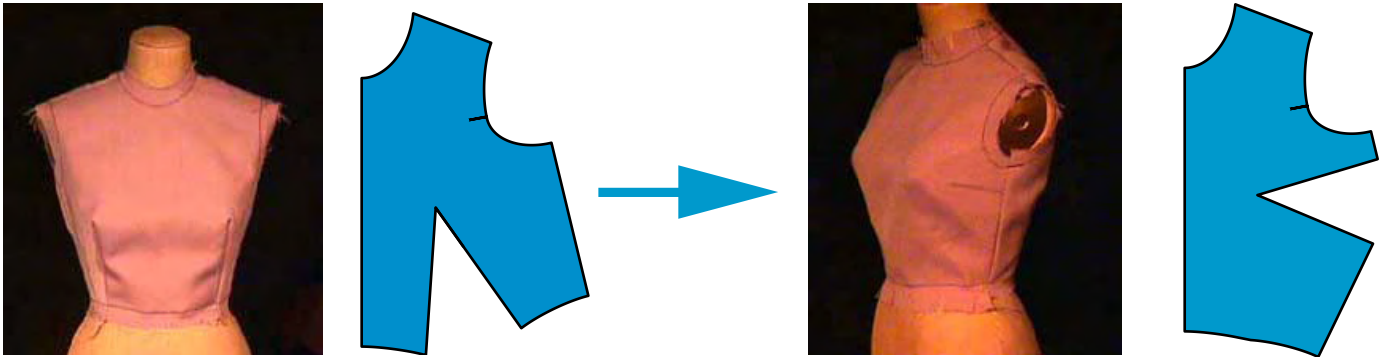


2. DART MANIPULATION



Dart Pivot

One of the basic flat patterning techniques involves pivoting the bust dart around the bust apex. The dart can be moved from one location to another, as long as it radiates from the bust apex.


Follow these steps to pivot the dart from the waist to the side seam.

1. **Open the bodice** you created in chapter 1 or run the JKSDsloper macro to create a new waist dart bodice.

2. **Activate the “Show Vertex” command.**

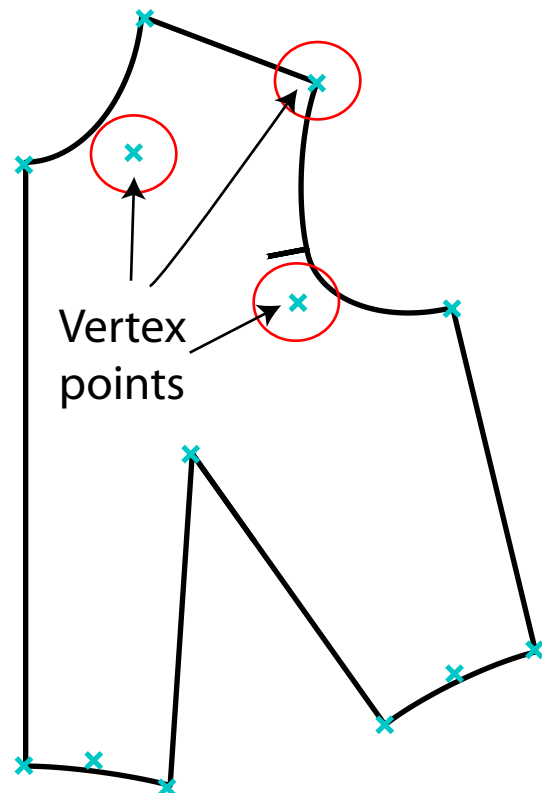
- The **Show Vertex** command is useful because it lets you see the exact points where line segments begin and end.
- Go to **View > Points**. Select **Show Vertex**. The keyboard shortcut for this command is **F5**.
- This command will allow you to see precisely where your lines begin and end.

3. **Draw the cut line.**

- Go to **Draw > Line**. Or select the line icon  from the toolbar.


- **Left click** at the point you wish to start your side seam dart. Then move the cursor (without holding the mouse button down) to the point where you want your line to end and **left click** again.

Tip: If you find that the commands do not seem to work, or the menu is grayed out, it means you have not completed the previous command. Press the **Escape** key or **right click** in the drawing area to cancel the previous command.

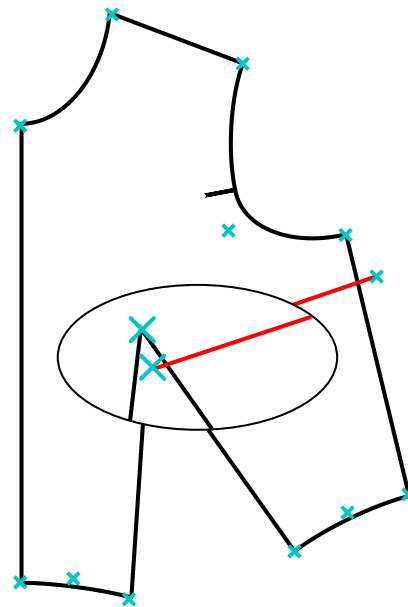


2. DART MANIPULATION

- Make sure that your line goes past the line that forms the shape you are going to cut. You

can use the **Zoom** tool , press **F2** or **Page Down** to zoom in on the dart apex.

Note: The cut line in the drawing to the right is shown in red for illustration purposes only. The line on your screen will appear in the color you have selected from the drop down color menu at the upper left hand corner of your screen.



4. Cut along the new dart line.

- Go to **Edit > Cut** or use the **Cut** icon



- The command line will ask you to **select an object to be cut**.

- **Left click** on the pattern piece outline. Then **right click** somewhere else (not on the pattern outline) to indicate you are done selecting your pieces.

- The command line will ask you to **select an object to cut with**.

- **Left click** on the line you drew and then **right click** (somewhere other than the line) to indicate you have selected your object.


- The command line will tell you that the command is "**done**" although your figure will not look different because the pieces you cut apart are still together.

Tip: Any time that you make a mistake, use the Undo command. You can find the **Undo** in the **Edit** menu, or use the tool box icon



. It is wise to save your work frequently.

5. Rotate pattern.

- Go to **Edit > Rotate** or use the  icon. Select the lower right corner of the pattern (**left click** and then **right click**.)

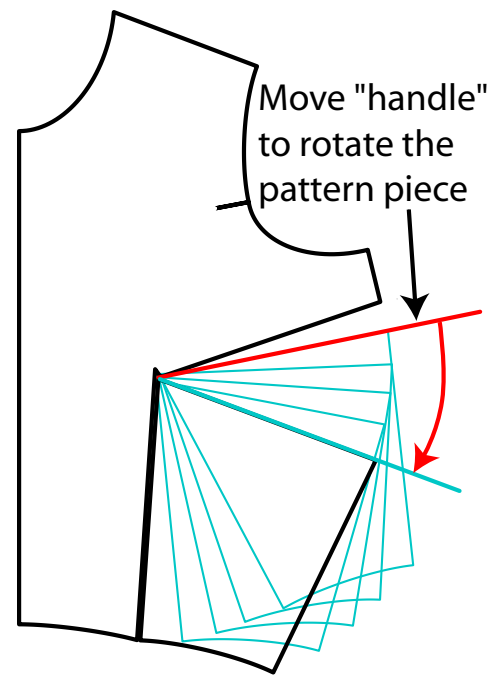
- The command line will ask you to **select a vertex to rotate your piece around**.

- **Left click** on the bust apex. (You can rotate around any point you select).


2. DART MANIPULATION


- Move the cursor away from the rotation point (do not hold the mouse button down).
- You will notice a “handle” appears. The command line will ask you to establish a base line. That is the “handle”. I prefer to line up the base line with one of the edges of the pattern piece, but you can place it anywhere.
- **Left click** and rotate your piece. **Left click** when you are finished.

Note: Do not hold the mouse button down as you move the base line to close the dart.




6. Erase the cut line.

- Use the **Erase** icon  or go to **Edit > Erase**. **Left click** on the cut line and then **right click** to indicate you have made your choice.
- If you accidentally erase the wrong ele-

ment, use the Undo icon  or go to **Edit > Undo**. The keyboard shortcut for the Undo tool is **Ctrl + Z**.

7. Join the pattern pieces together.

- Use the **Zoom** tool to make sure that the two pattern pieces overlap slightly at the old waist dart lines.
- Go to **Edit > Join** or use the **Join** icon .
- The command line will ask you to select the first object to join. **Left click** on either of the pattern pieces. Then **right click** anywhere to indicate you have made your choice.
- The command line will ask you to select the second object to join. **Left click** on the remaining pattern piece and then **right click** to indicate you have made your selection.
- The command line will say “**Done**” and your pattern pieces should be joined.

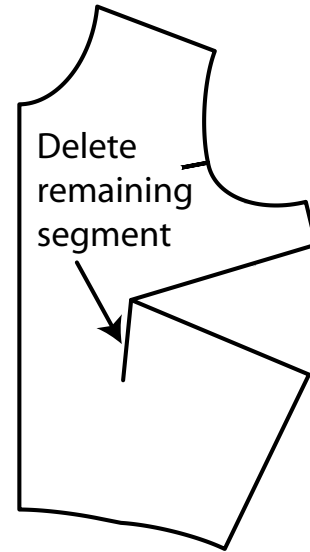
Tip: Save your work often! It is a good idea to save the steps as you go along under different names so that you can go back to any point. Giving the files numbers or letters can help you keep track of the versions.

2. DART MANIPULATION

8. Remove the old dart lines.

- The pattern can be used as it is now. Or you can clean it up by deleting the old waist dart lines if they did not disappear when you joined your pieces.
- Go to **Point > Delete Vertex**. Do not use the **Erase** tool for this as you will erase the entire pattern.
- **Left click** and then **right click** to delete each of the extra vertex points.

Congratulations! You have learned the dart pivot technique as well as some of PatternMaker's tools and commands!



Rotate Dart, 6:08

Dart Pivot Practice

Practice what you have just learned by pivoting the dart to the positions shown by the pictures below.

