Nodes

Creating a Line
- Select New. Switch to Artwork Canvas.
- Select the Pen tool and draw a few lines.
  - A left click with the release of the mouse; then a drag and click will form a straight line.
  - A left click and drag while holding the mouse will allow you to shape the line as you create it.
  - To end the line and select it, press the space bar.

Types of Nodes
- **Straight or Line Nodes:**
  - These nodes have a straight line before and after the nodes.
  - This type is formed with a left click.
- **Cusp Nodes:**
  - These nodes let you create corners or sharp angles like a straight node, but each side maintains its own characteristic.
  - You can move the control handles independently of one another to change the line only on one side of the node.
- **Smooth Nodes:**
  - These nodes create smooth transitions between the line segments.
  - The control handles are directly opposite from each other.
  - The control handles can be different distances from the node.
- **Symmetrical Nodes:**
  - These nodes let you create smooth lines like the smooth node.
  - They will give the line on each side of the node the same curve appearance. These handles move in unison.
  - The control handles are directly opposite each other and are at an equal distance from one another.
- Between each node is a segment—these segments can be curved or straight.
- Control handles are positioned on the node and become visible when you select Reshape Vector Object.

Selecting & Editing Nodes
- To edit a node, select Reshape Vector Object.
- You can add, delete, join, break apart nodes; change from straight to curved or curved to shape; or change the type of node.
- One node, multiple nodes, or all nodes can be selected to edit.
- To select all nodes, click on Select All Nodes.
- To select only one node, click on the node.
- To select multiple nodes, hold the Shift key and click on the nodes you wish to select or marquee select by drawing a bounding box around the nodes you wish to select.

Notes:
- Nodes connect two lines and are the control points of a shape or line.
- The Shape tools in CorelDRAW (rectangle, ellipse, polygon) contain nodes as well as the lines you draw. These shapes behave differently than nodes drawn with lines.
- You can create a curve from any object you create by converting that object to curves, except for spirals (they are already a curve) and a graph (it can’t be converted to anything else). After creating the shape, right click on it and select Convert to Curves.
Moving Nodes
- Select the drawn line and select Reshape Vector Object.
- Select the starting node of your line.
- Click and drag to move it around. This will change the length of the line segment and its position.
- Hold the Shift key and select the second node of your line.
- Move your cursor. This moves both nodes.
- When you have two nodes selected, the segment in between the nodes remains the same, while adjacent line segments are reshaped.

Adding Nodes
- Click on a portion of the line that has no node. A small black star appears.
- Click on Add Node in the Property bar and a node will be added.
- You may also add a node by double clicking on the line.
- To add a node in the exact center of a line segment, select an existing node and click on the Add Node icon. The new node is added centered between the selected node and the next node toward the beginning of the line.

Deleting Nodes
- Double click on a node to delete it.
- You may also select a node by clicking on it and then select Delete Node.

Changing the Type of Node
- Select a node in between curved line segments.
- Click on Cusp Node. The node changes to a cusp node.
- Further editing can be done to this node by moving the control handles.
- By moving the control handles, you can form a right angle point.
- Click on Smooth Node while the node is still selected to change the node back to a smooth node.
- Click on Symmetrical Node to give the node equal control handles. These nodes make smoother curves.

Rotating & Rescaling Nodes
- Select a node.
- Select Rotate/Skew Nodes.
- Handles appear around the node and can now be rotated or skewed.
- Select a node.
- Select Stretch/Scale Nodes.
- Handles appear around the node and can now be scaled.
Aligning Nodes
- Select two nodes by clicking and dragging a bounding box around the nodes.
- Click on Align Nodes.
- A dialog box appears so that you can select the type of alignment you need. Select the type of alignment and click OK.

Reverse Direction
- Reverse Direction will change the beginning and ending of the line segment.
- It does not influence the shape of the line.

Converting Lines
- While still in reshape mode, you can also change the line segments.
- Select a node in the drawn line.
- Click on Convert to Line.
- This converts the line segment in front of the selected node to a straight line.
- Convert to Curves icon will convert the line segment to a curve, which can then be reshaped by using the control handles.

Reshaping the Line
- To reshape the line, select a control handle of a node and move it.
- Experiment by shortening the length of the control handle, moving the control handle, as well as moving the control handle of the adjacent node.
- Clicking and dragging a control handle will change the shape of the curve without moving the node.

Connecting & Disconnecting Nodes
- Select the Pen tool. Draw another line similar to the shape shown.
- Press the space bar to select the line.
- Select Reshape Vector Object.
- Draw a bounding box around the beginning and ending nodes to select them.
- Click on Extend Curve to Close. This will join the beginning and ending nodes with a straight line.
- Select Undo.
- Reselect Reshape Vector Object.
- Select a node in the middle of the line.
- Select Break Curve.
- The line is now two separate lines that can be edited and moved independently of one another.
- Draw a bounding box around the two nodes that were previously one.
- Select Join Nodes to make the nodes reconnect.