**Copyin3panes:**

Network: ctrl c and ctrl v / use RMB from DDL to create a node from the history

Scene: Use copy node to make copies in the scene view

Parameter: To assign values type/slider to copy parameter and Paste Relative Reference – synchronization

**The picture on the screen:**

Create file node for picture

Scale it in one of the following ways:  
∙ RMB scroll in the scene view down to fit the   
screen scene viewport  
∙ With type H scene view fit the scene view   
port  
∙ With parameter value change parameter pane

Or create a transform node try 0.001 and scale

**How to set up your desktop interface?**  
from toolbar desktop   
Open desktop manager   
Click Add desktop,   
new desk appears in DDL,  
Name tab: abc Save changes,  
Accep To use it Open abc   
(do worry what you see)  
Make any changes to setup your preferred desktop  
Go to desktop manager Select save changes, Accept  
Now open abc, you are set to use it anytime you want it.  
To delete abs, go to desktop, desktop manager, select abs, little arrow on the left, the delete in the DDL

**In two-pane interface,** parameter pane can be activated/deactivate by pressing “P”

**Polyextrude** has attribute spine to refer to path to extrude along a curve or to shape the extrusion path.

Polyextrude uses curve node as second input to specify a path.

**CURVE:**

Click on handles in left vertical toolbar to have menu description in the scene view, type G to be in draw mode and Type F for edit mode  
To Remove all handles (click select/arrow in left vertical toolbar)

If you find that you don’t want some point(s), click and delete the point.  
If you want to add a point and shift + click on the curve and add the point  
If you want to move a point, then mouse click and drag to the point.

**Short cut tabs**   
 to help knowing which keys to use  
**F for edit**  
↑LMB drag curve Add a point on curve Select a point and delete  
Select and move  
**G for draw**Draw point one click at time to create lines  
^MMB click to plot a point on the curve   
drawing, but draw new curve Use MMB to stop draw for a point or curve Use LMB for new curve Use MMB of enter to stop draw  
**H for curved arcs**  
Experiment with primitive type: polygon, Bezier, Nurbs, you see the difference  
**O for orientation**

**An alternative easy and pleasing way to create curves. From perspective tab, select front View for visualizing whssile drawing.**

**Polyextrude** to extrude along the curve shape  
**Resample** to add more points to smooth the curve  
**Polywire** to add thickness to wire, parameters: divisions to smooth, radius wide  
**Revolve** to create surface (eliminates, copy, skin) parameter: divisions for number of copies, for skin Revolve replaces copy node experiment with uv-coordinate, number of divisions for 360 degrees.

Revolve has all that built-in: just the number of copies needs to be specified. Surface type can be solid or wireframe type.

**Line** is a special case of curve For Points type, no line is created, only two end points are displayed

Special case of Curve, Easy way to draw curve  
Front view is xy-plane  
Perspective view is zx-plane

**copy without copy Sweep** one line Make 40 copies along the boundary of the circle of radius (0.579) copies will be in this radius

copy leaves a copy behind; original is counted as first copy.   
Sweep does not count original as 1st copy. Sweep makes 40 copies, copy node is not used. Whole line points are scaled by radius.

Network pane **sticky note** for organization **SHIFT + O** create separate nodes folder within same geometry object keep network pane clean and in small segments