

Creating Graphics using CorelDraw 2020

Agenda

- Planning and Editing of a tactile graphic
- Stereocopy/Microcapsule tactiles
- The Working Screen of CorelDraw.
- Computer Configuration
- Drawing lines and shapes using tools in coreldraw
- CorelDraw Part 2 webinar.

Tactile Graphics Decision Tree

- Is this picture appropriate for a tactile graphic?
If answer is YES, produce graphic.
- Would the information be more meaningful in text form?
If answer is NO, produce graphic.
- Does the student need the information from a map/figure/graph to participate in classroom discussions or to answer questions?
If answer is YES, produce graphic.
- Diagrams that do not add additional, necessary information than what is stated in the surrounding text may be omitted.
- Sometimes the information in a caption is sufficient without including the graphic.

Planning

What information will be conveyed through the tactile?

- Identify the content in the graphic that needs to be included.
- Change a 3-D image to a 2-D image.
- Simplify the drawing.

Techniques for making a meaningful Graphics

- Enlarge the print diagram
- Complex graphics that cannot be reproduced on one page can be split over several pages
 - Maps and complex diagrams can be shown in 2 or more parts
- Insert a key for long labels in a diagram.
- Present diagrams for young readers one below another instead of side by side

Parts of a flower

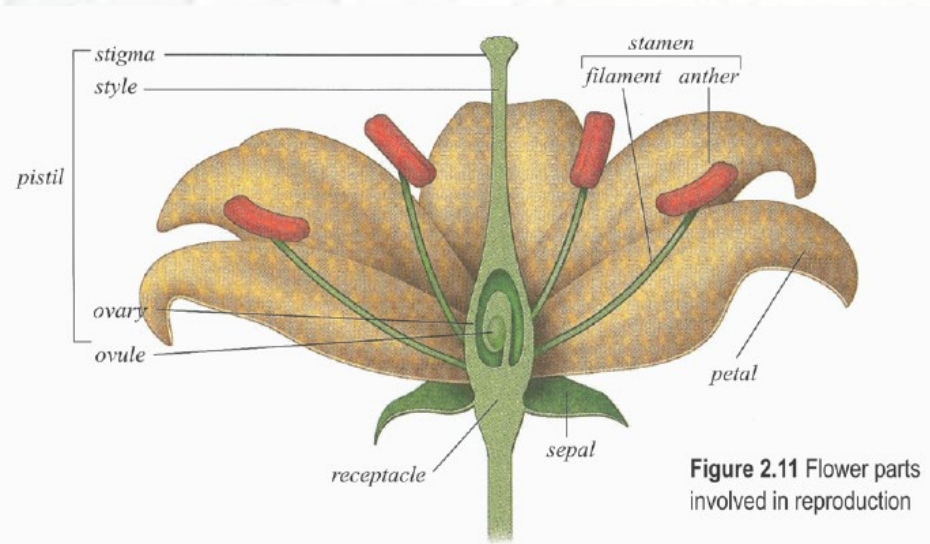
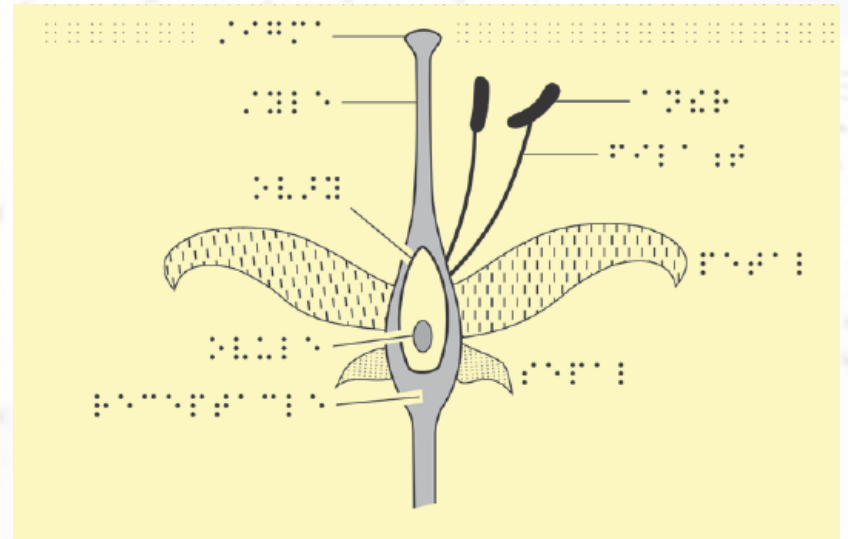
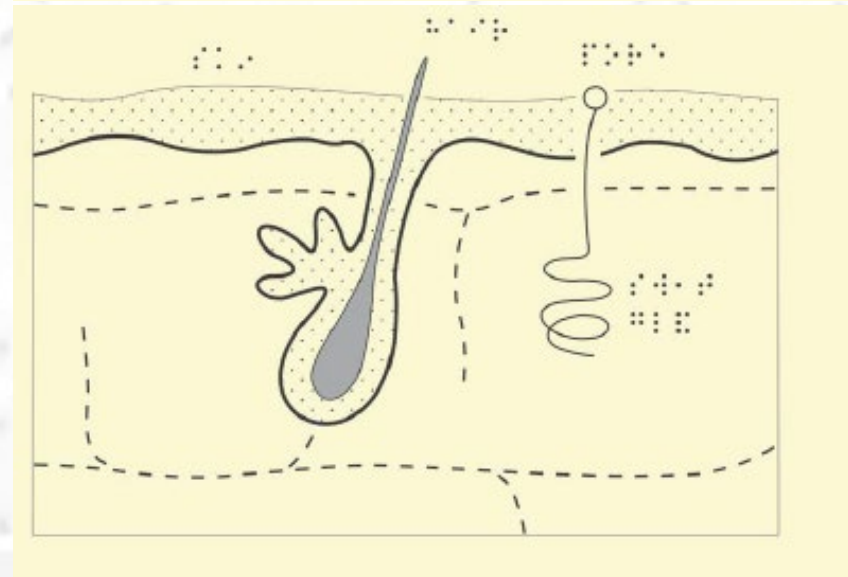
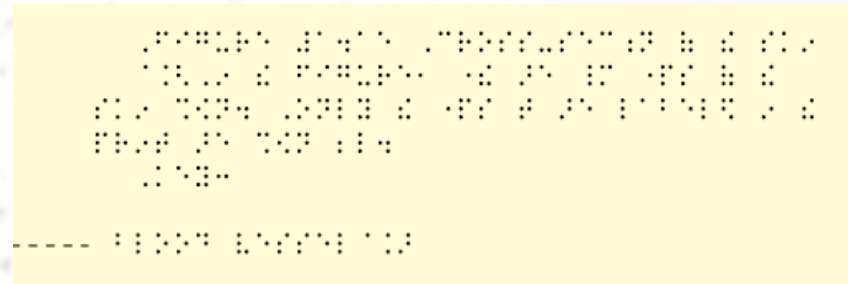
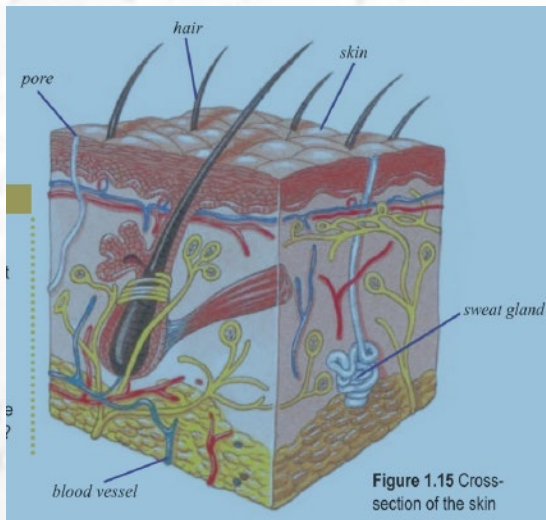


Figure 2.11 Flower parts involved in reproduction



Cross-section of the skin

Transcriber's note: In the figure, there are many parts of the skin shown. Only the parts that are labeled in print are shown below.



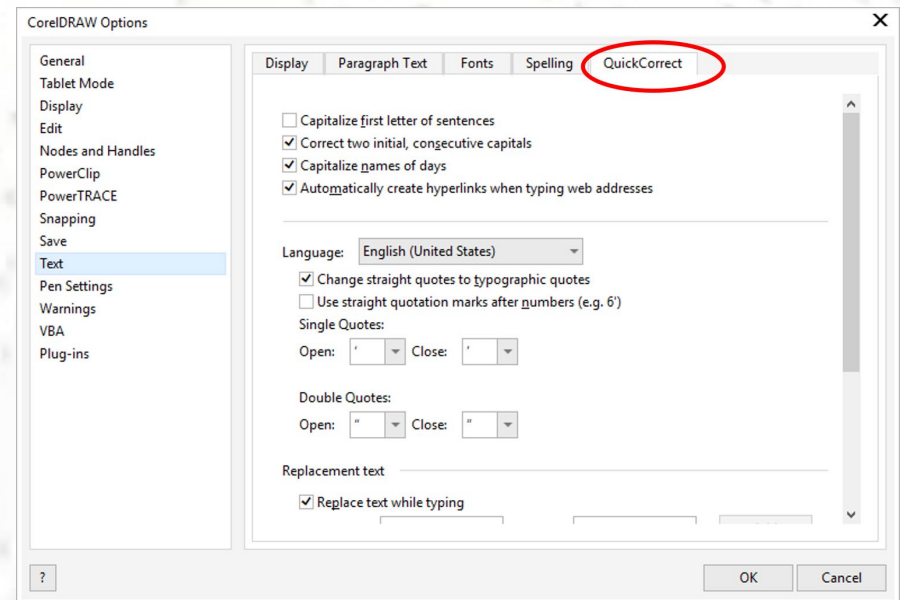
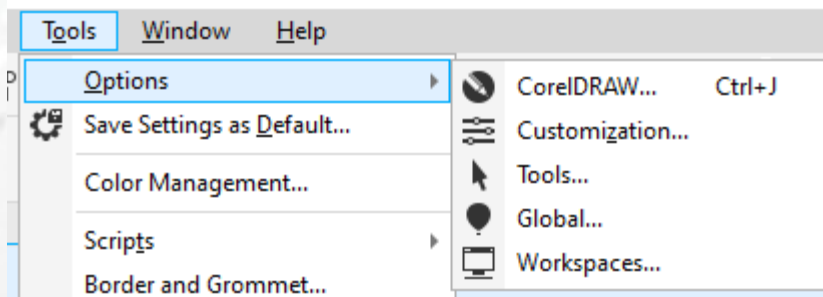
Stereocopy/Microcapsule Tactiles

Material Needed for creating stereocopy/microcapsule tactiles:

- CorelDraw software
- SwellTouch paper – 11 by 11-1/2 or letter size paper from American Thermoform Corporation
- Printer
- PIAF machine -- Image Enhancer/stereo copy developing unit

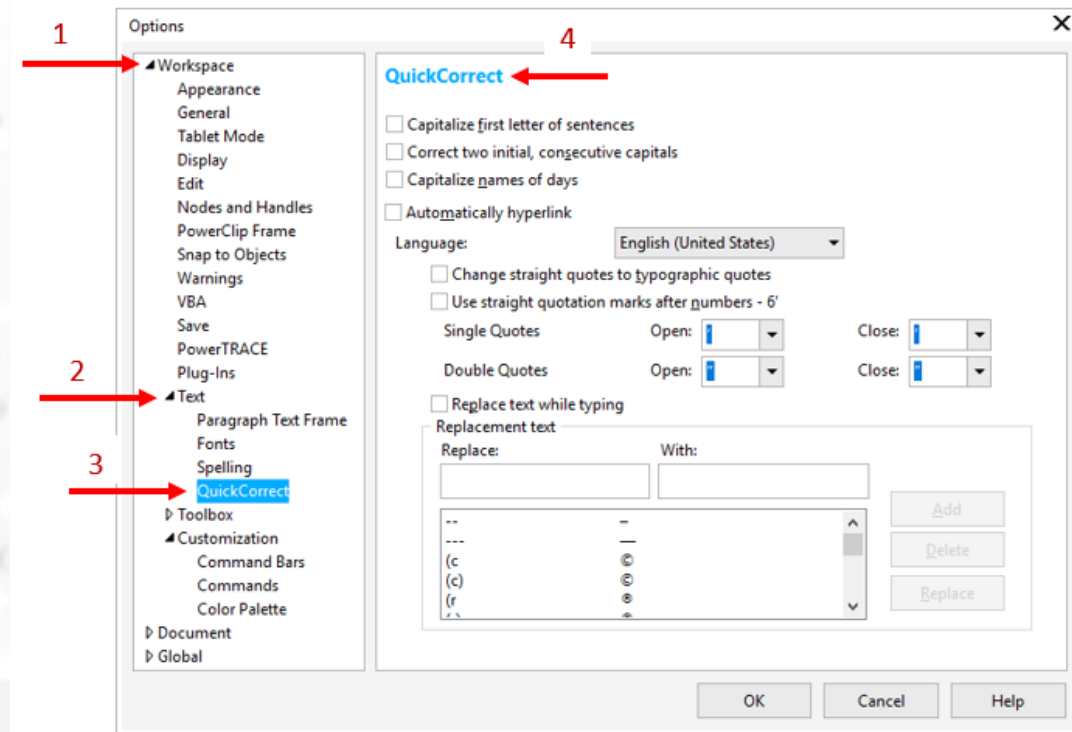
Computer Configuration in CorelDRAW 2020

- Go to **Tools** on your menu bar and select **CorelDraw...** from the **Options** flyout.
- On the left side of the window, click **Text**.
 - Click on QuickCorrect on the right side of the window.
 - Click on ☒ to deselect all the items under QuickCorrect window and click on OK.



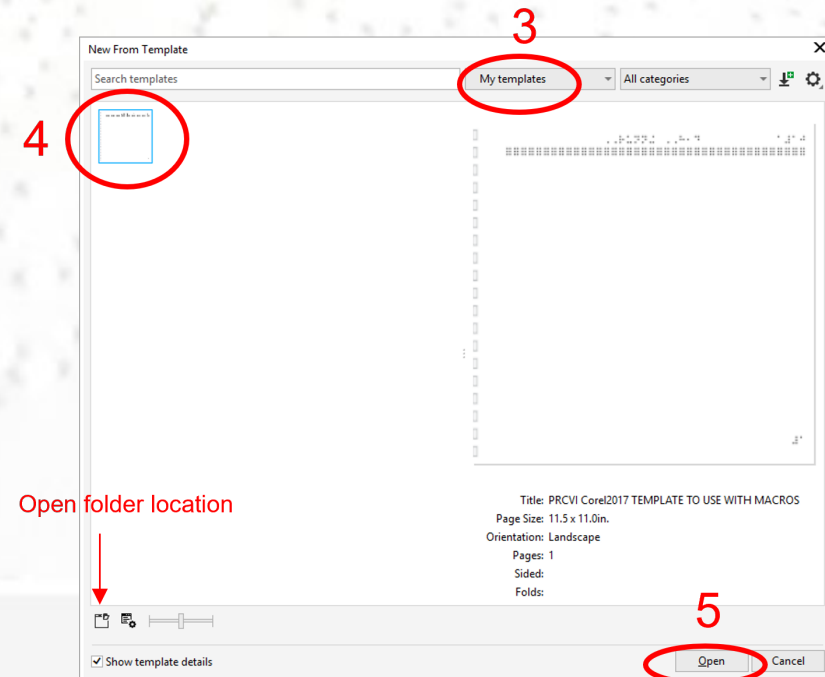
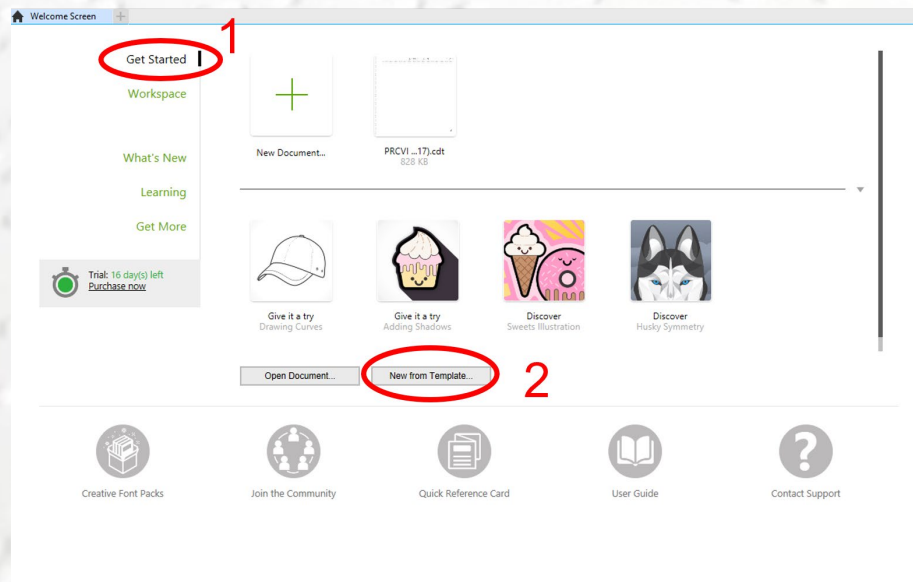
Computer Configuration in CorelDRAW 2017

- Go to **Tools** on your menu bar and select **Options**.
 1. On the left side of the screen, click on ► beside **Workspace** to show the option for **Text**.
 2. Under the Text option, Click on QuickCorrect.
 3. Click on √ to deselect all the items under QuickCorrect window and click on OK



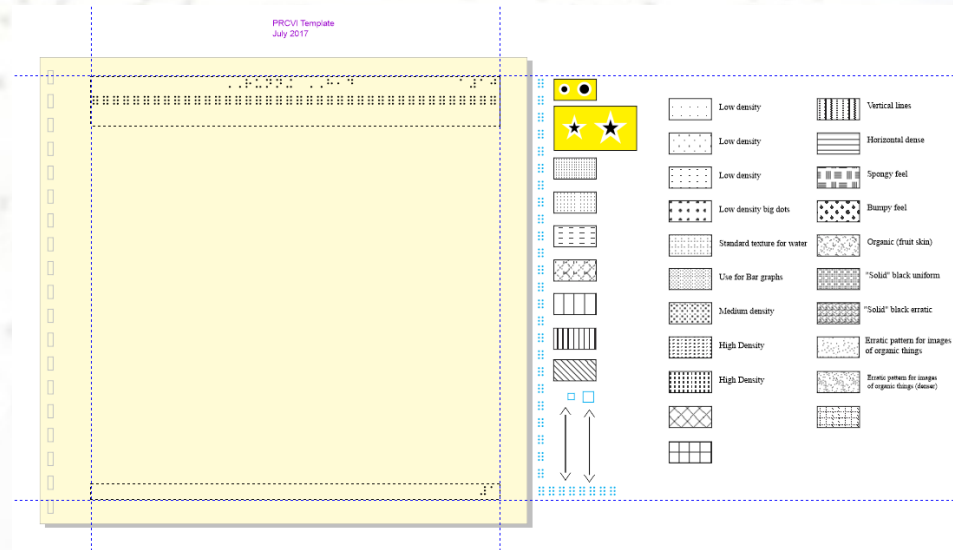
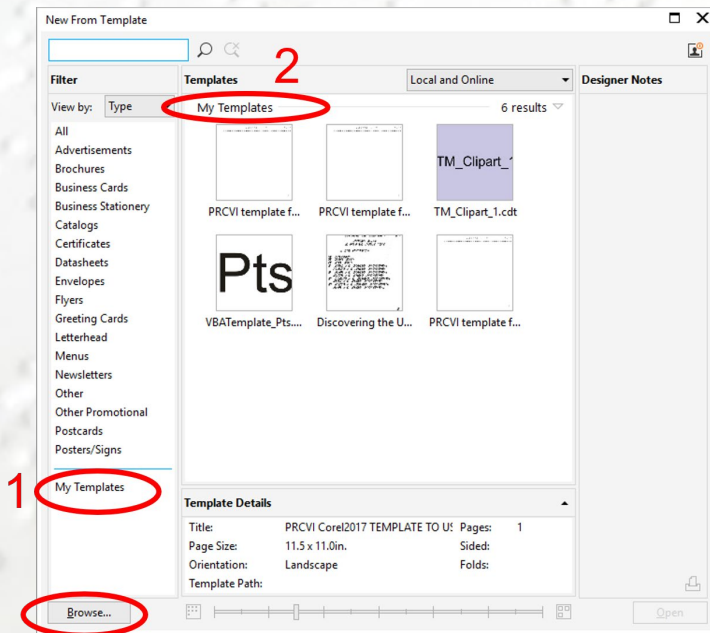
Getting Started in CorelDRAW 2020

- Open CorelDraw 2020.
- Skip the signing in window.
- Select **New from Template** from the Get Started window and Click on **My Templates**. Or go to File on the Menu bar and click on **New from Template**.
- Click on the template named “PRCVI template for CorelDraw 2017” inside My templates window. Then click on Open.
- Click on **Open folder location** if you have saved this template in a different location on your computer. Template saved in this path C:\Users\Username\Documents\Corel\Corel Content\Templates is shown in My templates window.
- PRCVI template is created keeping in mind, needs of transcribers. This template has default for page size : (11" x 11-1/2"), swell braille font, frequently used textures, lines with arrowheads, dots for graphs and maps etc.



Getting Started in CorelDRAW 2017

- Open CorelDraw 2017. Skip the signing in window
- Select **New from Template** from the Get Started window or go to File on the Menu bar and click on **New from Template**.
- On the window which opens up, Click on **My Templates**.
- Click on the template named “PRCVI template for CorelDraw 2017” inside My templates window. Or Click on Browse if you have saved this template in a different location on your computer.



CorelDRAW 2020 Screen

Menu bar: The area containing pull-down options and commands.

Title bar: Displays the title of the open document.

Rulers: Calibrates lines with markers used to determine the size and position of objects in a drawing.

Standard toolbar: A detachable bar that contains shortcuts to menu and other commands, such as opening, saving and printing.

Property bar: A detachable bar with commands that relate to the active tool or object.

Toolbox: Contains tools for creating and modifying objects in the drawing.

Drawing window: The area bordered by the scroll bars and application controls. It includes the drawing page and the surrounding area.

Drawing page: The rectangular area inside the drawing window. It is the printable area of your work area.

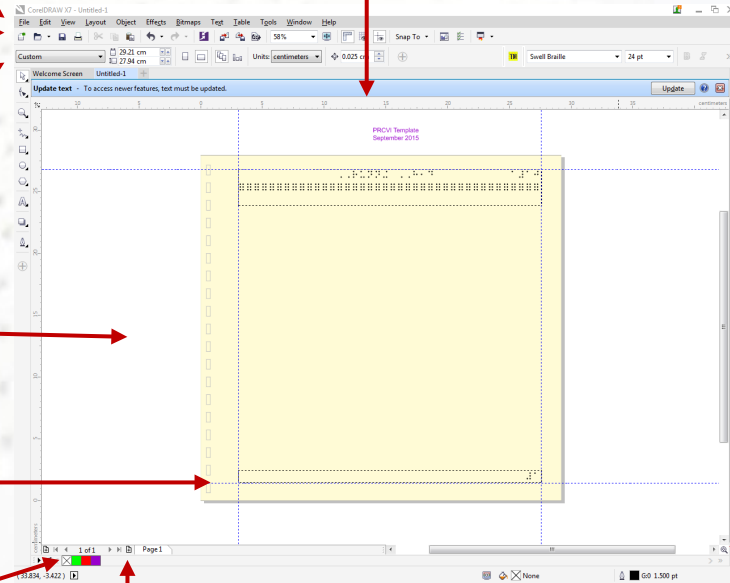
Document palette: A dockable bar that contains colour swatches for the current document.

Document navigator: An area that contains controls for moving between pages and adding pages.

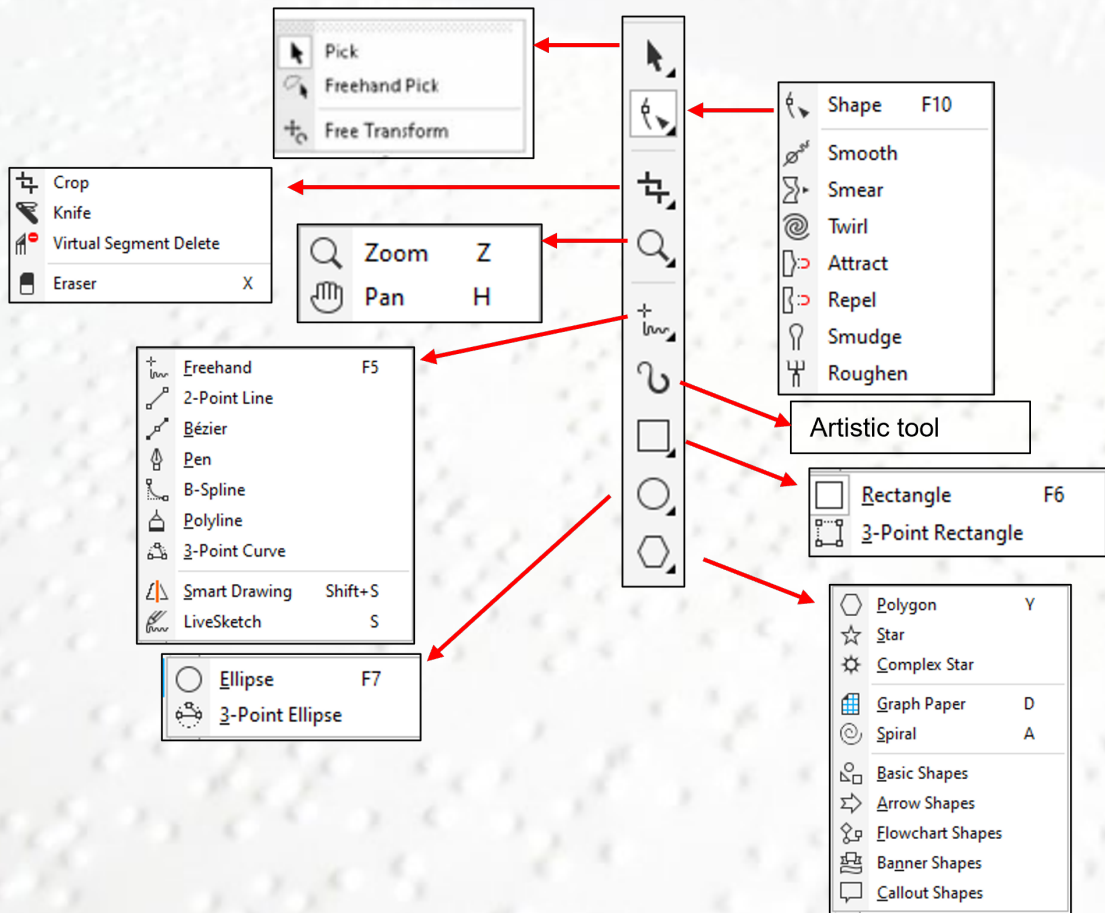
Status bar: Contains information about object properties such as type, size, colour, fill, and resolution. The status bar also shows the current mouse position.

Colour palette: A dockable bar that contains color swatches.

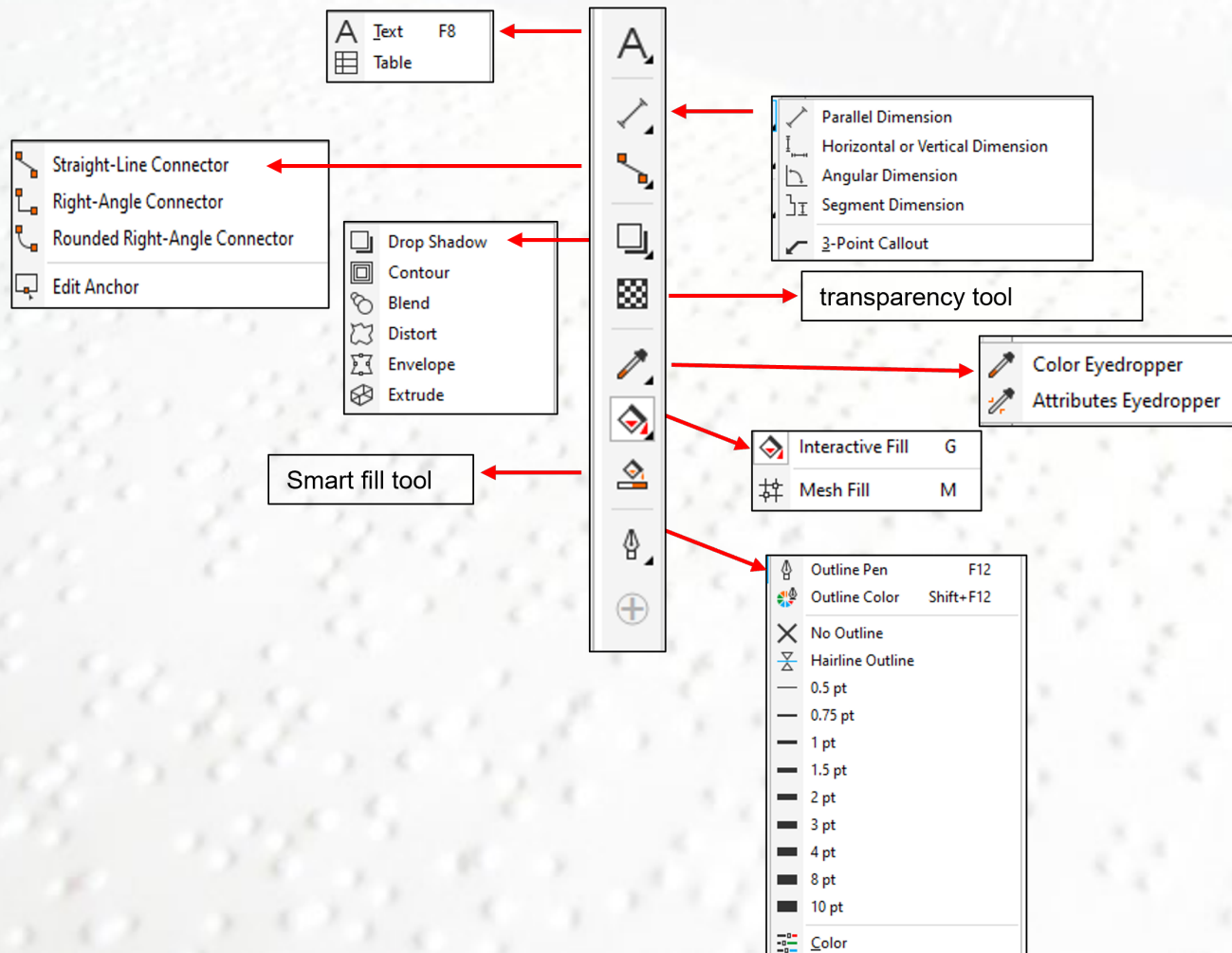
Navigator: A button that opens a smaller display to help you move around a drawing.



Tools on a toolbox



Tools in a toolbox (cont.)



Commonly used Tools



← Pick Tool: Select, position or transform objects.



← Shape Edit: (F10): Edit a curve object or text character by manipulating nodes.



← Crop tool: removes the area outside the selection.



← Zoom tool (z): change the magnification level of the document window



← Freehand tool : Draw curves and straight line segment



← Artistic tool: Add artistic brush, spray and calligraphic effects.



← Rectangle tool (F6): Draws rectangles and squares.



← Ellipse tool (F7): Draws circles and ellipses.



← Shape tools: Draw polygons, basic shapes, spirals etc.



← Text tool (F8): Add and edit paragraph and artistic text.



← Parallel dimension tool: draw slanted dimension lines.



← Connector tool: Draw a line to connect two objects.



← Interactive tool flyout..



← Transparency tool: partially reveal image areas underneath the object.



← Colour eyedropper tool: sample colours and apply them to object.



← Interactive Fill tool: Apply the current fill to an object.

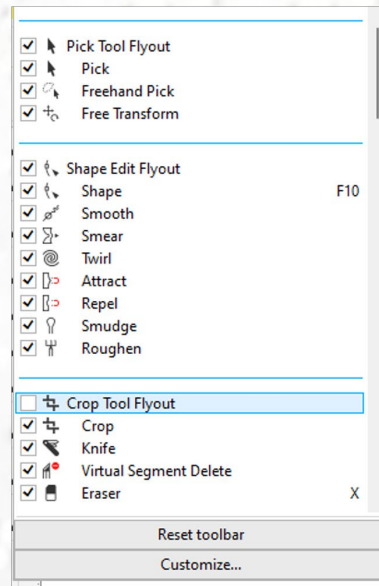
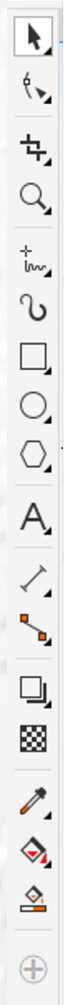


← Smart fill tool: create objects from overlapping areas, and apply a fill to those areas.



← Add frequently used tools or remove unused tools from the toolbox.

Managing the toolbox









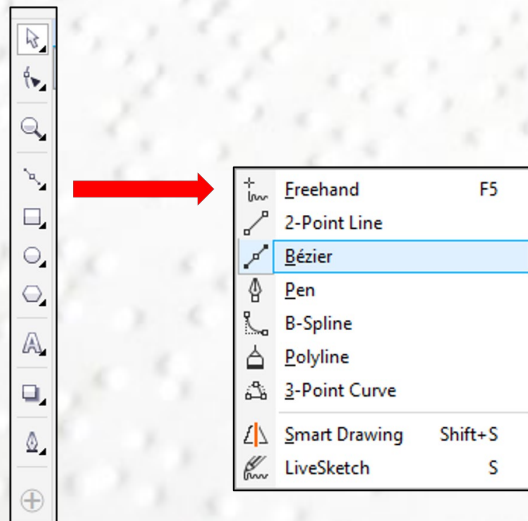
Page Layout

- The page property bar lets you adjust page settings, such as page size, dimensions, orientation (landscape or portrait), units of measure etc.
 - To access the Page property bar, click the Pick tool and click a blank space in the drawing window.
1. Choose a preset page size from the Page size list box on the property bar.
 2. Specify custom page width and height in the Page dimensions boxes.
 3. Set the page orientation to Landscape or Portrait.
 4. Click the Current page button to apply the page size only to the current page or all pages.
 5. Choose a unit of measure from the Drawing units list box.




Drawing lines

- The drawing tools from the **Curve flyout** let you draw curved and straight lines. The line segments are connected by nodes, which are depicted as small squares.
- The Freehand  and Polyline  tools let you draw freehand lines as if you were sketching on a sketchpad.
- The new LiveSketch TM  tool offers the simplicity and speed of freehand sketching.
- The Bezier  and Pen  tools let you draw lines one segment at a time by placing each node with precision and controlling the shape of each curved segment.
- The B-spline tool  lets you create smooth curves with fewer nodes than curves drawn by using freehand paths.

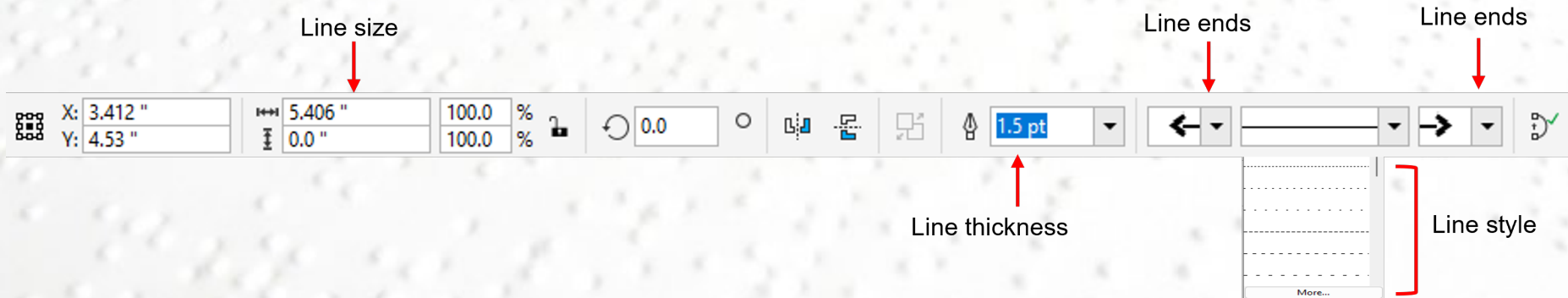


Drawing a line using Bezier tool

- Select Bezier tool  from the toolbox.
- Left click on the drawing page where you want to start the line and left click again on the page where you want the line to end.
- You can draw a straight line by holding on the Ctrl key and repeating the process mentioned above.


To change the properties of the drawn line:

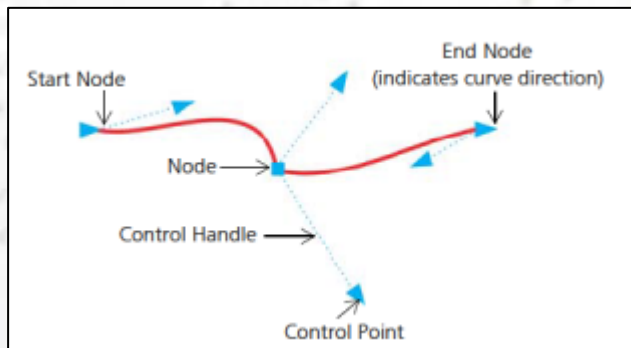
- Select the pick tool from the toolbox.
- Select the drawn line.
- On the property bar, change the line size, width, line style or line ends.



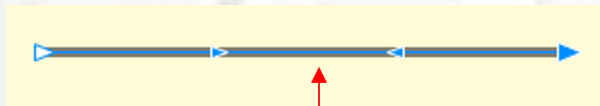
Tool in the toolbox remains active until you return to the Pick Tool. To return to the Pick Tool after using the tools, tap the spacebar or use the mouse to click on the Pick Tool.
To return to the Pick tool from the Text Tool, press and hold the Ctrl key as you tap the spacebar.

Curving a line using the Shape tool

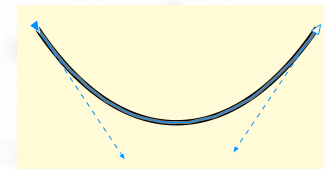
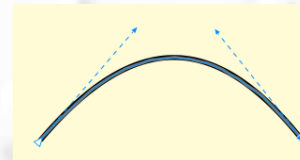
- Select Bezier tool  from the toolbox and draw a straight line by holding on the Ctrl key.
- Click on the shape tool. Notice the line changes to blue colour. Click on the line.
- On the property bar, select Convert Line to Curve.
- Two small arrows appear on the line.
- Click on the middle of the line and drag the line upwards to make an upward curve or drag the line downward to make a downward curve.




By holding and dragging the control point with mouse, the shape and length of the curve can be changed.

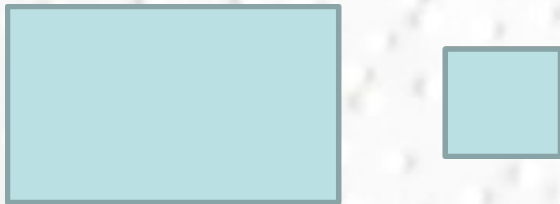


Click here



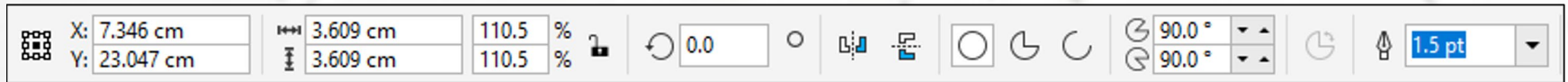
Drawing a Rectangle/Square

- Click on the rectangle tool on the toolbox with the mouse.
- Bring the mouse anywhere onto the drawing window. Notice the mouse cursor becomes + .
- Click and drag the mouse in any direction. Notice how the rectangle is drawn as you drag the mouse.
- Release the mouse button.
- To draw a square, hold the **Ctrl** key down and draw as per the above instructions. Notice how the **Ctrl** key constrains the shape to a perfect square. Release the mouse button *before* releasing the **Ctrl** key.
- You can change the properties of an object drawn by making changes in the property bar.

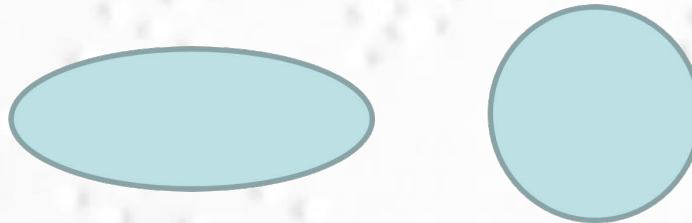


Drawing a Circle/Oval

- Click on the Ellipse tool on the toolbox with the mouse.
- On the property bar, click on the Ellipse to make an oval shape.
- Bring the mouse anywhere onto the drawing window. Notice the mouse cursor becomes +○.
- Click and drag the mouse in any direction. Notice how the ellipse is drawn as you drag the mouse.
- Release the mouse button.
- To draw a circle, hold the **Ctrl** key down and draw as per the above instructions. Notice how the **Ctrl** key constrains the shape to a perfect circle. Release the mouse button *before* releasing the **Ctrl** key.
- You can change the properties of the circle drawn by making changes in the property bar.



Object Size

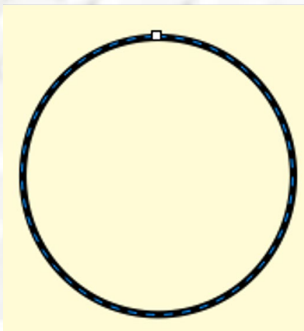


Pie shape and an Arc

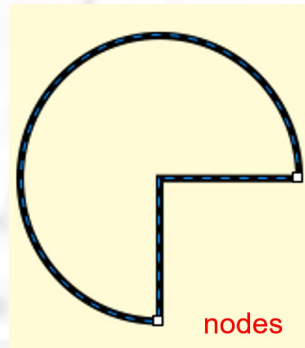
- Click on the Ellipse tool on the toolbox with the mouse.
- On the property bar, click on the Pie to make a pie shape.
- On the property bar, click on the Arc to make an arc.
- With the shape tool, drag the nodes to get the desired pie shape or an arc.
- Pie shape and arc can also be created by moving the nodes of a circle. To create an arc, drag the node while keeping the pointer outside the circle. Keeping the pointer inside the circle will create a pie shape.



nodes

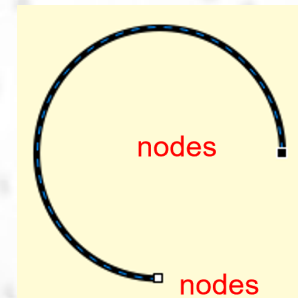


nodes



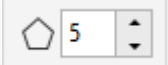


nodes

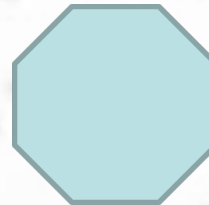
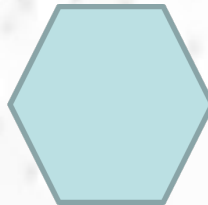
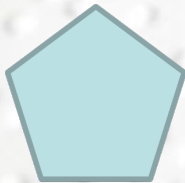
nodes



nodes

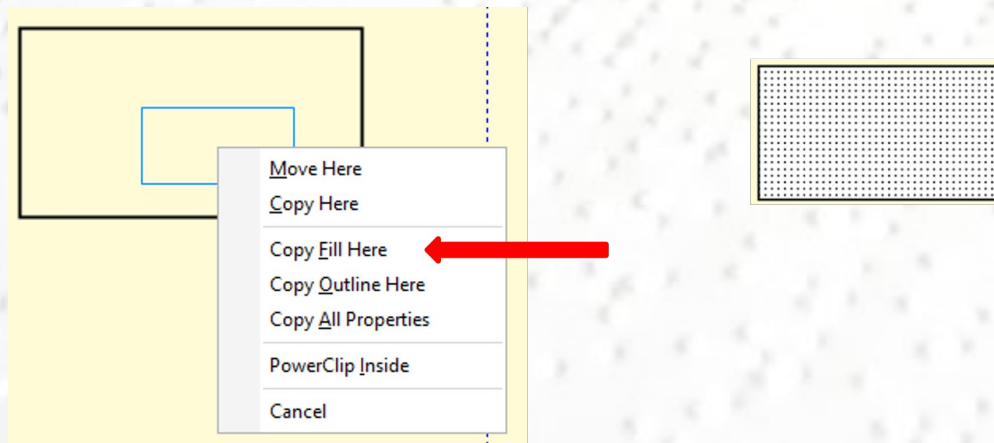
Draw a Polygon

- Click on the polygon tool on the toolbox with the mouse.
- Set the number of points on sides for the polygon on the property bar. 
- Bring the mouse anywhere onto the drawing window. Notice the mouse cursor becomes +.
- Click and drag the mouse in any direction. Notice how the polygon is drawn as you drag the mouse.
- Release the mouse button.
- To draw a perfect polygon, hold the **Ctrl** key down and draw as per the above instructions. Notice how the **Ctrl** key constrains the shape to a perfect polygon. Release the mouse button *before* releasing the **Ctrl** key.
- Draw a right triangle, parallelogram etc by selecting Common shapes tool  from the toolbox.





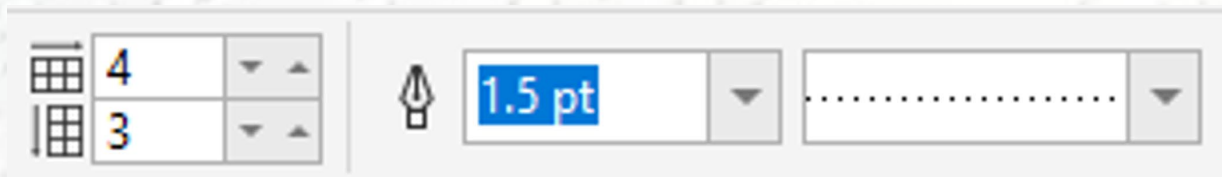
Filling a texture

- Draw any enclosed shape.
- Click on the 40% black from the colour palette to get a grey fill.
- Select the texture from the PRCVI template. Hold on the texture with right-side of the mouse, drag and bring the texture to the object and release the mouse. Select “Copy Fill Here” from the drop down menu. Object will get filled with the desired texture.



Creating a Grid

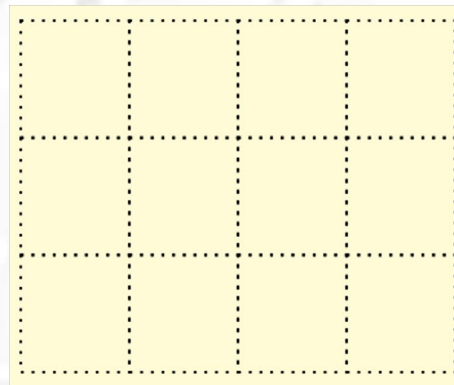
- Make a grid using Graph Paper Tool 
- Select graph paper tool from Object flyout .
- On the property bar, select the number of columns and rows to appear in a new grid.
- On the property bar, select the outline width and line type for the grid.
- Drag the mouse on the drawing page and make a grid.



Number of columns and rows

Outline width

Line style



Adding text to a diagram

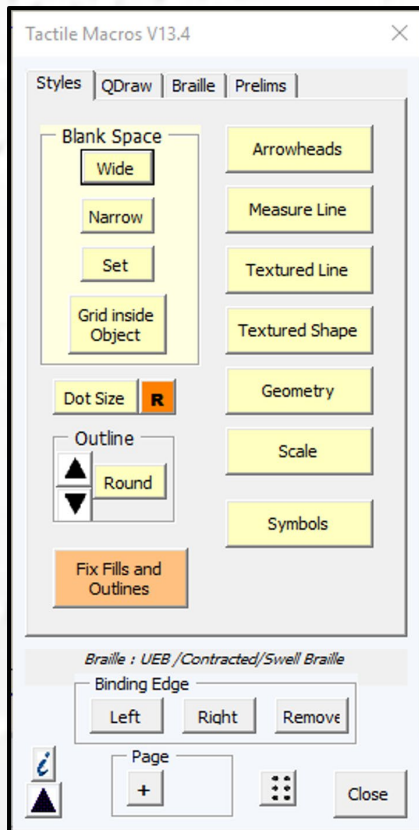
- Click on the Text Tool on the toolbar or Press F8 to write text on a drawing page
- To change the font type and font size, go to the property bar and make changes.
- Use ASCII code to get contracted braille.

ASCII Chart

Key on the Keyboard	Braille Equivalent
!	⠁⠗⠗⠊
@	⠠⠗⠗⠠
#	⠠⠗⠗⠨
\$	⠠⠗⠗⠵
%	⠠⠗⠗⠼
^	⠠⠗⠗⠤
&	⠠⠗⠗⠤⠠
*	⠠⠗⠗⠨⠠
(⠠⠗⠗⠠⠶
)	⠠⠗⠗⠠⠸
;	⠠⠗⠗⠠⠵⠗
,	⠠⠗⠗⠠⠵⠗⠠
.	⠠⠗⠗⠠⠵⠗⠨
/	⠠⠗⠗⠠⠵⠗⠵
?	⠠⠗⠗⠠⠵⠗⠼
<	⠠⠗⠗⠠⠵⠗⠴
>	⠠⠗⠗⠠⠵⠗⠢

Tactile macros

- Create graphs, pie chart etc using tactile macros.



← Tactile macros

References

Guidelines and Standards for tactile graphics, 2010

<https://www.prcvi.org/media/1125/guidelines-and-standards-for-tactile-graphics.pdf>