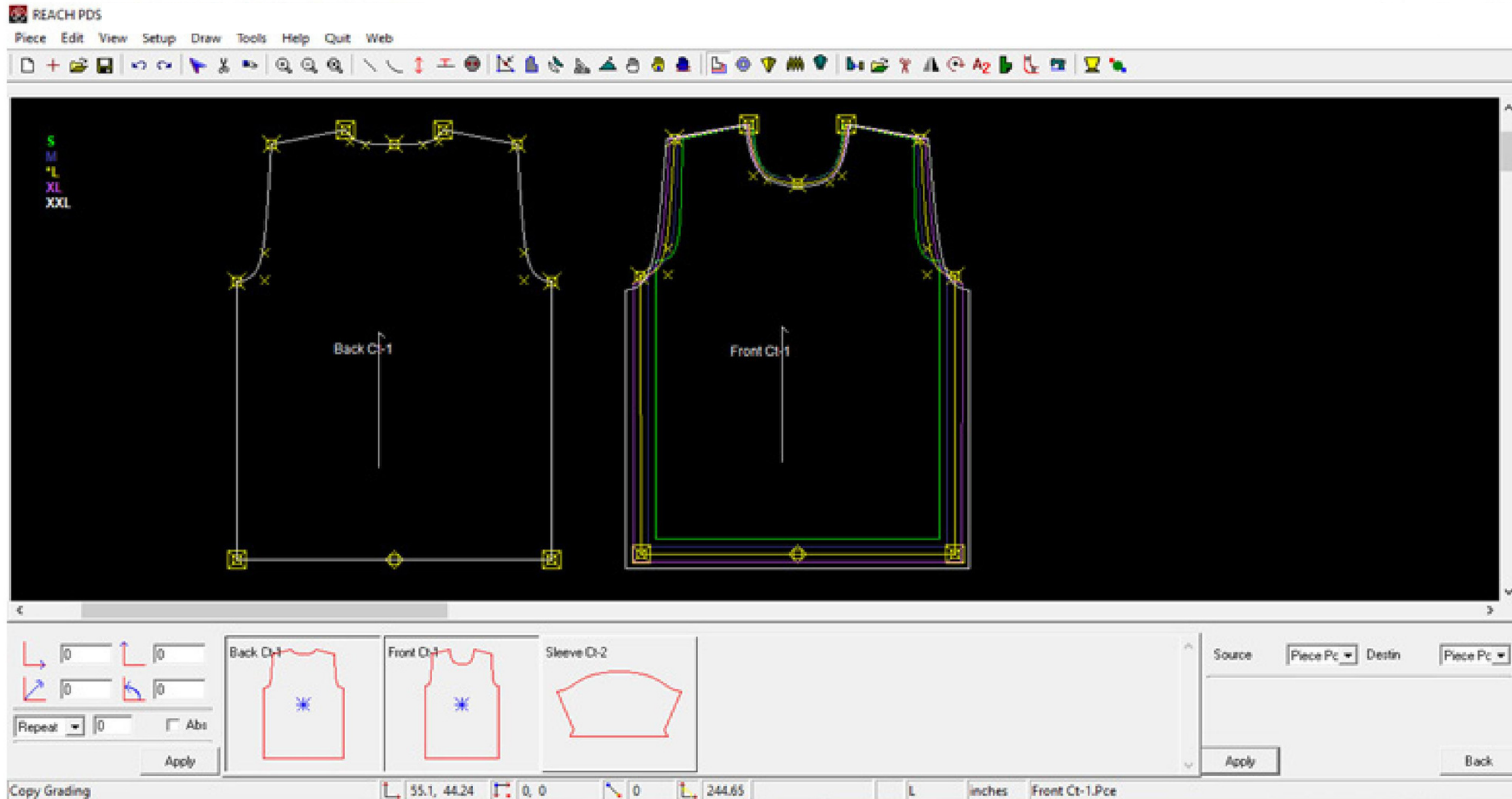
REACH CAD



STEP-026

IN THE SUBMENU ON THE RIGHT SIDE CLICK ON COPY TOOL

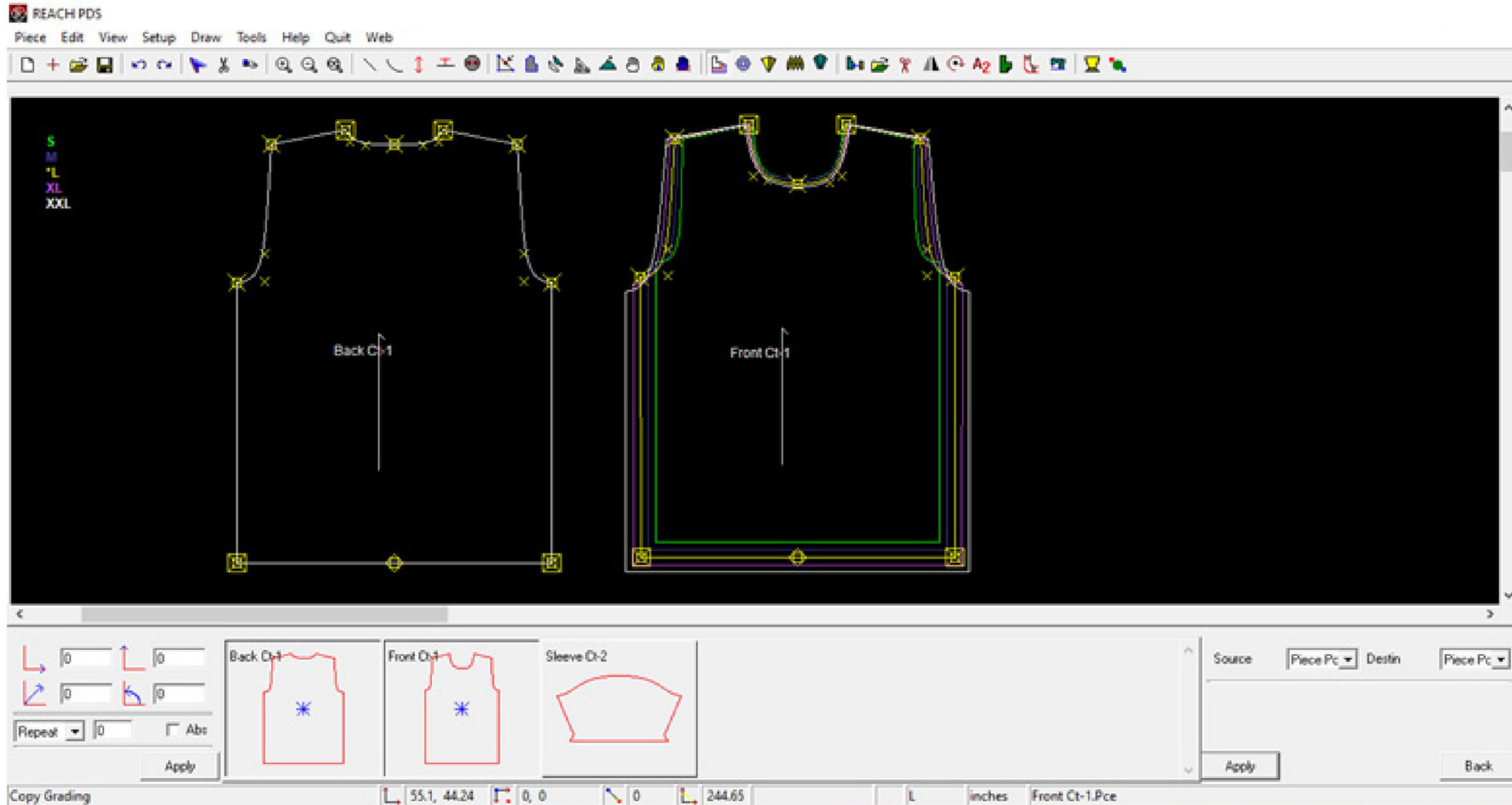
REACH CAD



STEP-027

CHANGE SOURCE AND DESTIN TO PIECE POINT AND APPLY THE CHANGES.

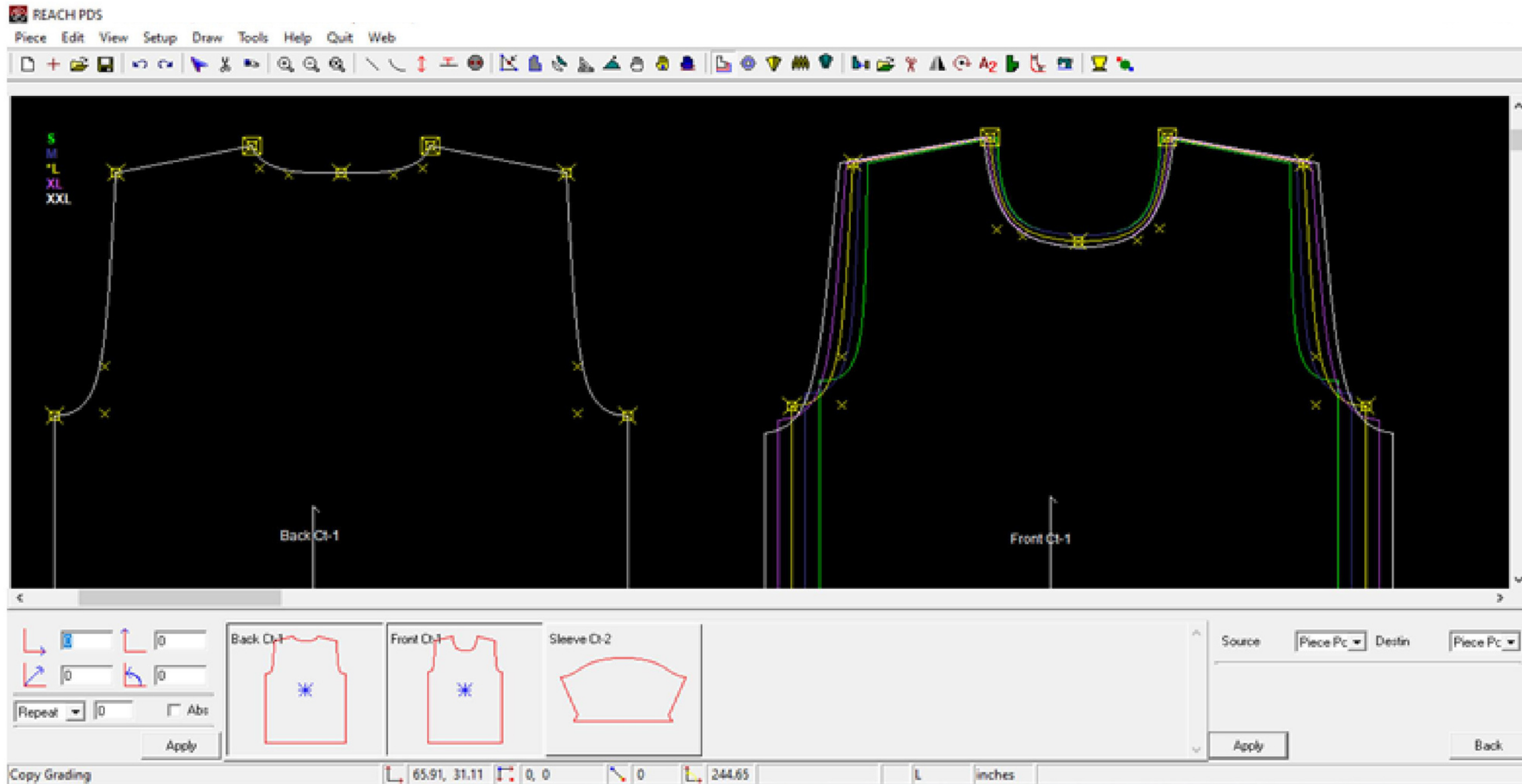
REACH CAD



STEP-028

ZOOM TO BACK AND FRONT NECK PART

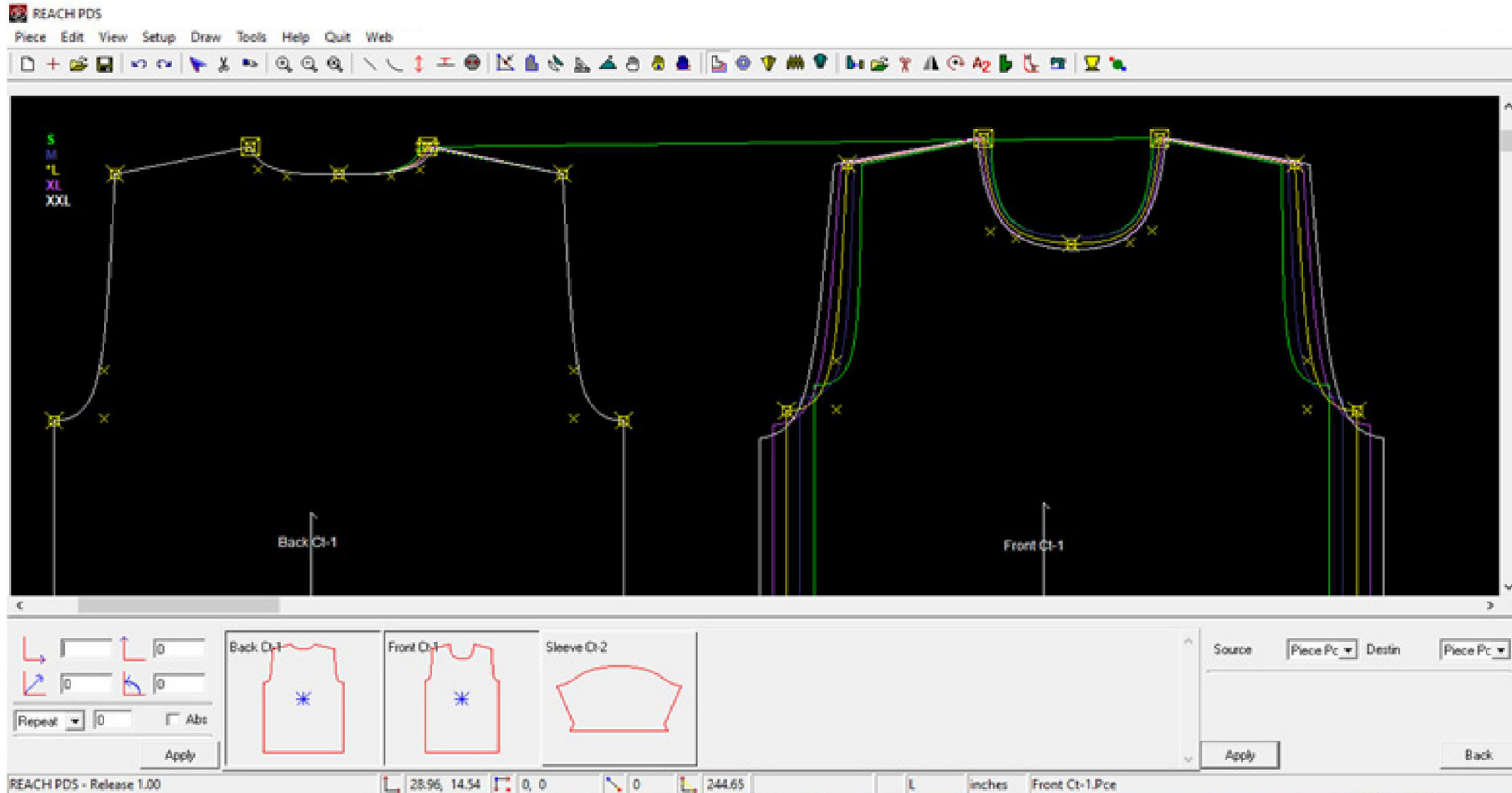
REACH CAD



STEP-029

CLICK ON FRONT NECK POINT AND JOIN IT TO BACK NECK POINT

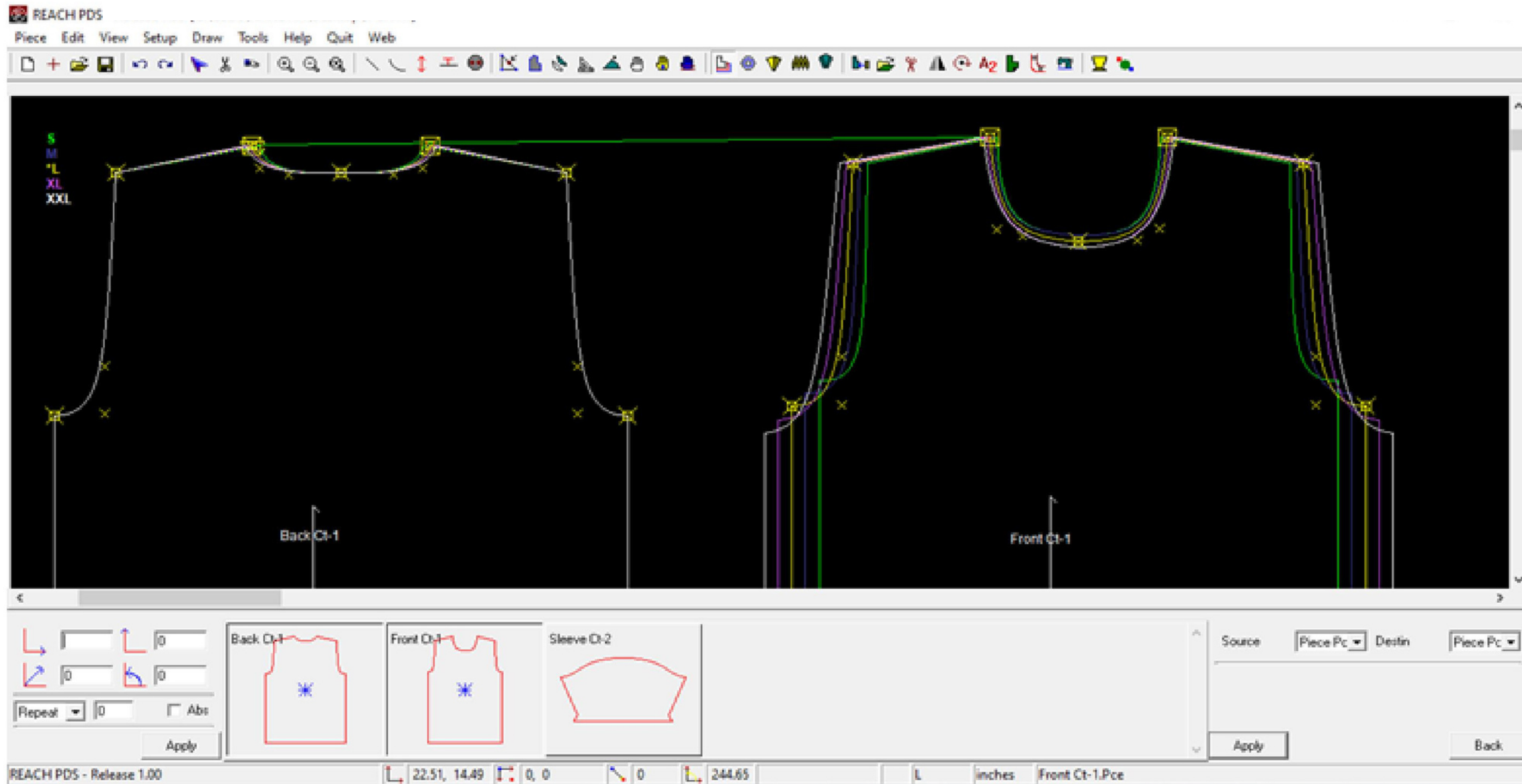
REACH CAD



STEP-030

DO THE SAME FOR LEFT SIDE NECK POINT

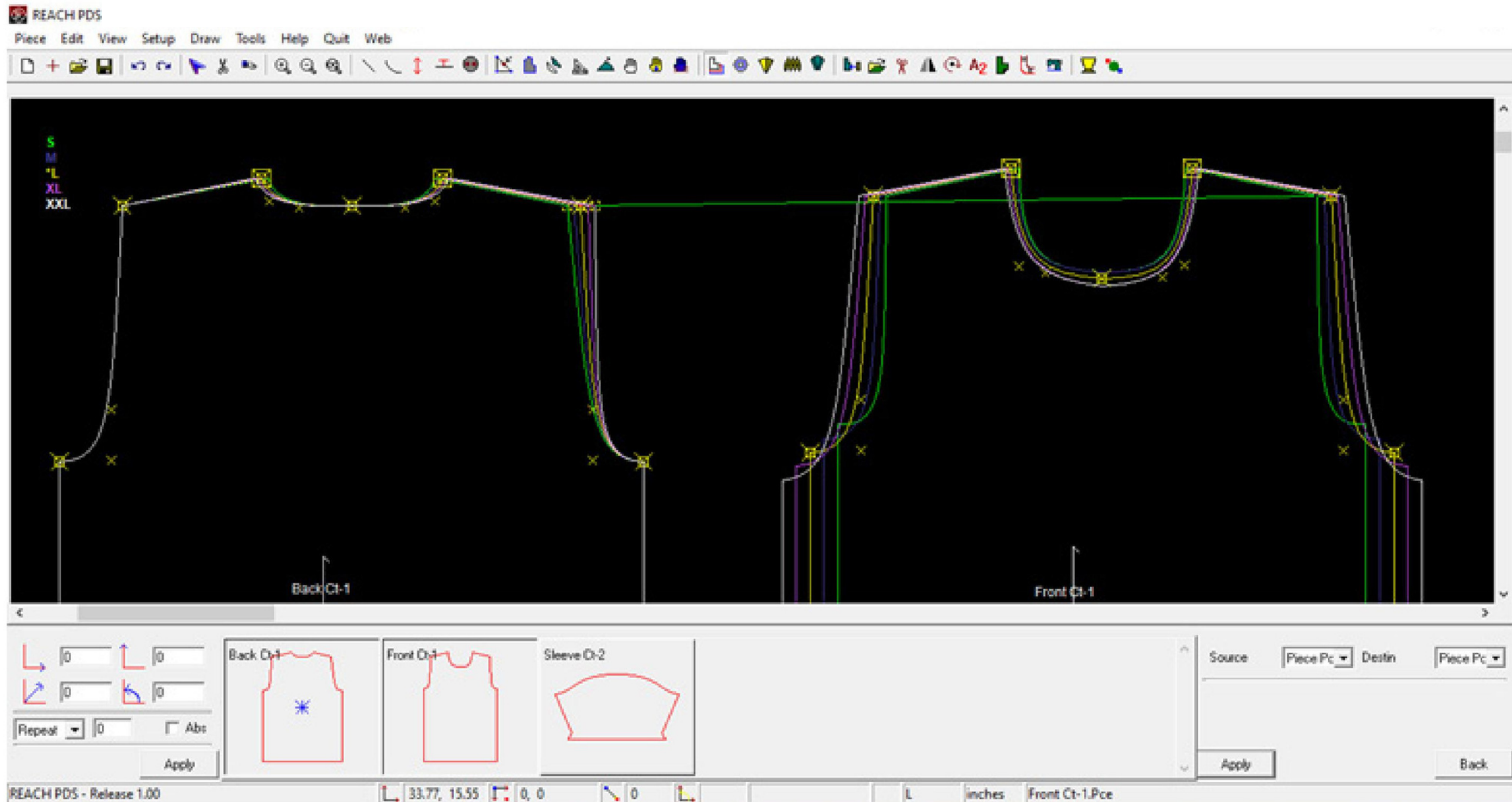
REACH CAD



STEP-03 |

JOIN FRONT SHOULDER POINT TO BACK POINT SIMILARLY

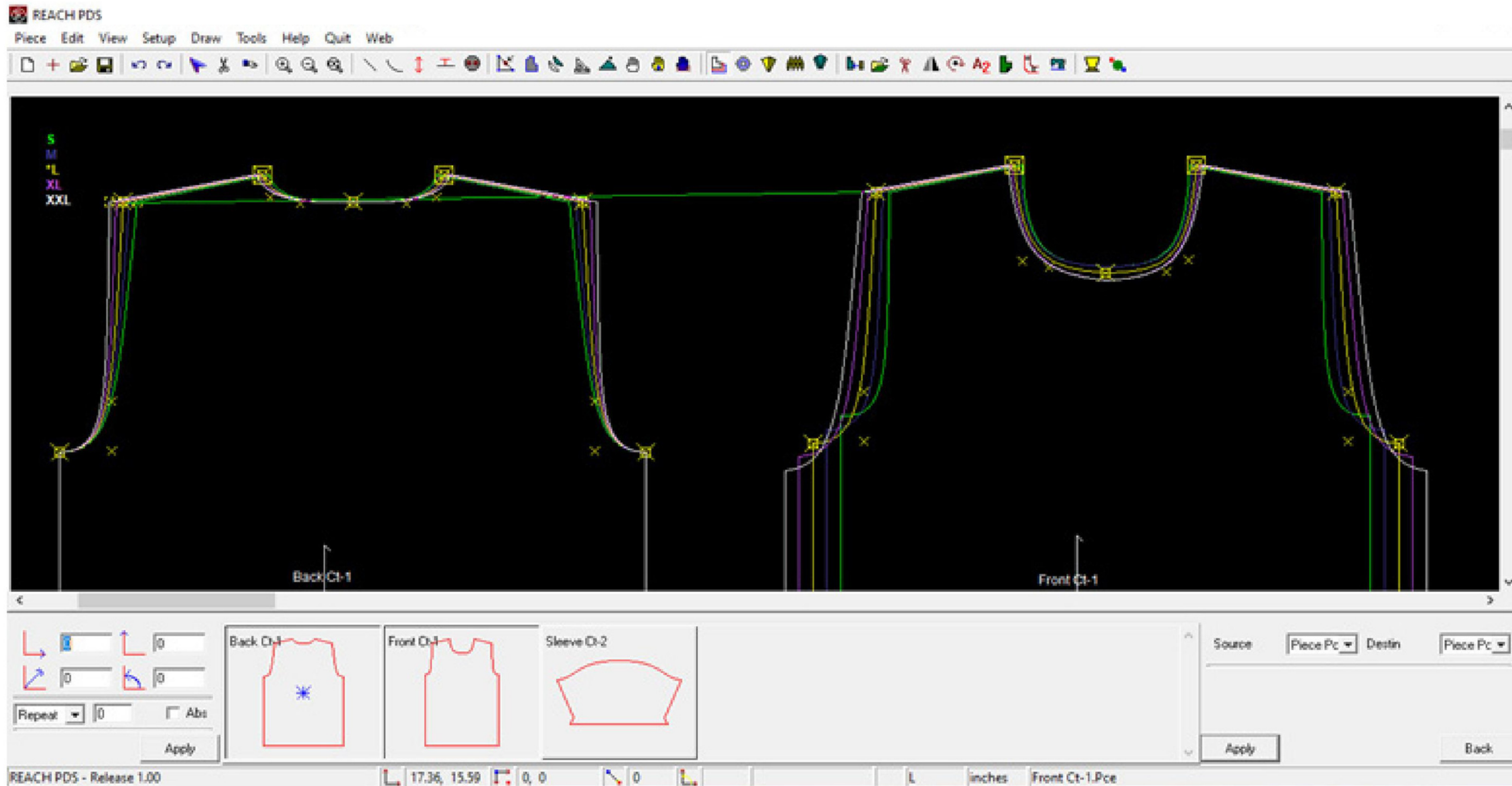
REACH CAD



STEP-032

USE THE SAME METHOD FOR LEFT SIDE SHOULDER POINT

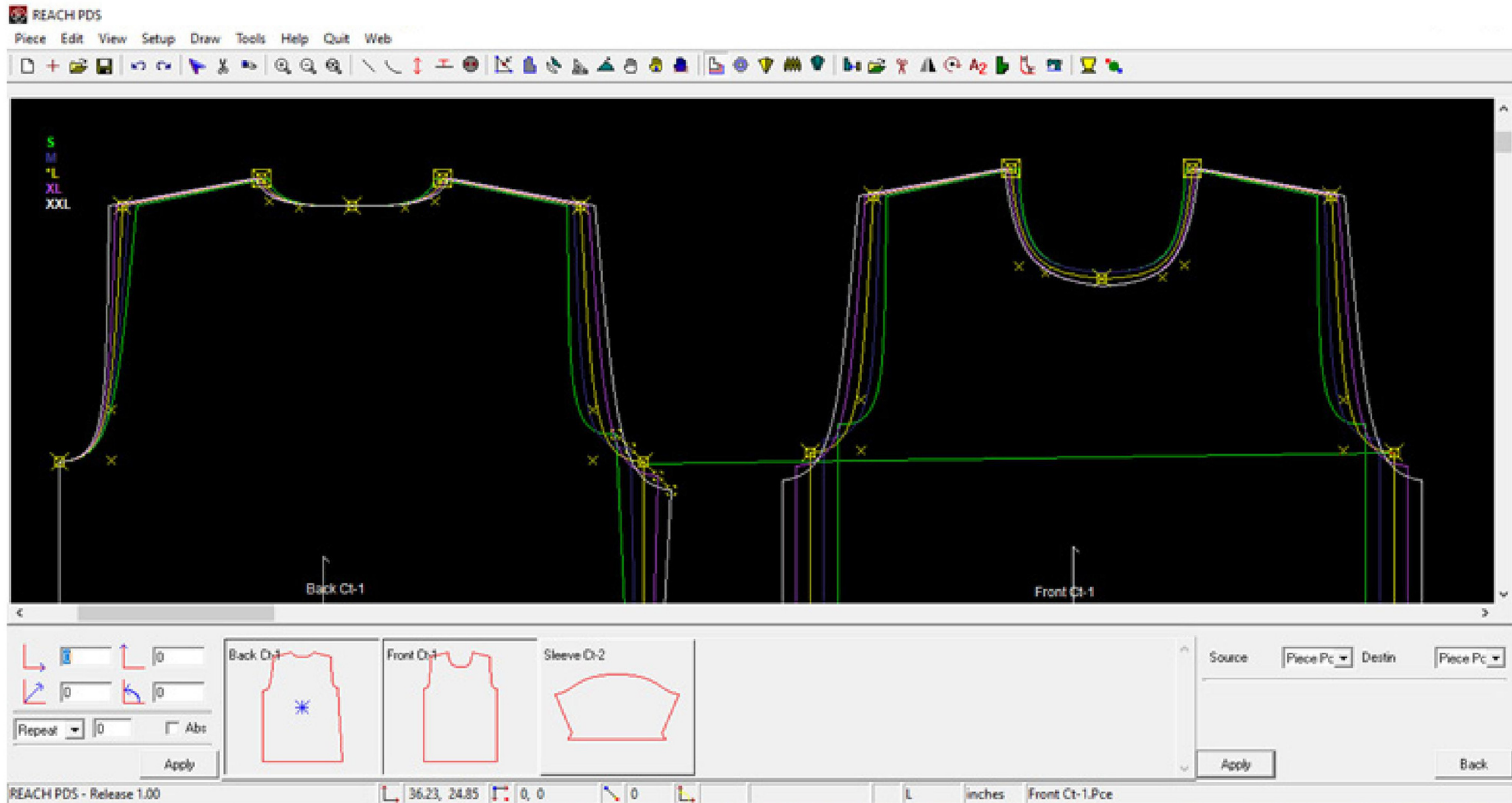
REACH CAD



STEP-033

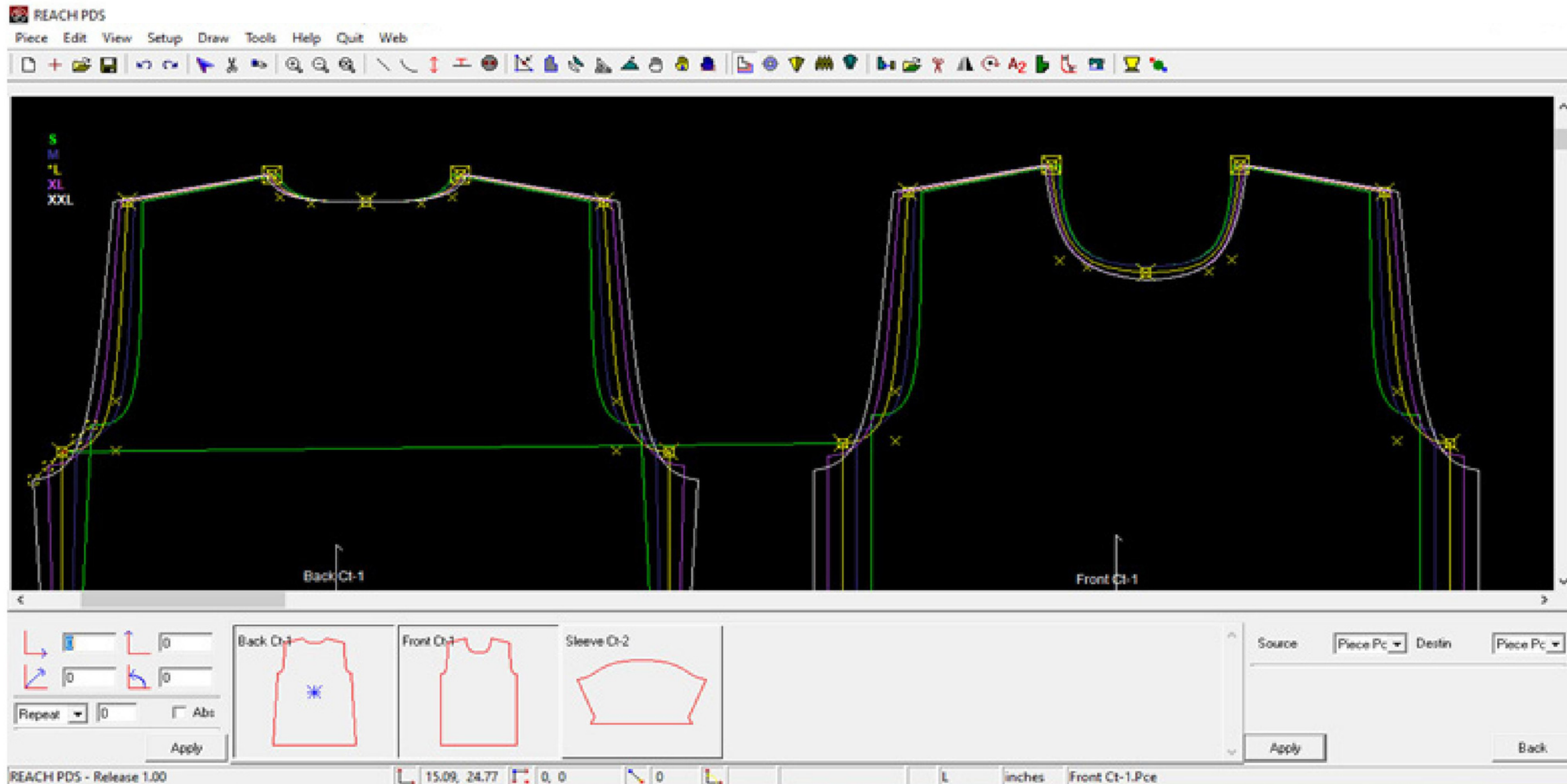
COPY THE ARMHOLE & CHEST POINT TO BACK PATTERN POINT

REACH CAD



STEP-034

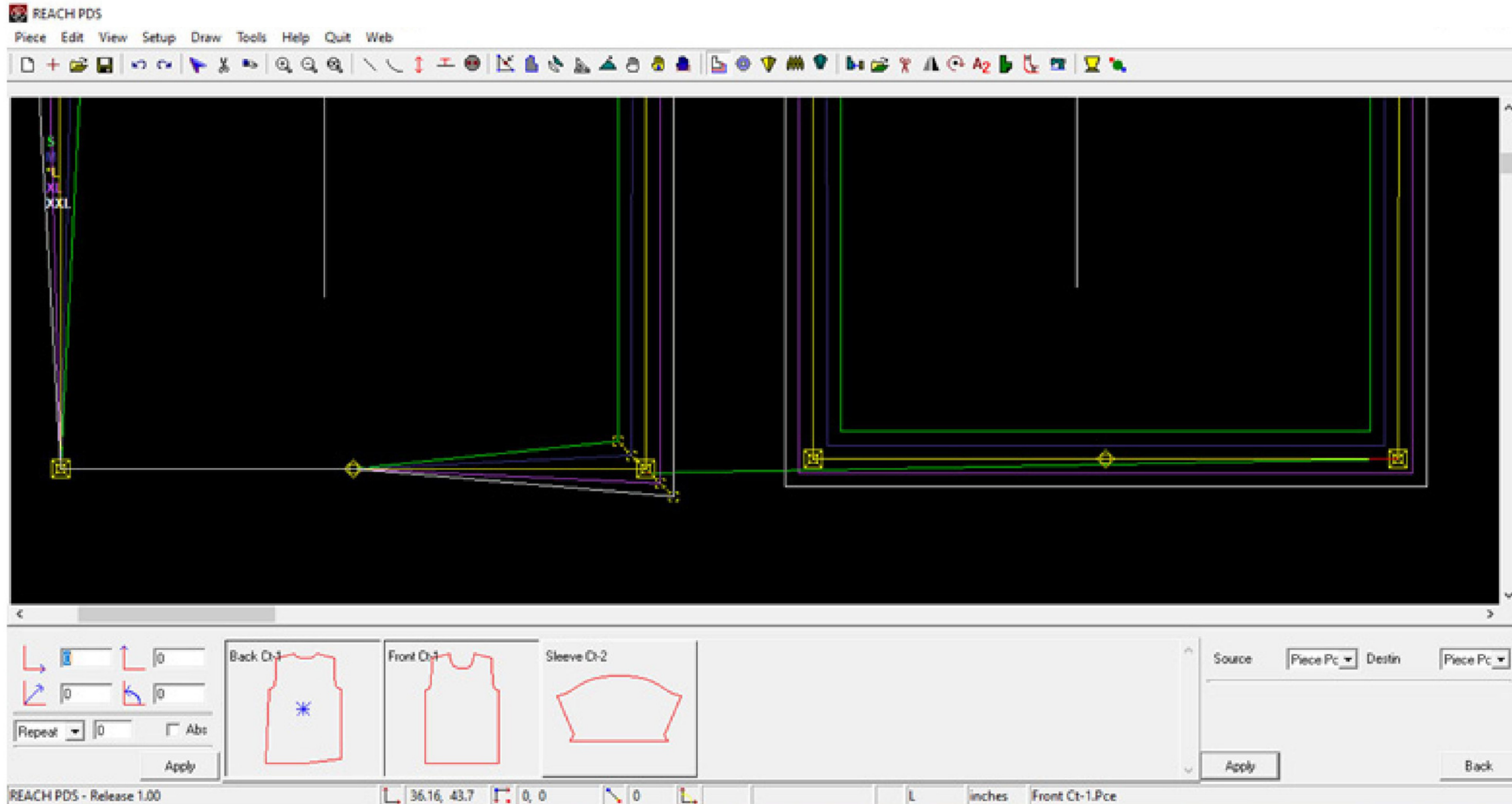
USE THE SAME METHOD FOR OPPOSITE SIDE.



STEP-035

COPY FRONT BOTTOM POINT TO BACK BOTTOM POINT

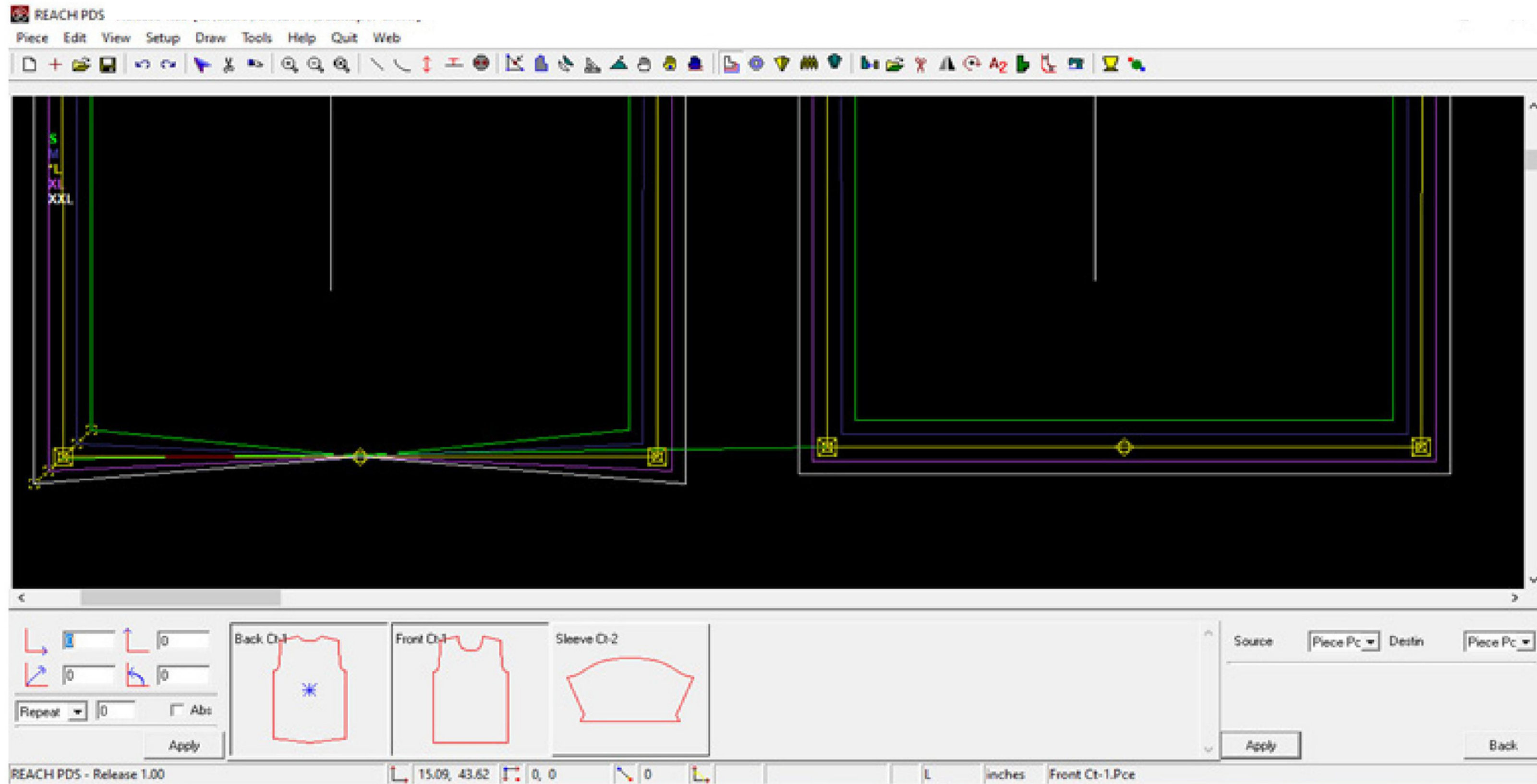
REACH CAD



STEP-036

DO THE SAME FOR LEFT SIDE BOTTOM POINT.

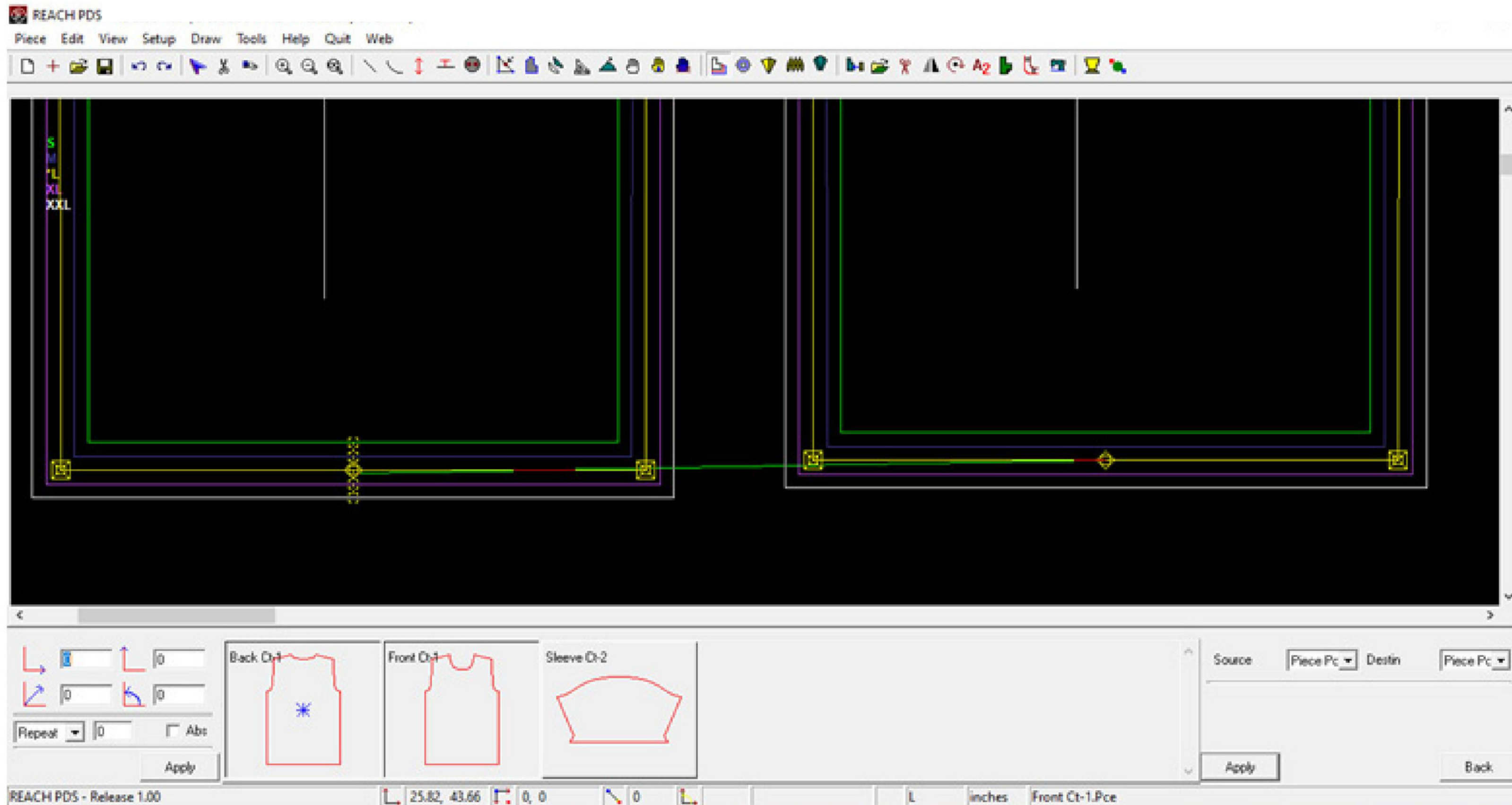
REACH CAD



STEP-037

COPY THE CENTER POINTS.

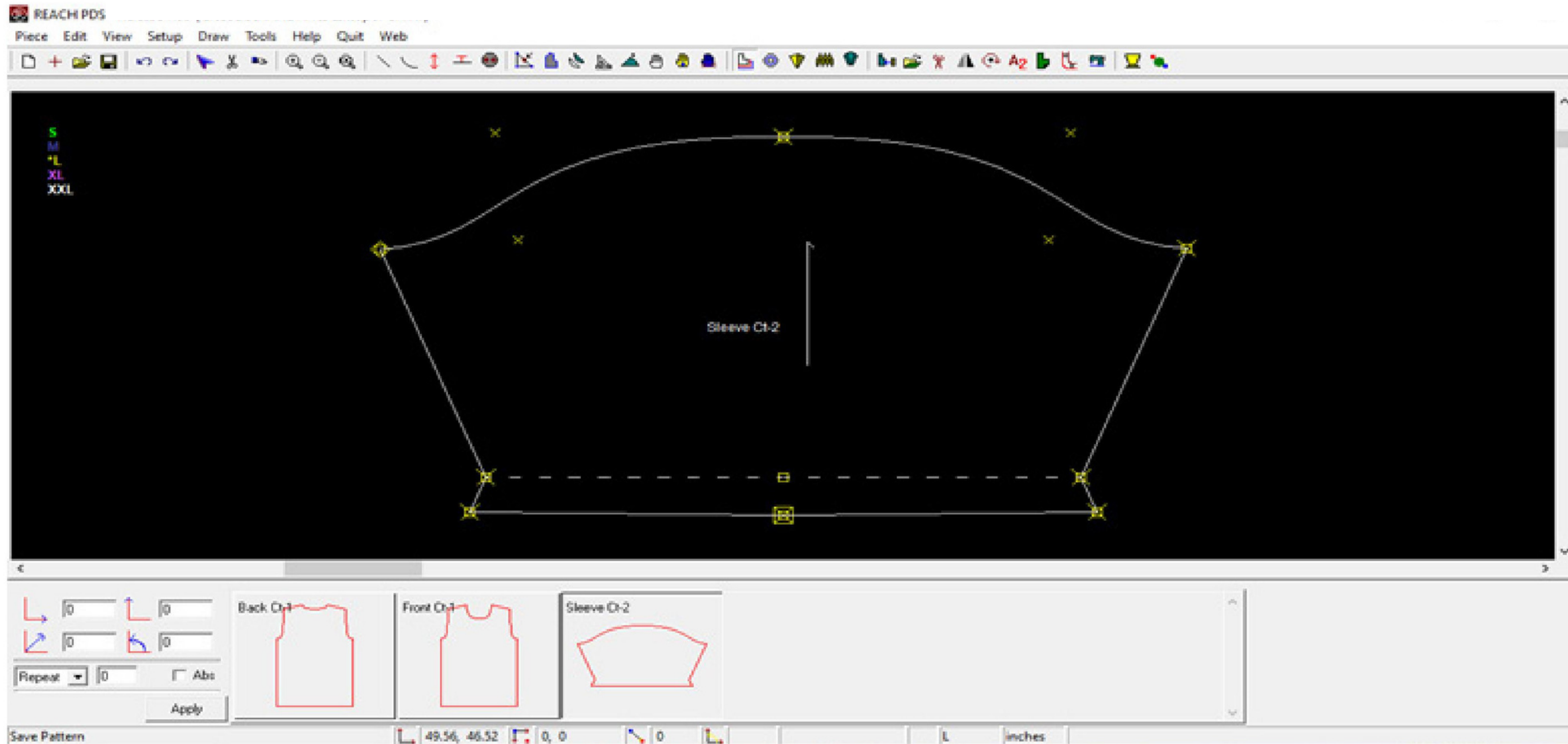
REACH CAD



STEP-038

NEXT CLICK ON THE SLEEVE PATTERN

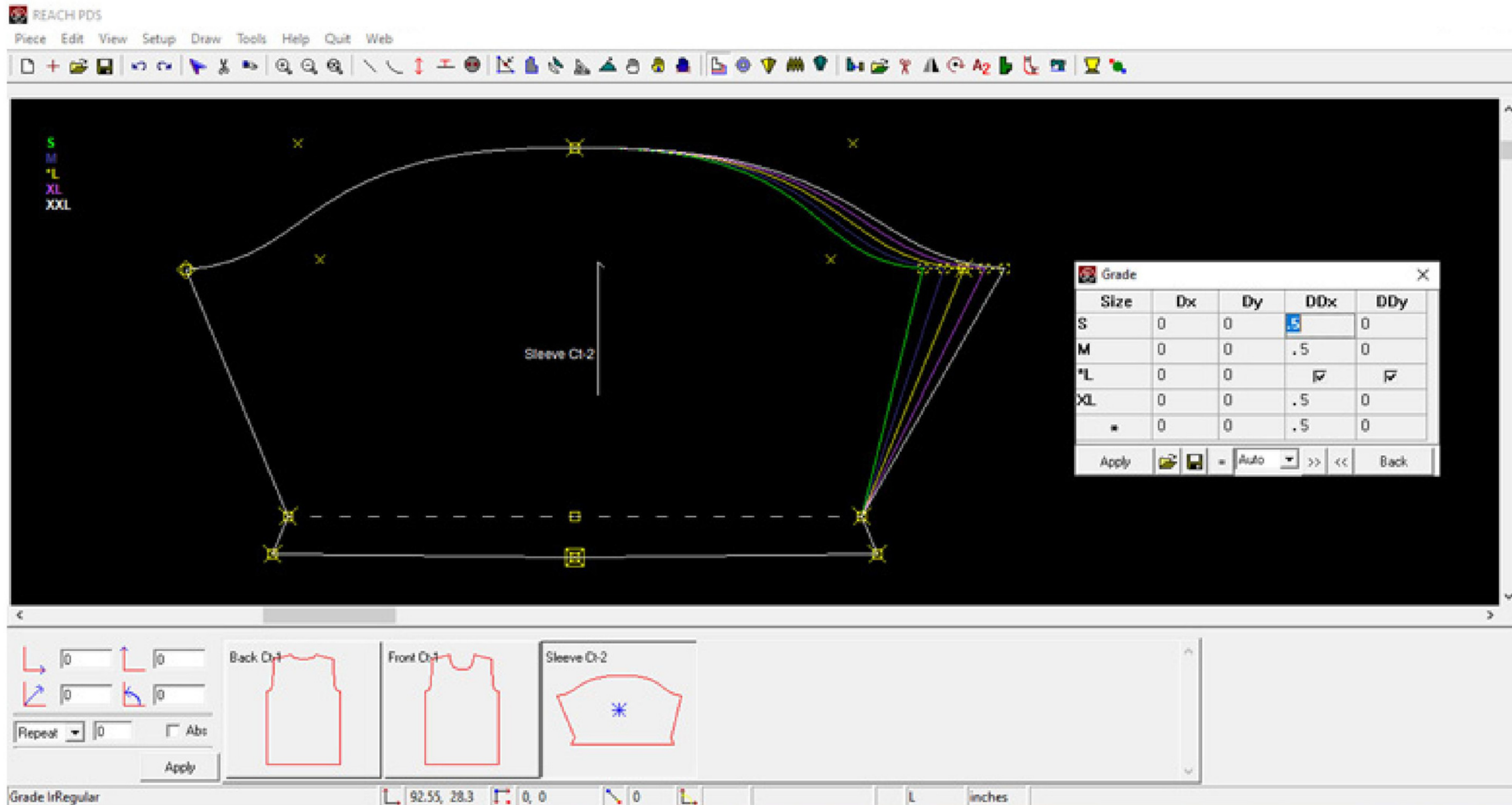
REACH CAD



STEP-039

CLICK ON TABULAR TOOL RIGHT SIDE ARMHOLE POINT NEXT APPLY TO DDX 0.5 APPLY

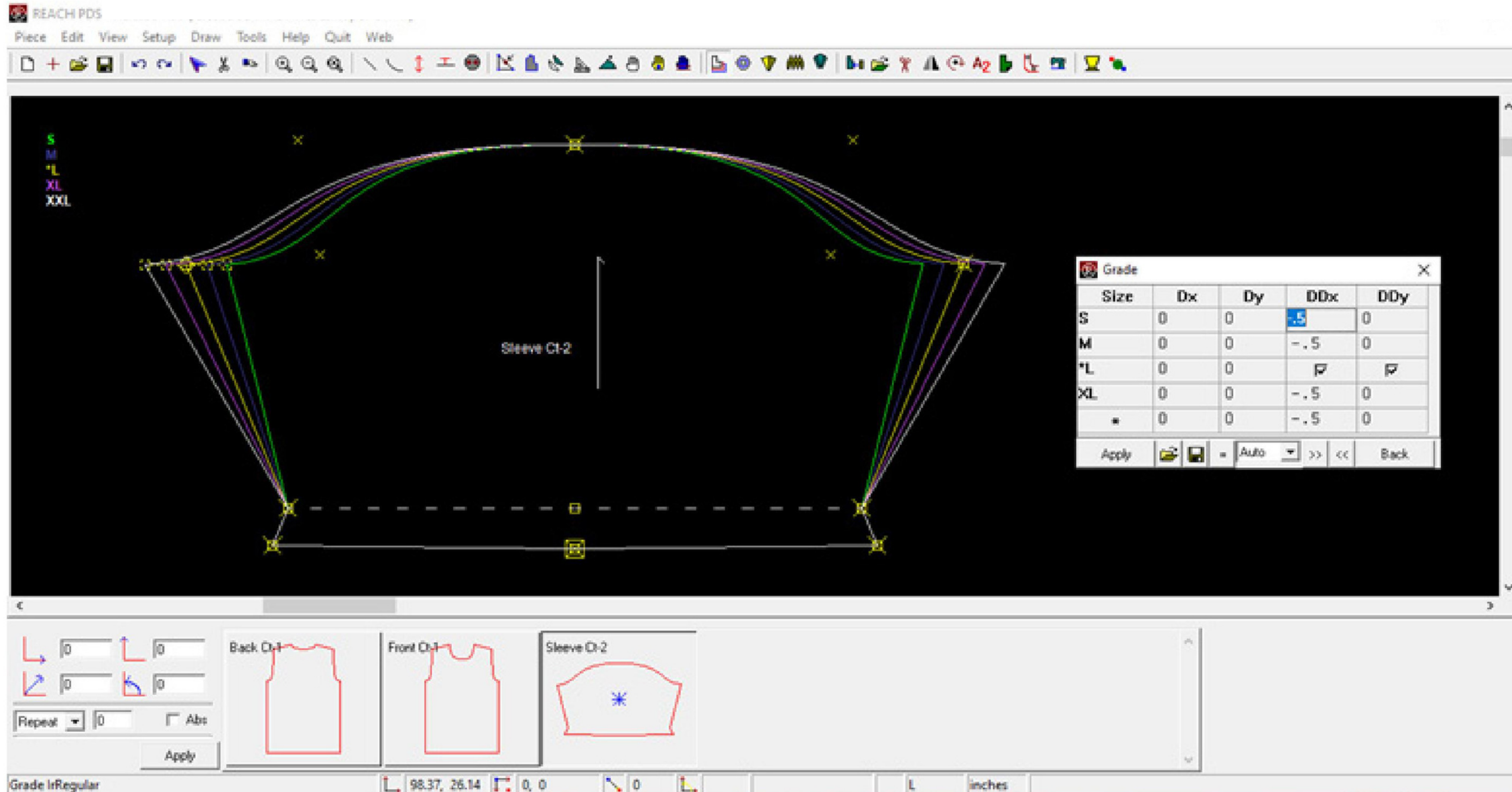
REACH CAD



STEP-040

APPLY THE SAME METHOD ON LEFT SIDE SLEEVE ARMHOLE POINT

REACH CAD



STEP-041

CLICK ON SLEEVE OPEN POINT AND APPLY DDX MEASUREMENT

REACH CAD

The screenshot shows the REACH PDS software interface. The main workspace displays a sleeve pattern labeled 'Sleeve Ct-2' with various control points and a curved neckline. A 'Grade' dialog box is open, showing a table of grading data for sizes S, M, *L, XL, and a base size. The table has columns for Size, Dx, Dy, DDx, and DDy. The *L size has checkmarks in the DDx and DDy columns. The bottom panel shows three pattern thumbnails: 'Back Ct-1', 'Front Ct-1', and 'Sleeve Ct-2', with 'Sleeve Ct-2' selected and marked with a blue asterisk. The status bar at the bottom indicates 'Grade IrRegular' and 'Sleeve Ct-2.Pce'.

Size	Dx	Dy	DDx	DDy
S	-1	0	.5	0
M	-.5	0	.5	0
*L	0	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
XL	.5	0	.5	0
.	1	0	.5	0

STEP-042

APPLY SLEEVE LENGTH MEASUREMENT AS DDY 0.5

REACH CAD

REACH PDS
Piece Edit View Setup Draw Tools Help Quit Web

S
M
L
XL
XXL

Sleeve Ct-2

Size	Dx	Dy	DDx	DDy
S	-1	0	.5	.5
M	-.5	0	.5	.5
L	0	0		
XL	.5	0	.5	.5
XXL	1	0	.5	.5

Apply [Icons] = Auto >> << Back

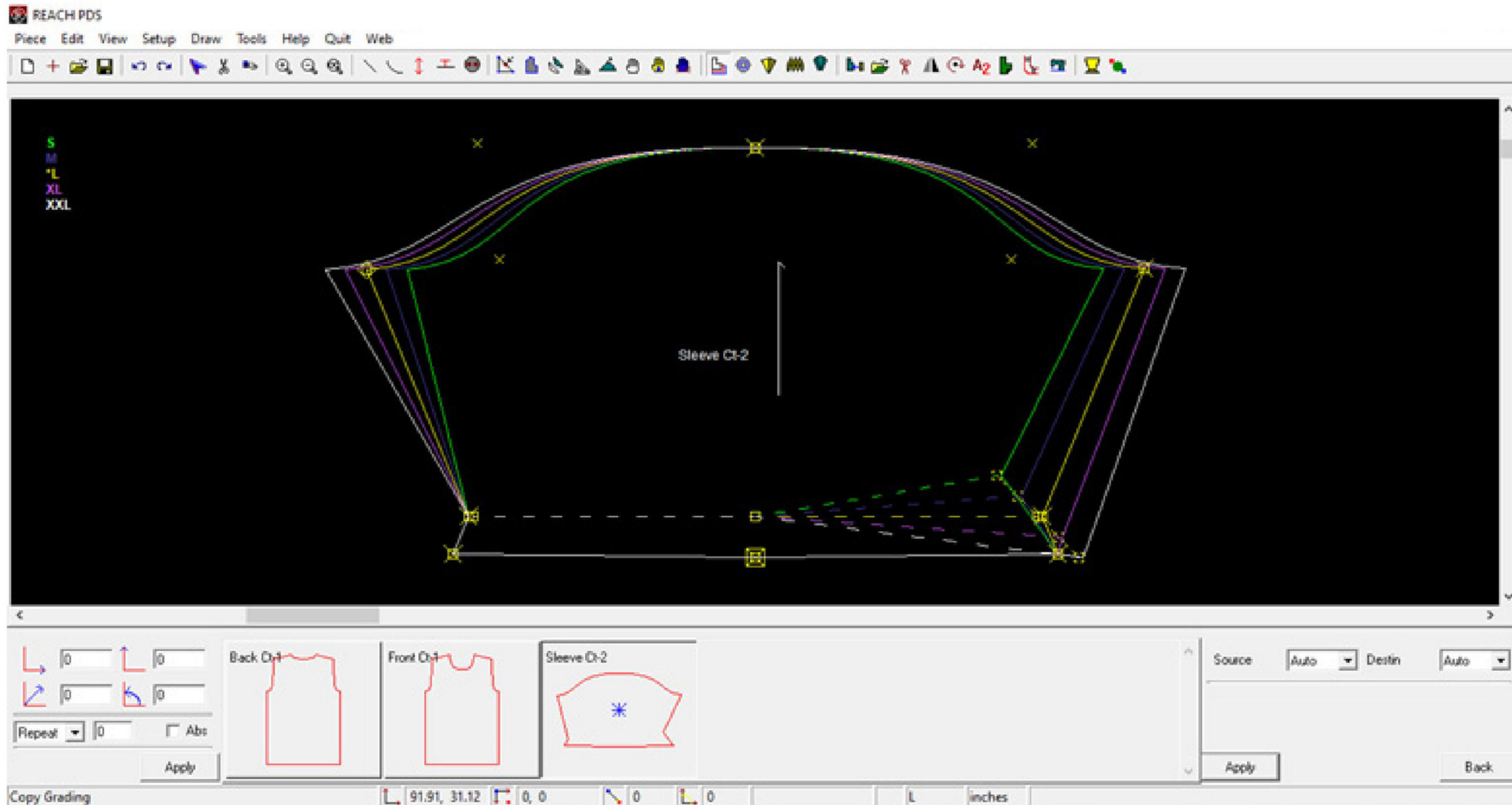
Back Ct-1 Front Ct-1 Sleeve Ct-2

Grade IrRegular 87.94, 28.2 0, 0 0 0 L inches Sleeve Ct-2.Pce

STEP-043

NEXT, CLICK ON COPY TOOL, CHANGE SOURCE AND DESTIN TO AUTO AND APPLY

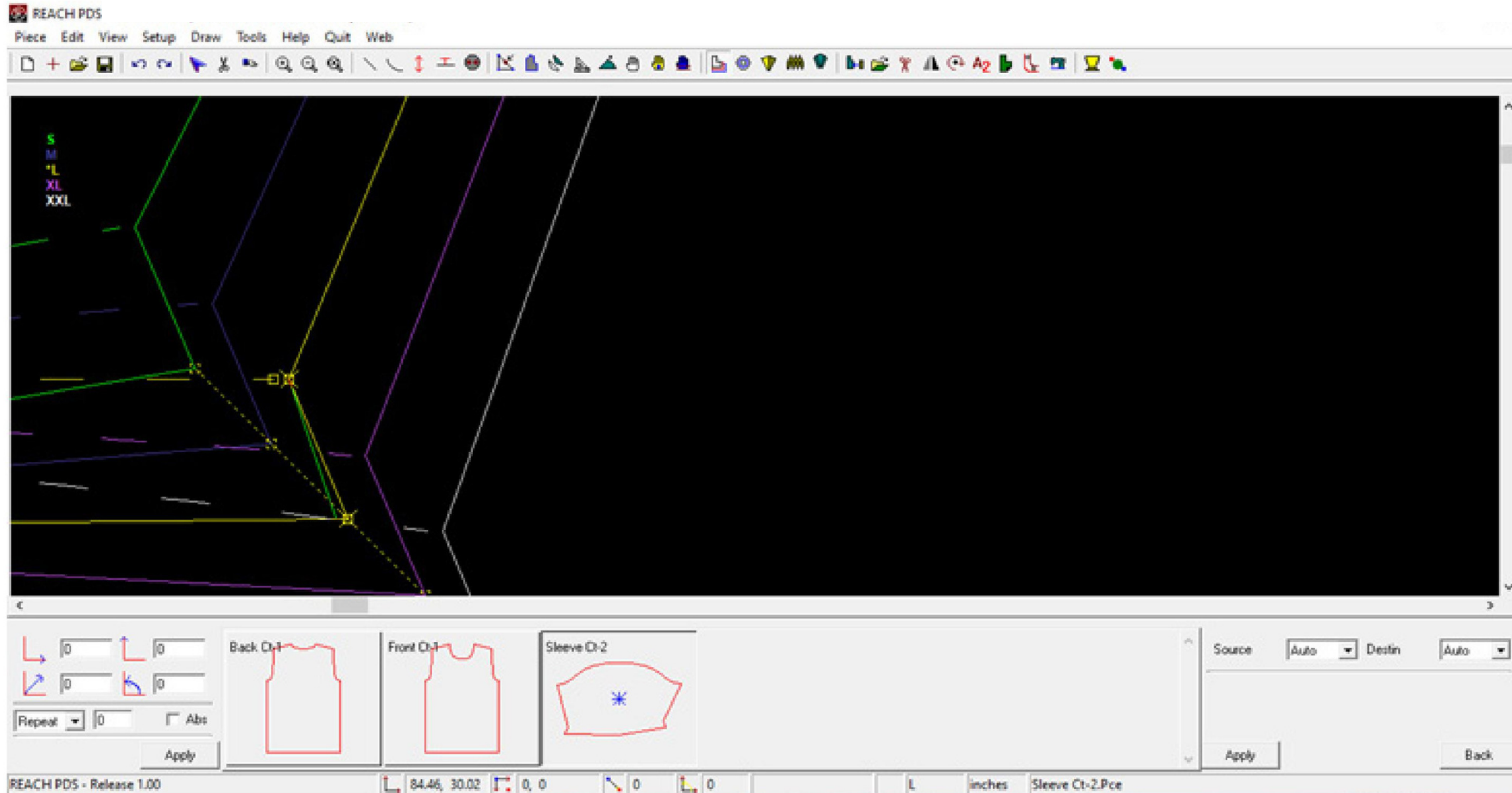
REACH CAD



STEP-044

COPY TO OPEN POINT TO SAEM POINT

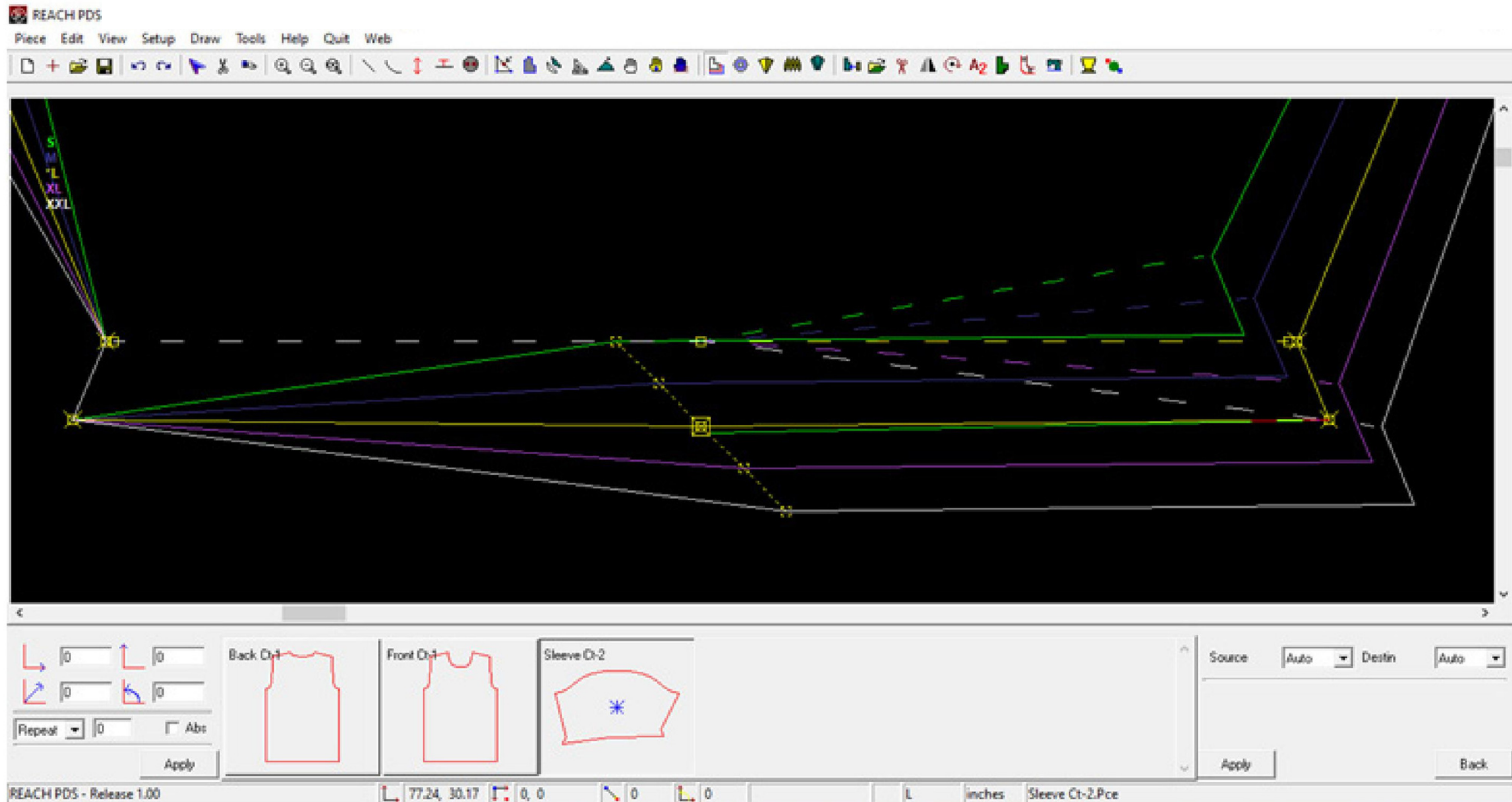
REACH CAD



STEP-045

CLICK ON NEXT COPY Y COPY TO OPEN TO CENTER POINT

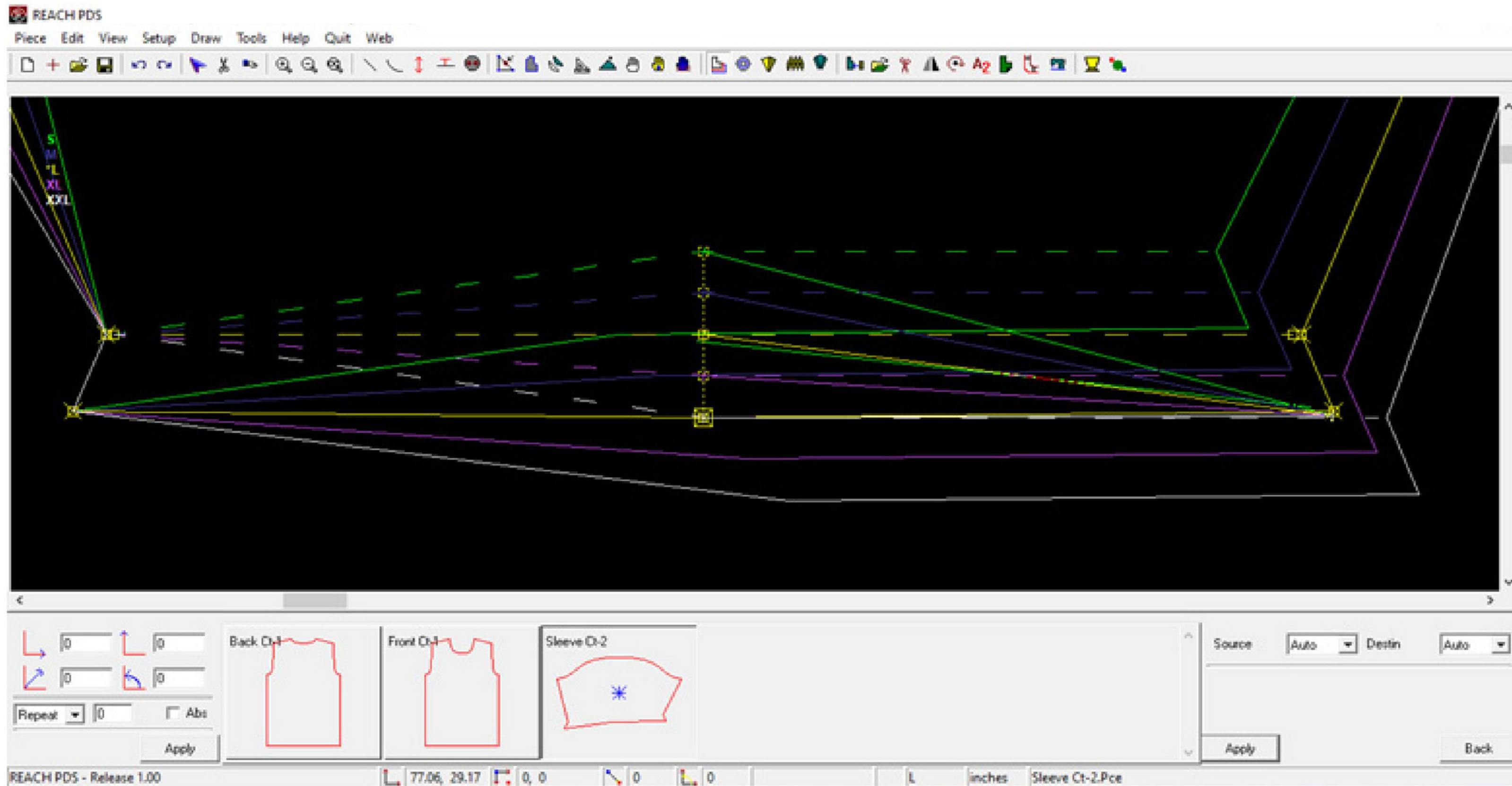
REACH CAD



STEP-046

BY SAME METHOD COPY INTERNAL LINE TO CENTER POINT.

REACH CAD



STEP-047

CLICK ON THE POINT ON LEFT SIDE SLEEVE OPEN AND APPLY MEASUREMENT DDX

REACH CAD

REACH PDS

Piece Edit View Setup Draw Tools Help Quit Web

S
M
*L
XL
XXL

Size	Dx	Dy	DDx	DDy
S	1	0	-.5	0
M	.5	0	-.5	0
*L	0	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
XL	-.5	0	-.5	0
*	-1	0	-.5	0

Apply >> << Back

Back Ct-1 Front Ct-1 Sleeve Ct-2

Grade IrRegular 70.16, 29.06 0, 0 0 0 L inches Sleeve Ct-2.Pce

STEP-048

ON SAME POINT APPLY DDY .5 FOR ALL SIZES

REACH CAD

The screenshot displays the REACH PDS software interface. The main workspace shows a pattern diagram with various lines and points. A 'Grade' dialog box is open, showing a table of grading parameters for different sizes. The table is as follows:

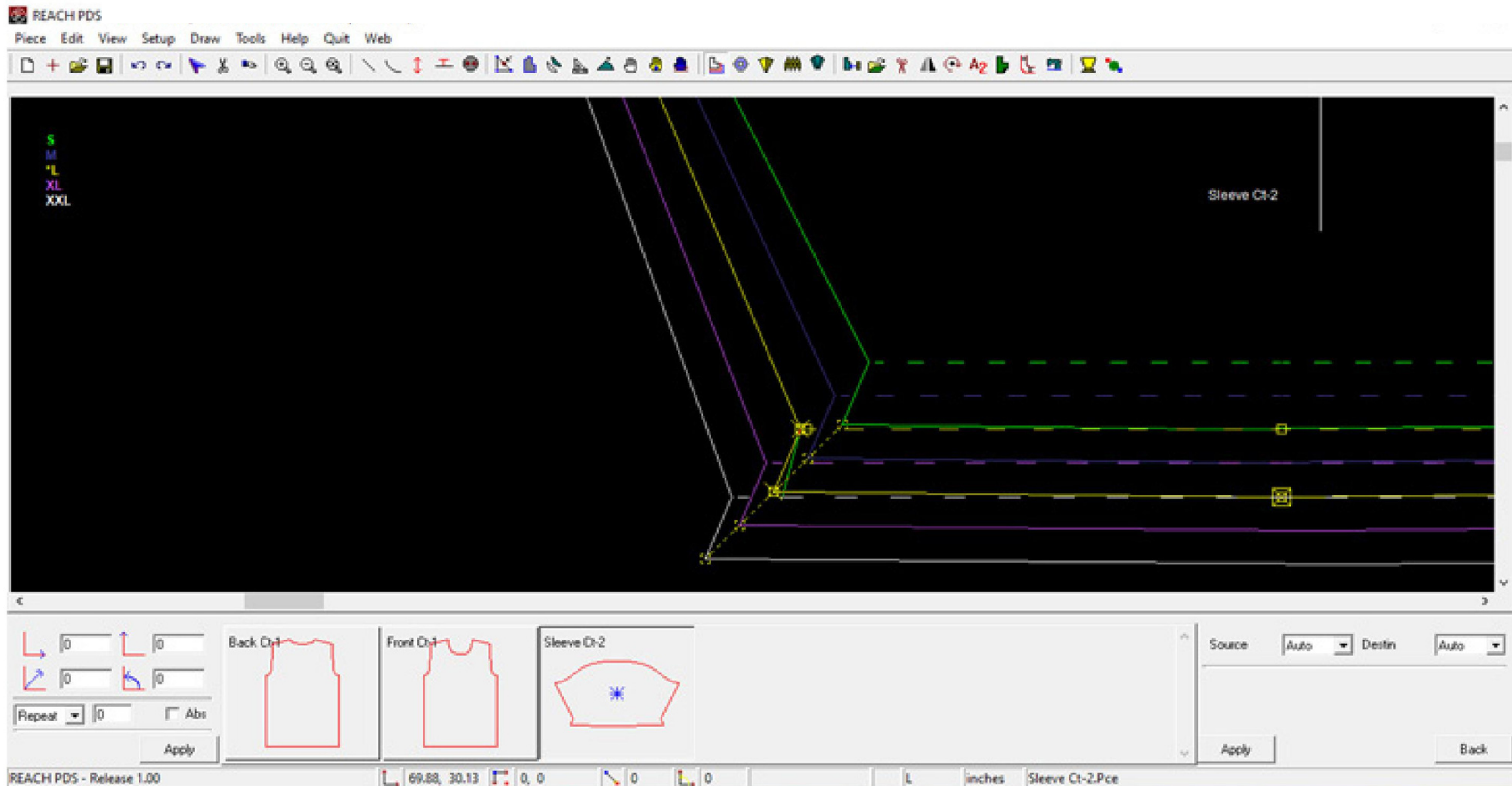
Size	Dx	Dy	DDx	DDy
S	1	0	-.5	.5
M	.5	0	-.5	.5
*L	0	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
XL	-.5	0	-.5	.5
*	-1	0	-.5	.5

Below the table, there are 'Apply' and 'Auto' buttons, along with navigation arrows. The bottom of the interface shows three pattern pieces: 'Back Ct-1', 'Front Ct-1', and 'Sleeve Ct-2'. The 'Sleeve Ct-2' piece has a blue asterisk symbol on it. The status bar at the bottom indicates 'Grade ItRegular', '76.92, 28.81', '0, 0', '0', '0', 'L', 'inches', and 'Sleeve Ct-2.Pce'.

STEP-049

CLICK ON COPY TOOL SLEEVE OPEN TO SAEM POINT

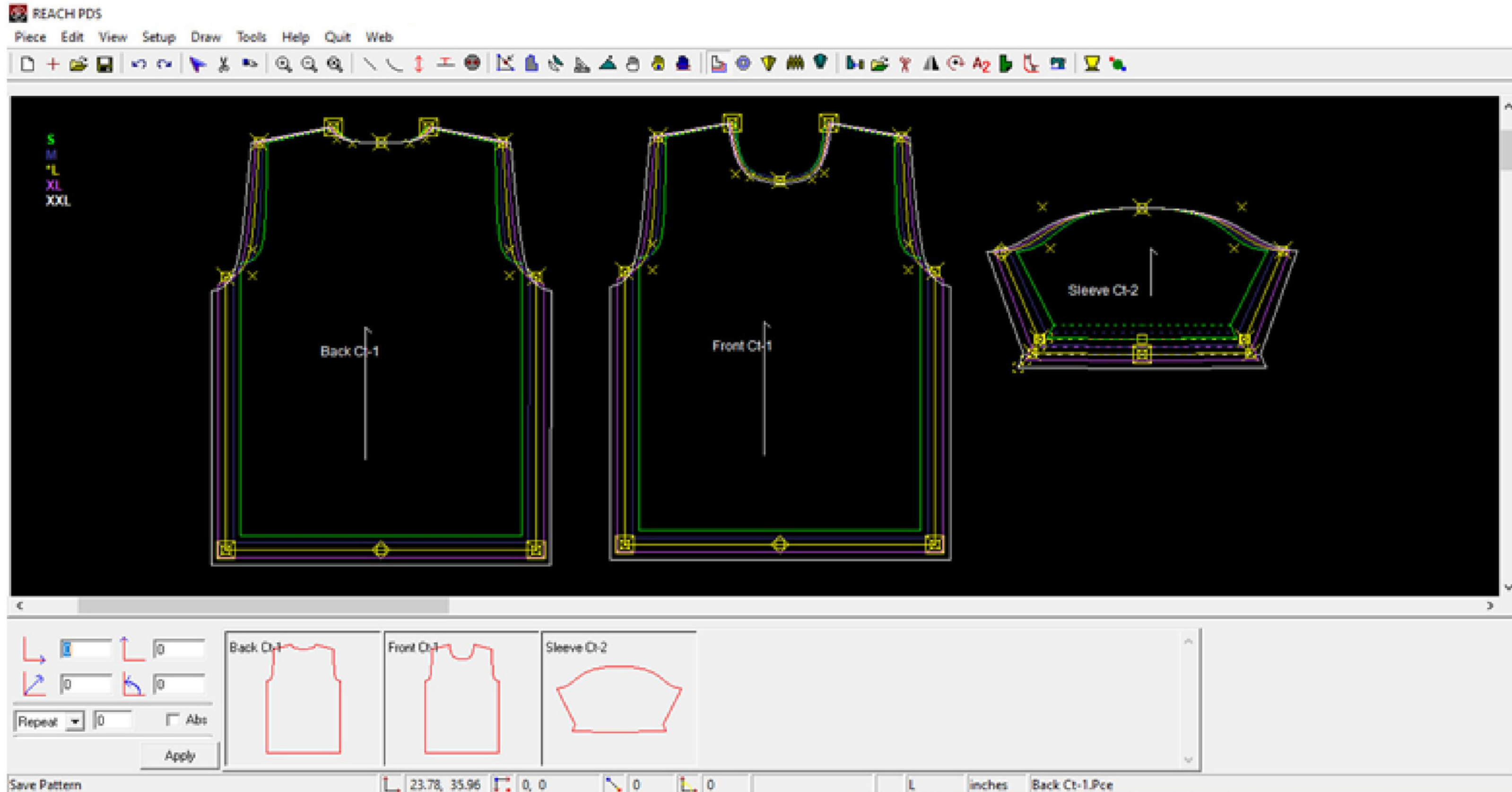
REACH CAD



STEP-50

CLICK ON ALL PATTERNS AND GO TO ZOOM ALL

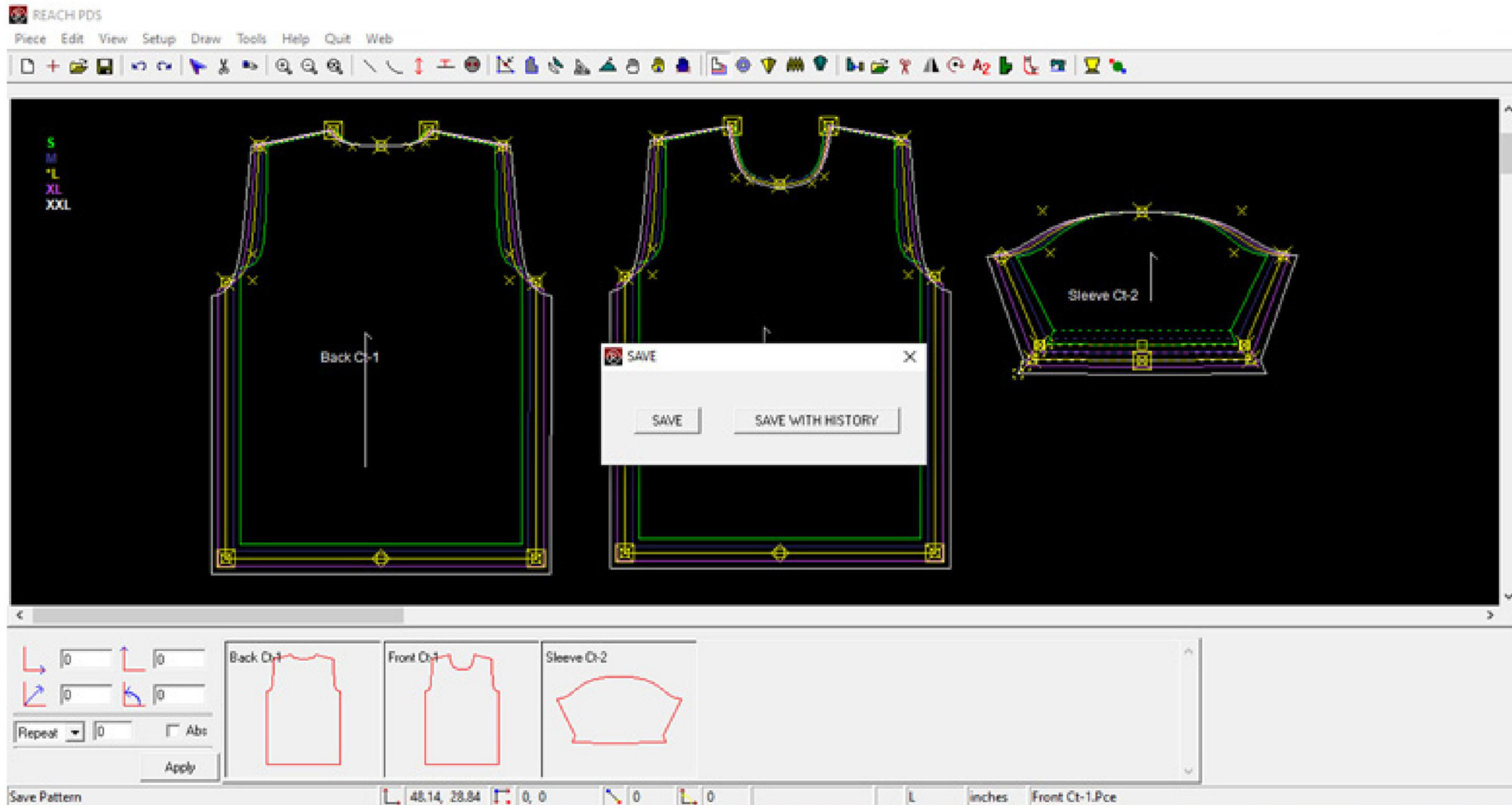
REACH CAD



STEP-05 I

GRADING COMPLETE. GO TO SAVE BUTTON AND SAVE THE FILE

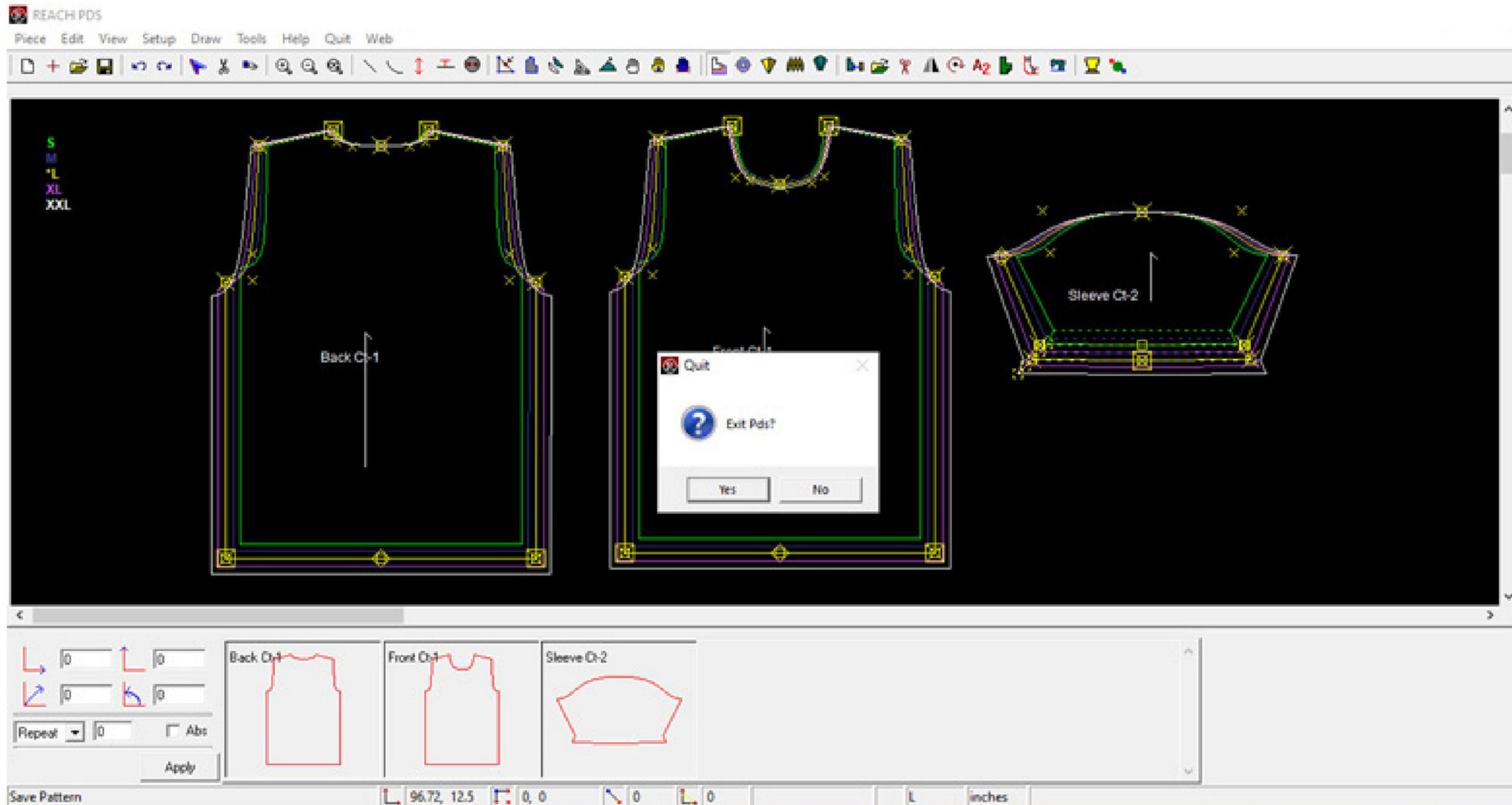
REACH CAD



STEP-052

GO TO CANCEL AND CLICK ON YES

REACH CAD



REACH CAD GRADING FINISHED



REACH CAD is a best in class apparel pattern design, grading and marker planning software.

REACH CAD enables fabric and time savings in apparel product development and manufacture. About 70% of apparel manufacturing cost is fabric cost. Fabric usage optimization is critical to building competitive apparel ventures.

REACH CAD enables that.

Additionally, by reducing fabric wastage, REACH CAD contributes to a greener environment.

REACH CAD is included in the training programmes of Ministry of Rural Development, Ministry of Skill Development and Entrepreneurship, Ministry of Industries and Commerce, Ministry of Textiles, Ministry of Education etc of Govt. of India and various state govts.



REACH Technologies