

A quick-start screenshot guide to Inkscape

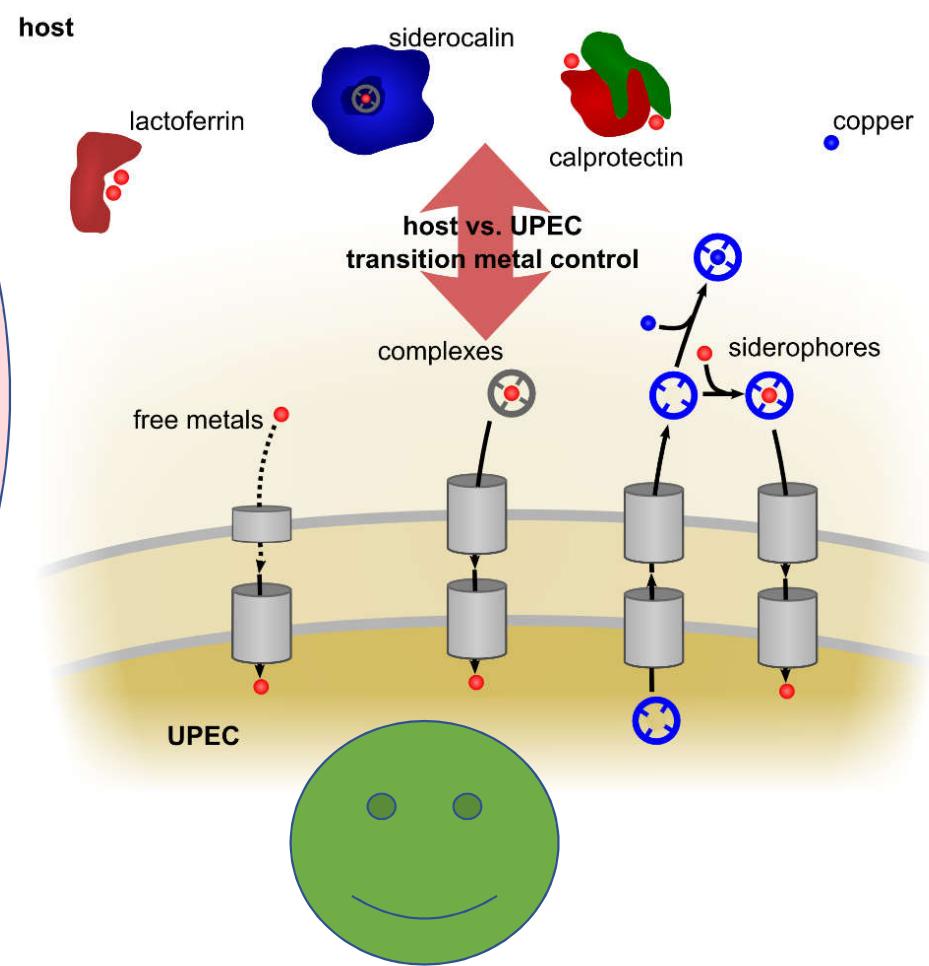
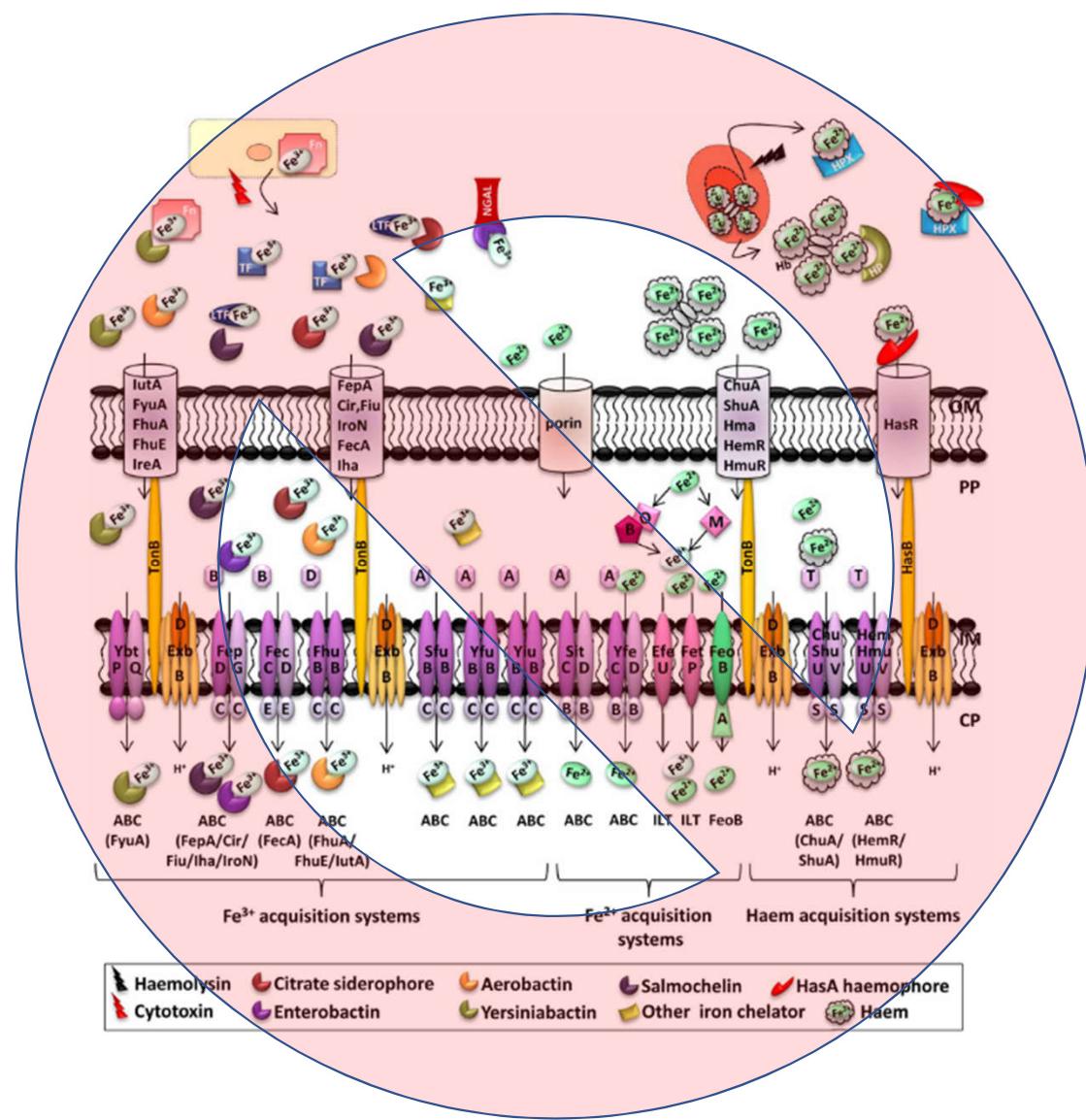
Created by Madison Mack and Anne Robinson in association with
InPrint: A Scientific Editing Network at Washington University in St. Louis

Basic Figure Tips

Part I

Some factors to consider

- Font size – readable and consistent
- Line width – thick enough to see, but not clunky, consistent
- Simplicity – a cluttered figure with too many shapes and labels and no consistency will be meaningless and hard to comprehend
 - Goal: a figure that can quickly be understood at a glance
- Page size:
 - Look up figure dimensions in the journal to determine page size
- Color use:
 - Use sparingly
 - Be consistent
 - Be colorblind friendly...



Accommodating Colorblind Individuals

- 8% of men and 0.5% of women are red-green colorblind (NIH)
- Big effect on how colors look:



can't see red light

Deutanopia: can't see green light



can't see blue light

Accommodating Colorblind Individuals

- Tips:

- Cyan and other pale colors are basically invisible
- Red laser pointers are basically invisible
- Affects more than red and green: purple = red + blue, light green = yellow, etc
- Use color intensity for contrast: light red vs. dark green is visible (red vs. green is not)
- Use shapes and shadings

- Resources:

- <http://bconnelly.net/2013/10/creating-colorblind-friendly-figures/>
- <http://colororacle.org/> re-colors computer screen

Accommodating Colorblind Individuals

- Tips:

- Cyan and
- Red laser
- Affects m
- Use color
- Use shap

	Original	Simulation			Hue	for Photoshop, Illustrator, Freehand, etc.		for Word, Power Point, Canvas, etc.	
		Protan	Deutan	Tritan		C,M,Y,K (%)	R,G,B (0-255)	R,G,B (%)	
1					—°	(0,0,0,100)	(0,0,0)	(0,0,0)	
2					41°	(0,50,100,0)	(230,159,0)	(90,60,0)	
3					202°	(80,0,0,0)	(86,180,233)	(35,70,90)	
4					164°	(97,0,75,0)	(0,158,115)	(0,60,50)	
5					56°	(10,5,90,0)	(240,228,66)	(95,90,25)	
6					202°	(100,50,0,0)	(0,114,178)	(0,45,70)	
7					27°	(0,80,100,0)	(213,94,0)	(80,40,0)	
8					326°	(10,70,0,0)	(204,121,167)	(80,60,70)	

- Resources:

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- <http://colororacle.org/> re-colors computer screen

Accommodating Colorblind Individuals

Protanopia

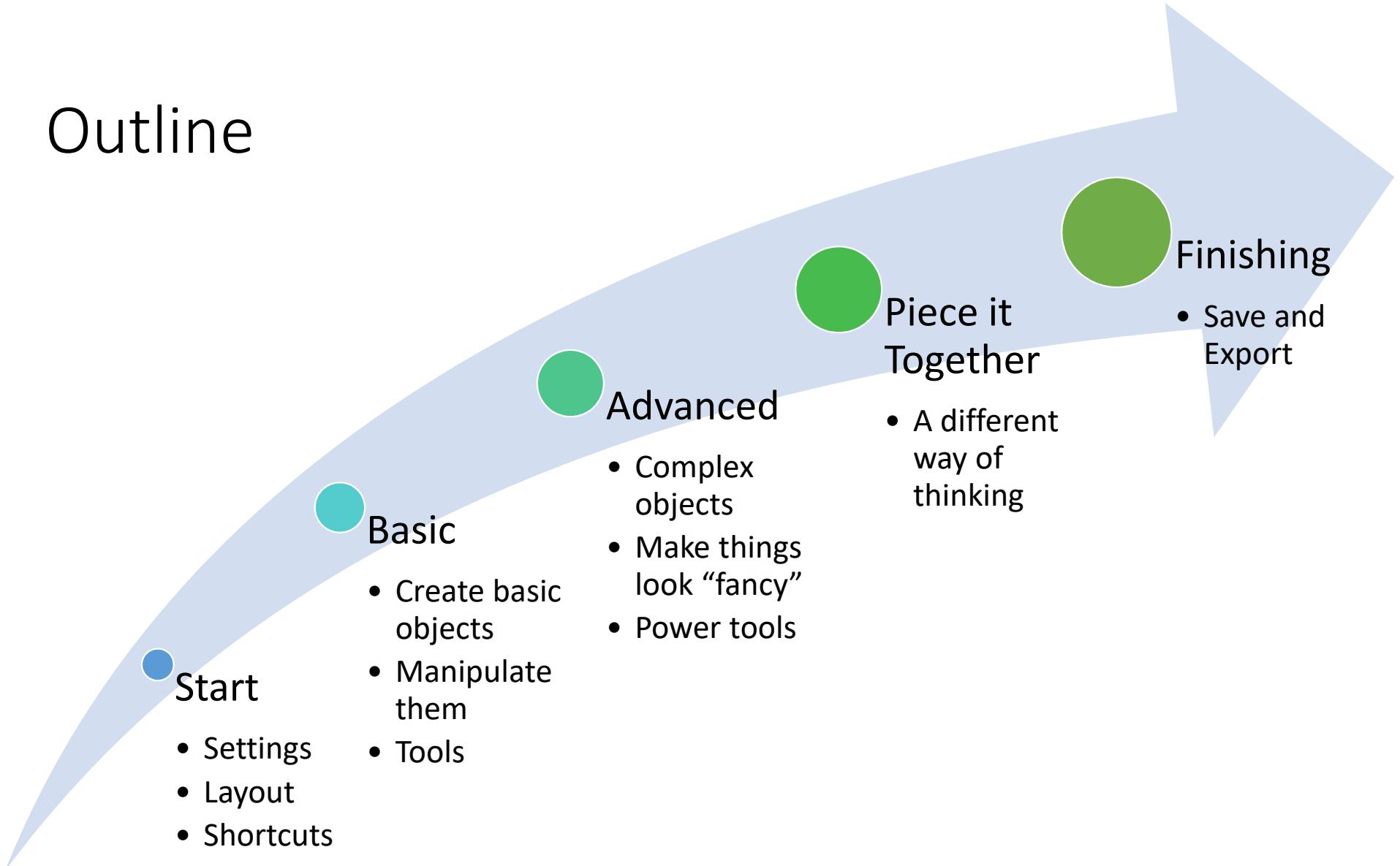
- Tips:
 - Cyan and other pale colors are basically invisible
 - Red laser pointers are basically invisible
 - Affects more than red and green: purple = red + blue, light green = yellow, etc
 - Use color intensity for contrast: light red vs. dark green is visible (red vs. green is not)
 - Use shapes and shadings
- Resources:
 - <http://bconnelly.net/2013/10/creating-colorblind-friendly-figures/>
 - <http://colororacle.org/> re-colors computer screen



Using the Software

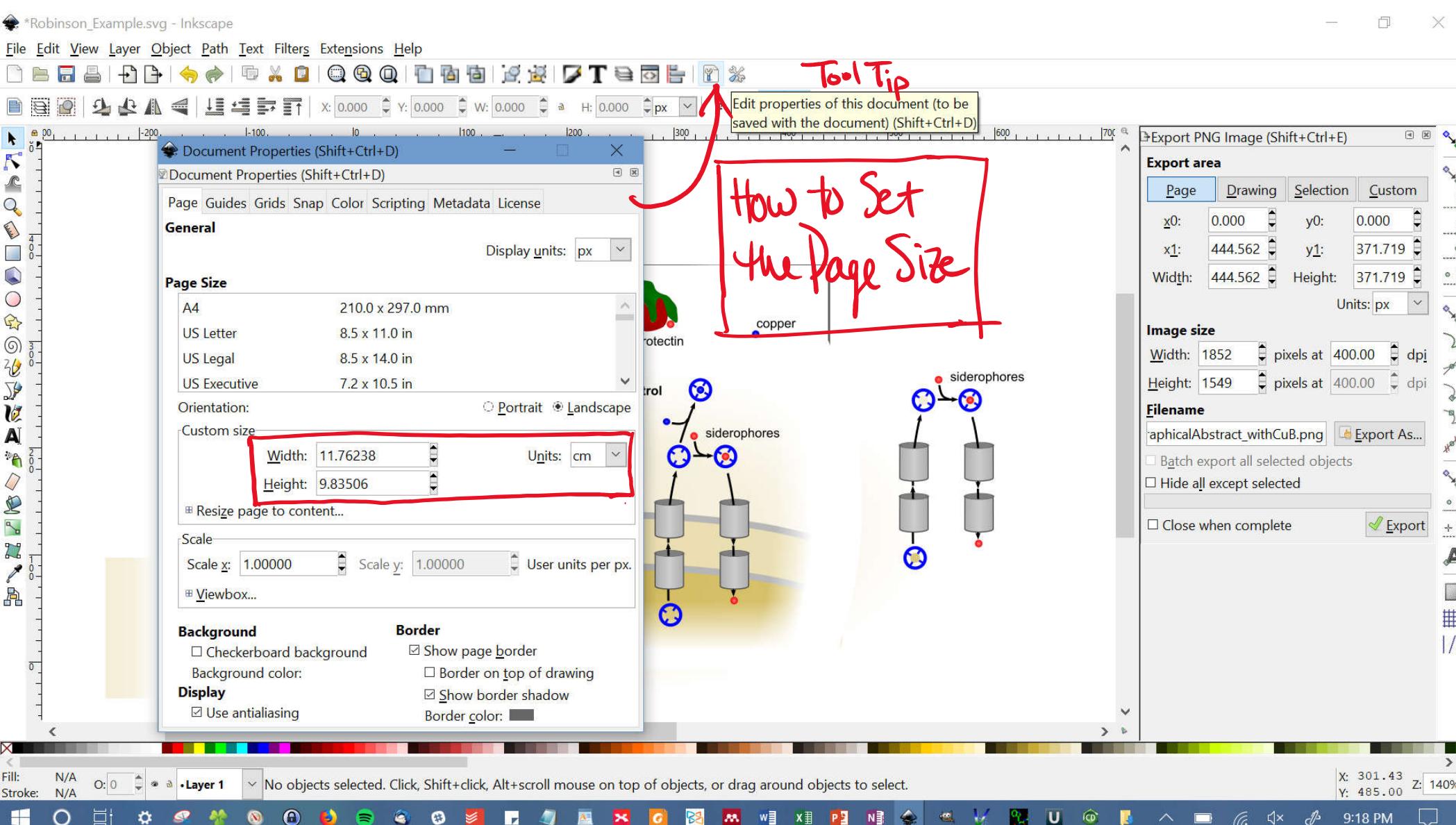
Part II

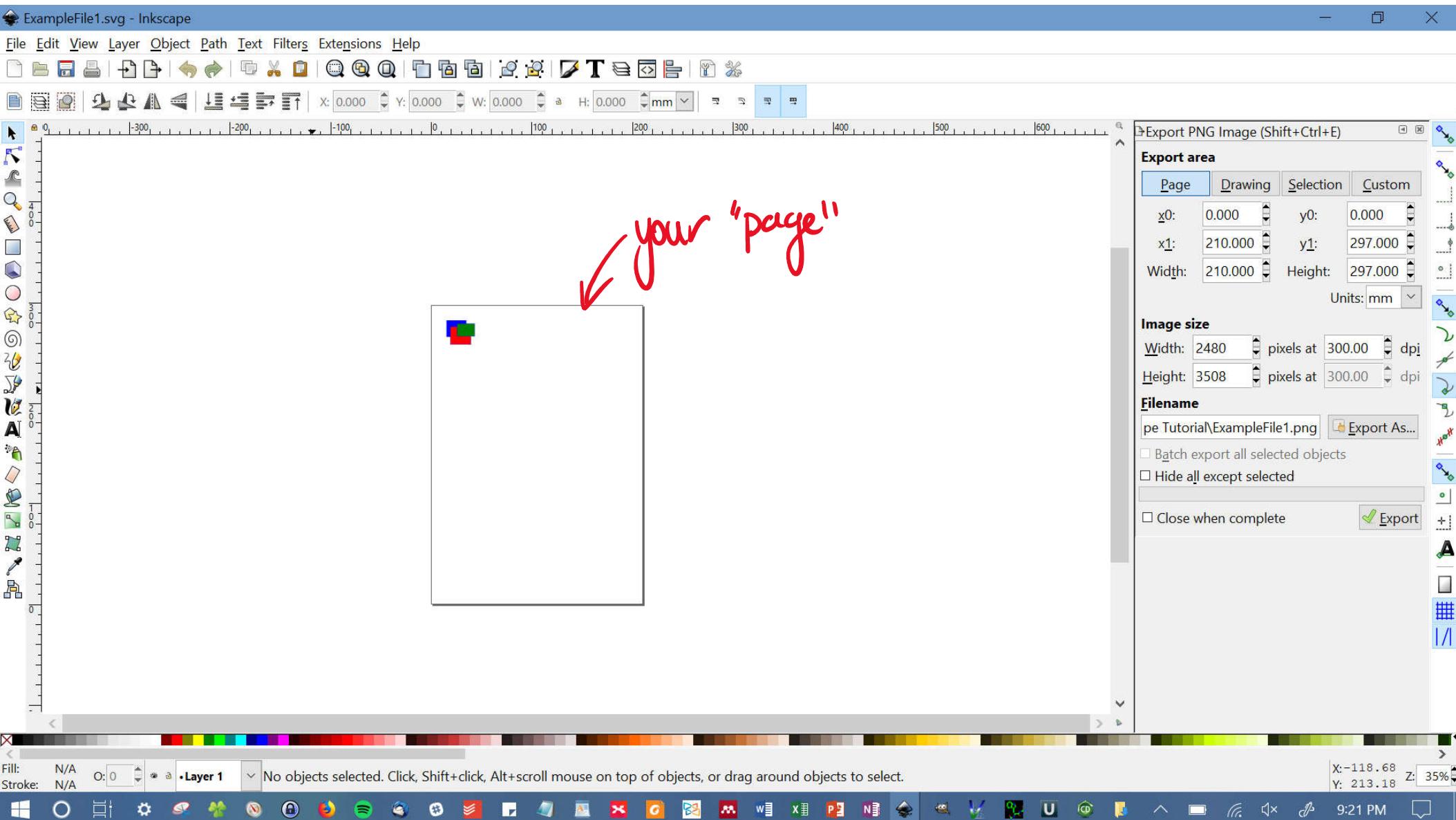
Outline



Getting Started

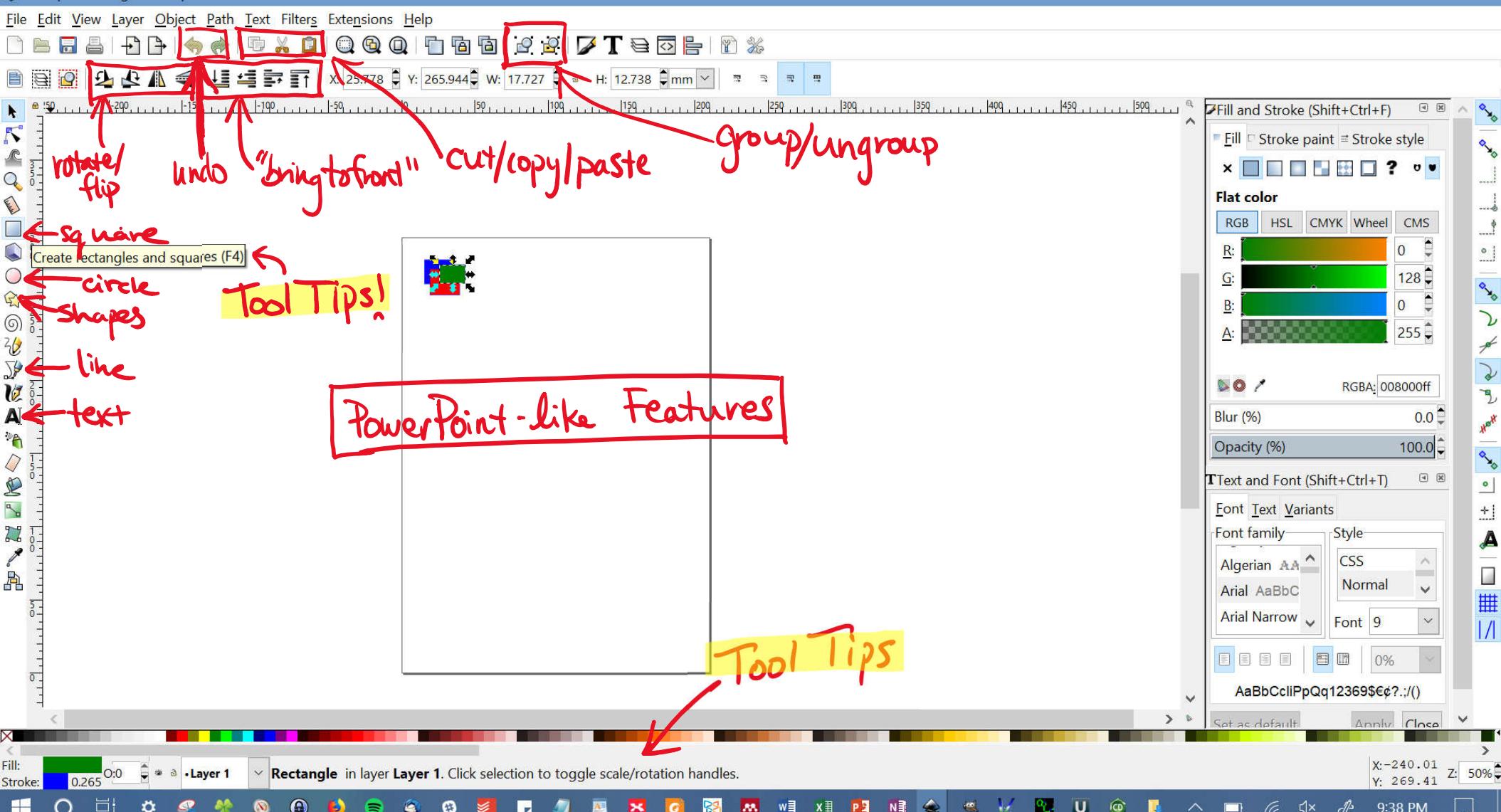
- Page size
 - Vector graphics are scalable (ie they do not “get pixelated”)
 - But page size still matters b/c **font size and line thickness are relative to page size**
 - It is easy to get lost in making figures and have no clue what size you are making things
 - It is best to **first set the page size based on your final goal** (one-column manuscript figure? Ppt slide? Other?)

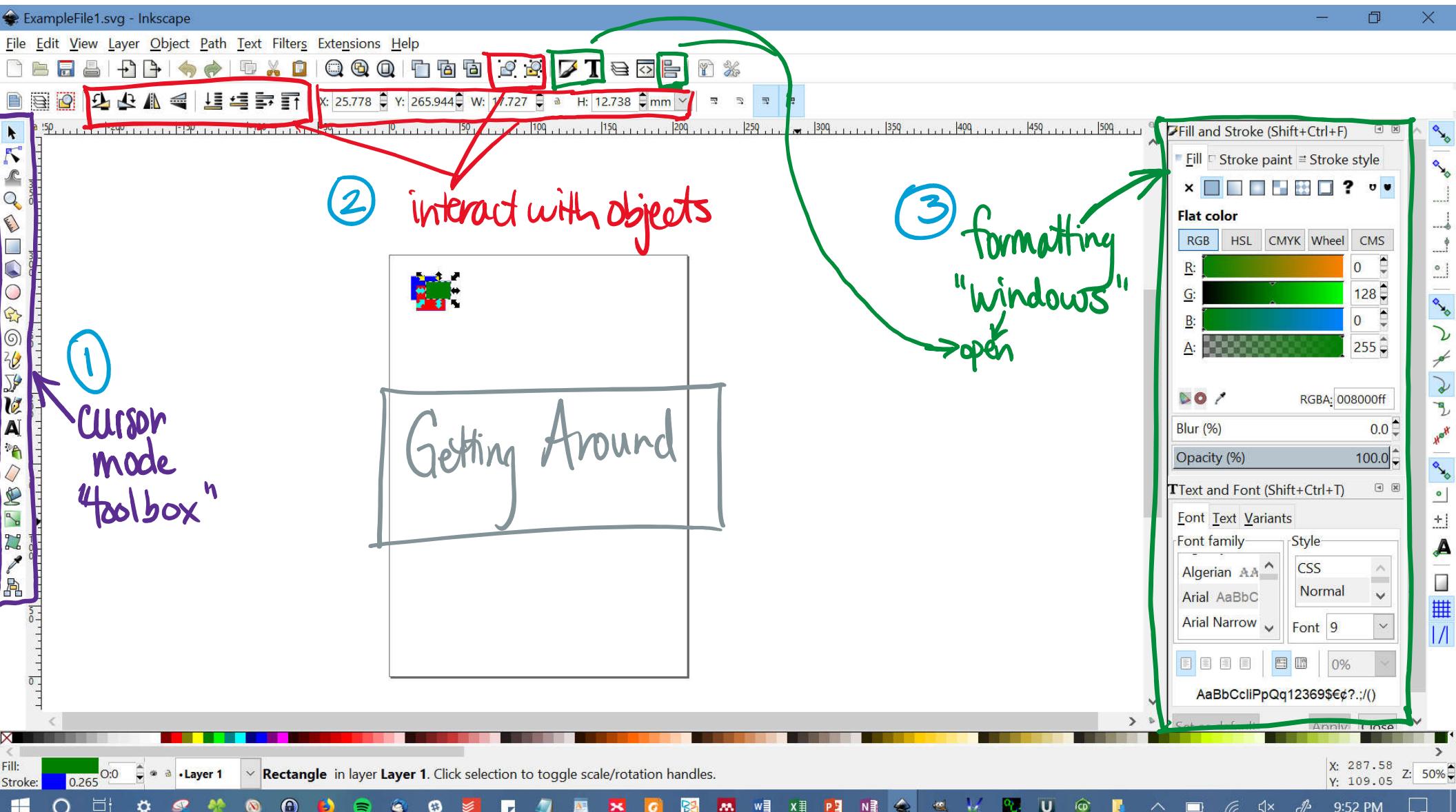


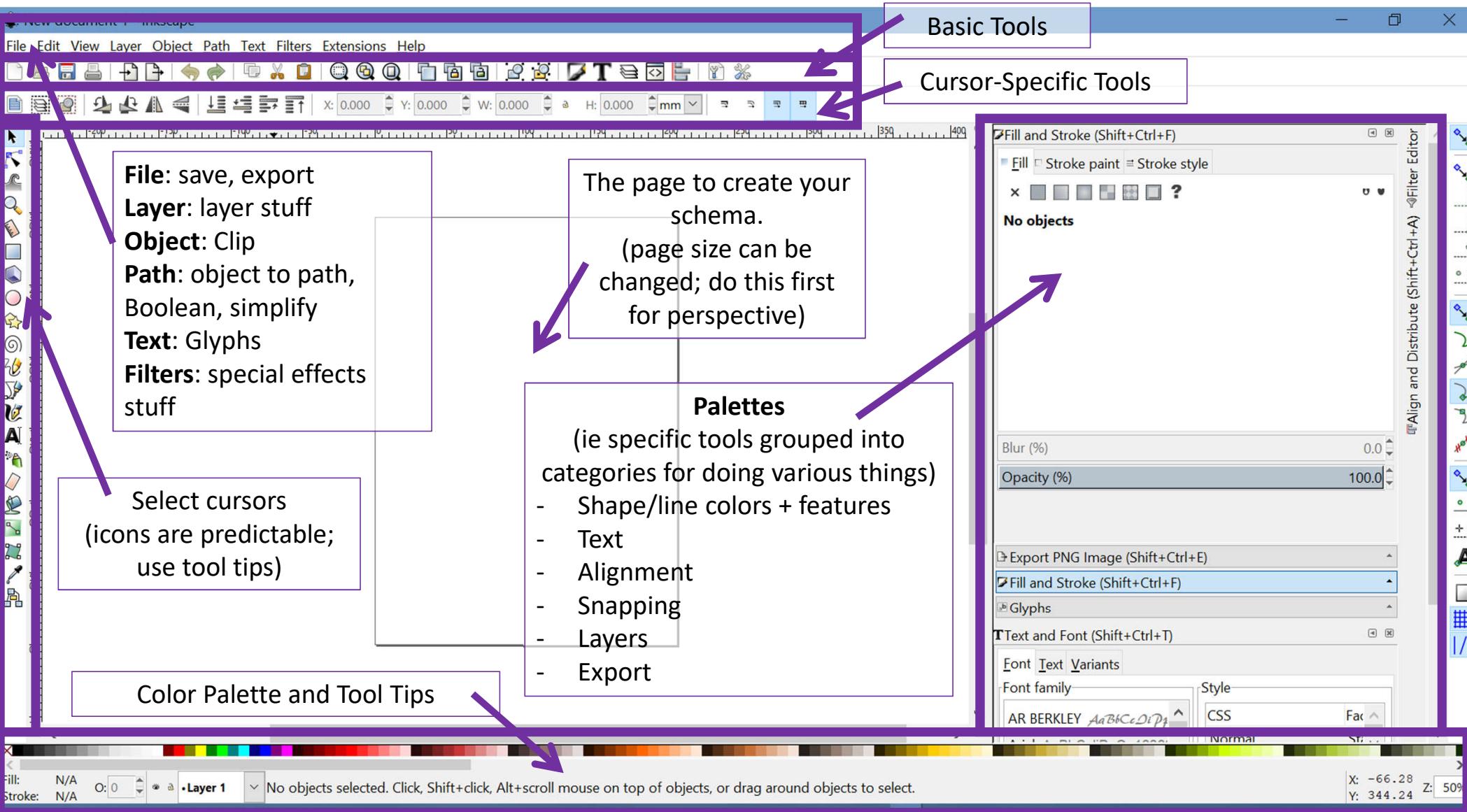


Getting Started

- It's just like PowerPoint (don't panic!)
- Ultimately, it has more flexibility and features than PowerPoint, but to get started look for tools you are already comfortable with using.
- If you don't know what something is, hover over it and read the tool tip!!!! ☺



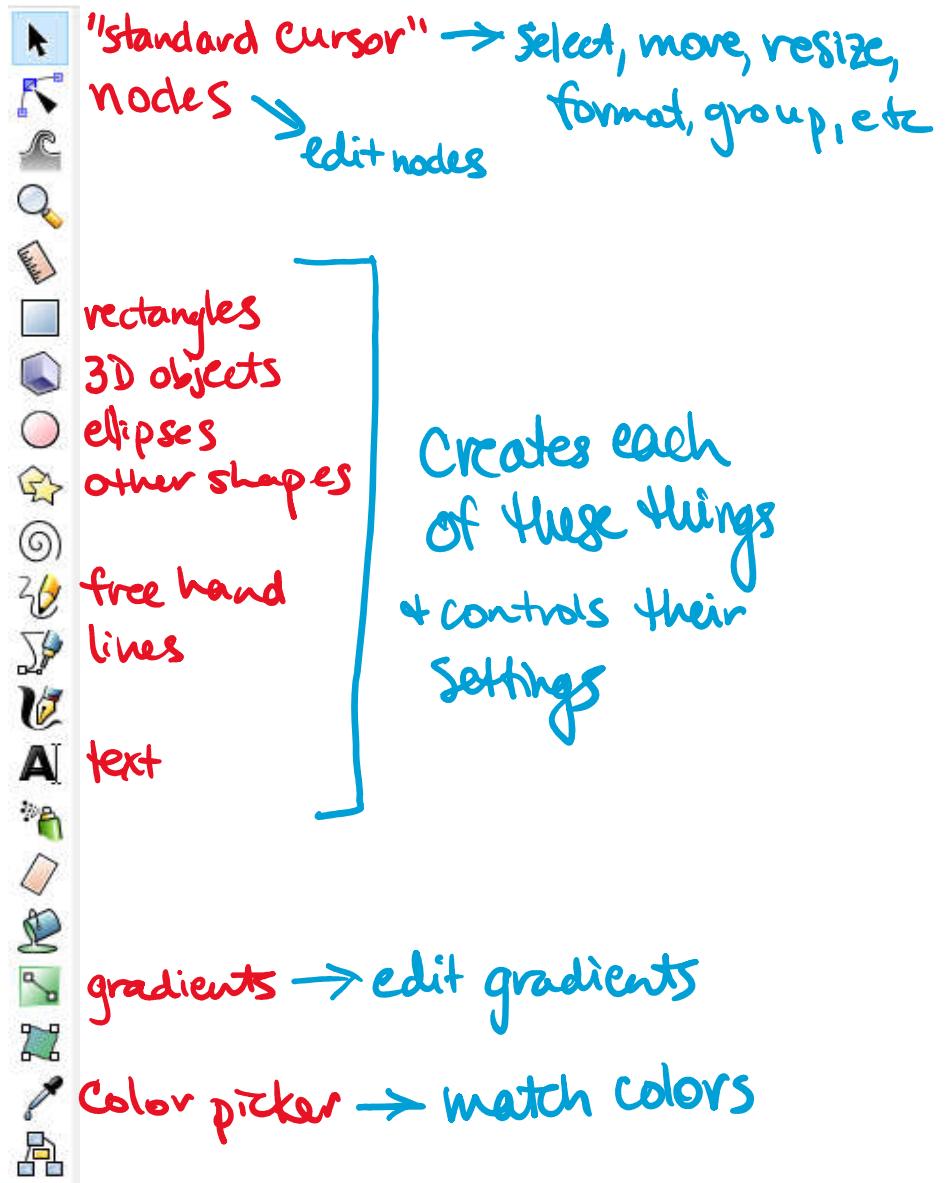




Getting Started

- Using Cursors

- Every button in the “toolbox” on the left panel converts your cursor into a different “tool”.
 - Eg. to create a box, you must use the “box making” cursor
- If you are lost, click back into standard cursor mode.
- Use this cursor mode to do standard manipulations (move, resize, group, fill, etc).
- If you double click on an object, you will change your cursor to that object type



Getting Started

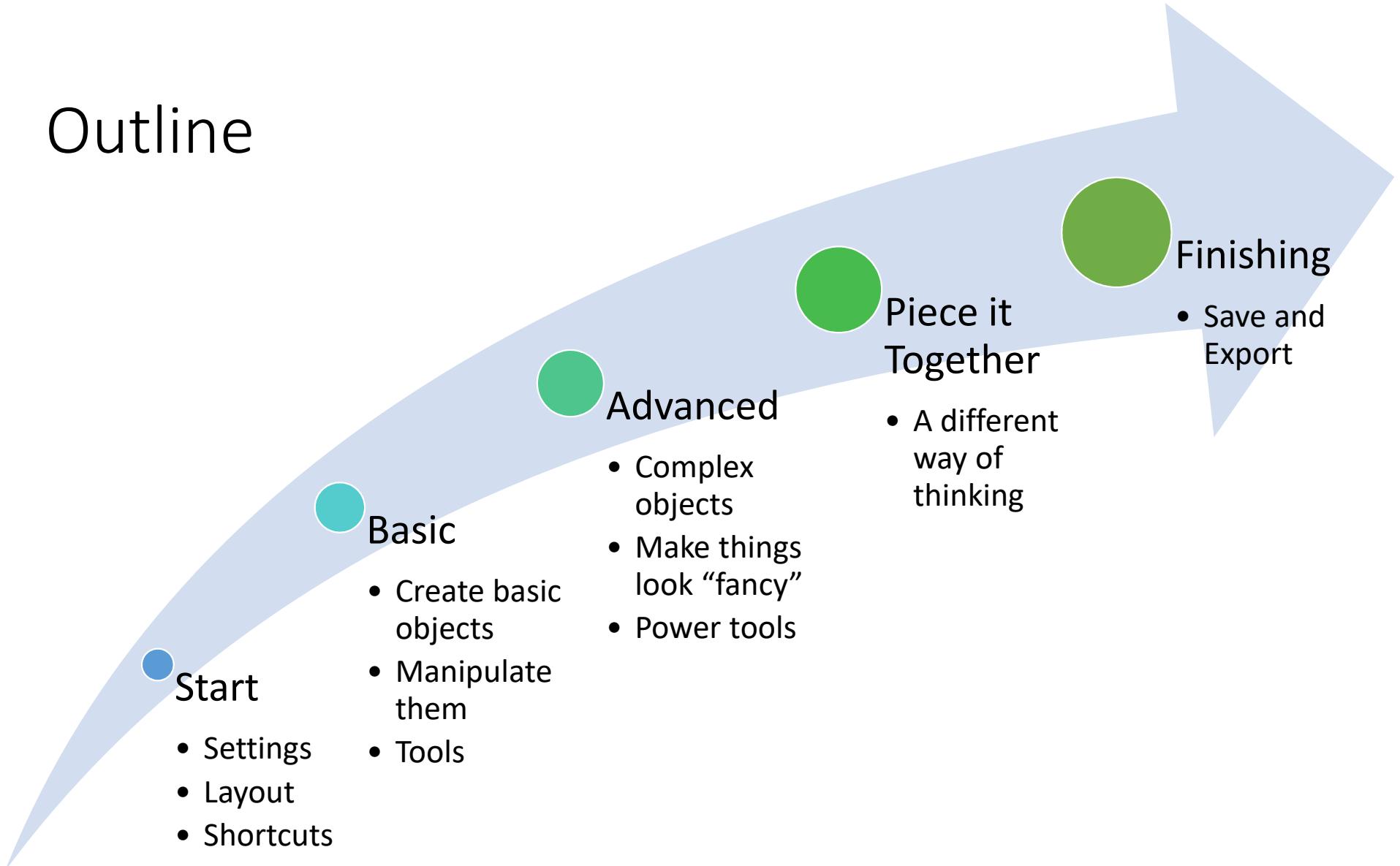
- Useful Keyboard shortcuts
 - + and – keys zoom in/out
 - Alt + click to toggle through overlapping objects
 - Shift + click/drag to select multiple items
 - Exclusive selection (object only selected if the ENTIRE object is within the selected area)
 - Ctrl + click/resize to lock aspect ratio
 - Ctrl click + drag to lock into horizontal/perpendicular line
 - Shift + click and select color to color line instead of fill
 - F1 = standard cursor, F8 = text cursor, etc
 - Shift + | to show/hide guides
 - Lots more...learn as you want them ☺

*On Mac, “ctrl” is actually the “ctrl” key not the openApple/cmd keys

Getting Started

- A quick aside about importing
 - These programs are also super powerful for editing graphs to make them publication quality
 - Any pdf can be imported using File > Import
 - All components of the pdf (text, paths, objects) will then be editable
 - For making your own figures and combining several graphs into a single multi-panel figure, this is super powerful

Outline

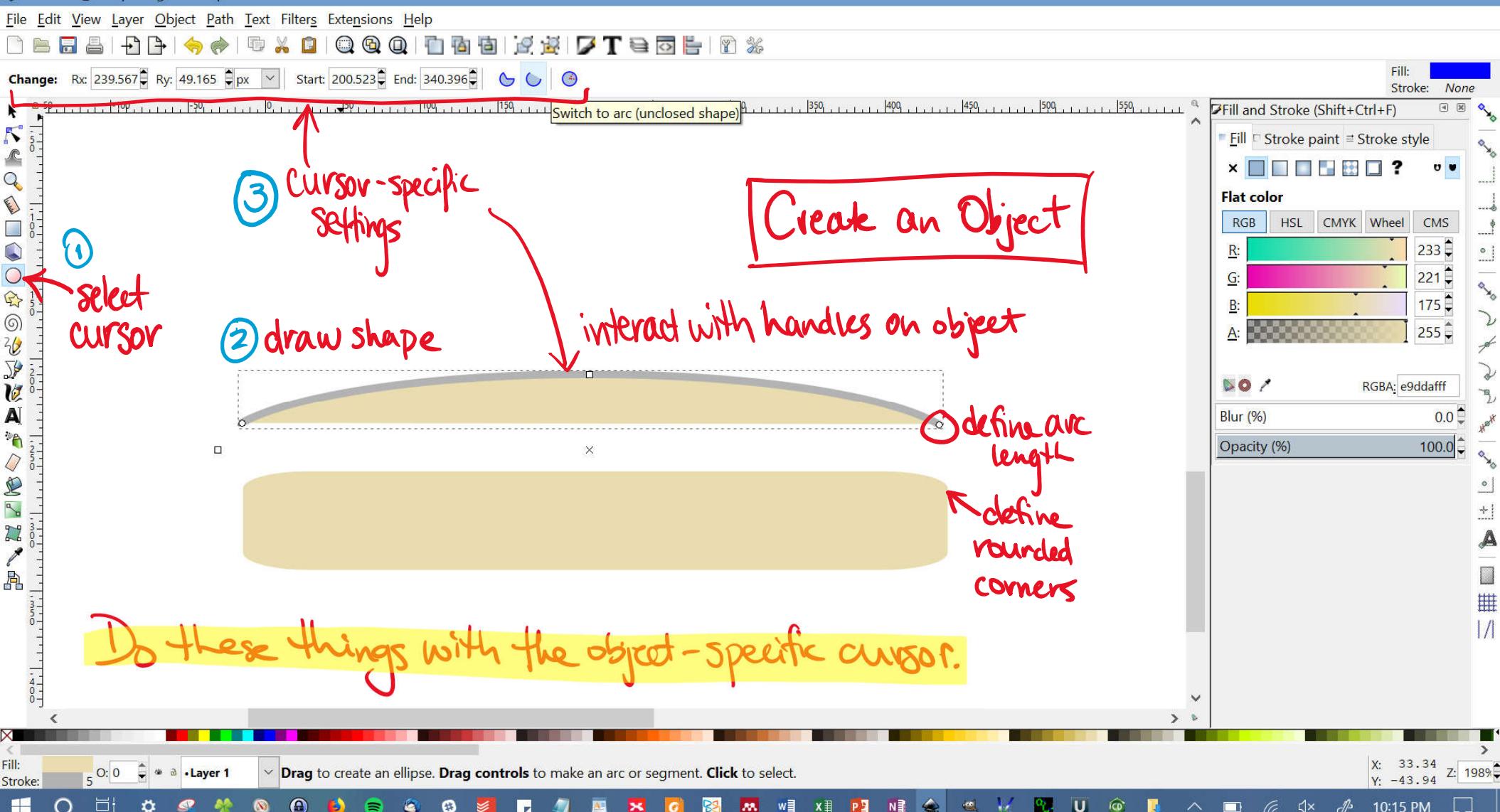


Outline

- Create
 - Squares, ellipses, lines, text
- Manipulate
 - Move, Scale, Rotate
 - Fill, Stroke
 - Group
 - Order
 - Flip
- Tools
 - Guides
 - Snap
 - Align

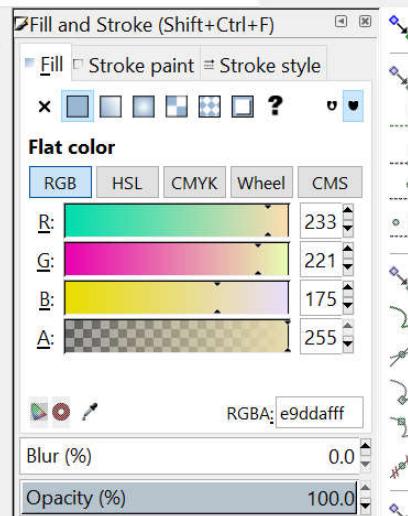
A Note About Text

- Inkscape is not great with text, so I use it sparingly
- Font size is not locked, so it resizes when you resize the box it is in
- Subscript and superscript format incorrectly when you change the font size. If you change the font size, you just have to delete and re-type the subscript and superscript letters.
- It will not wrap lines. You have to add hard enters
- You can set a default font size and font style in the Text and Font formatting window.
- Symbols: Text > Glyphs to insert symbols
 - Select font, try different scripts and range to find the symbols you want



Fill: Stroke:

Fill: Stroke:



RGB: e9ddaff

Blur (%): 0.0

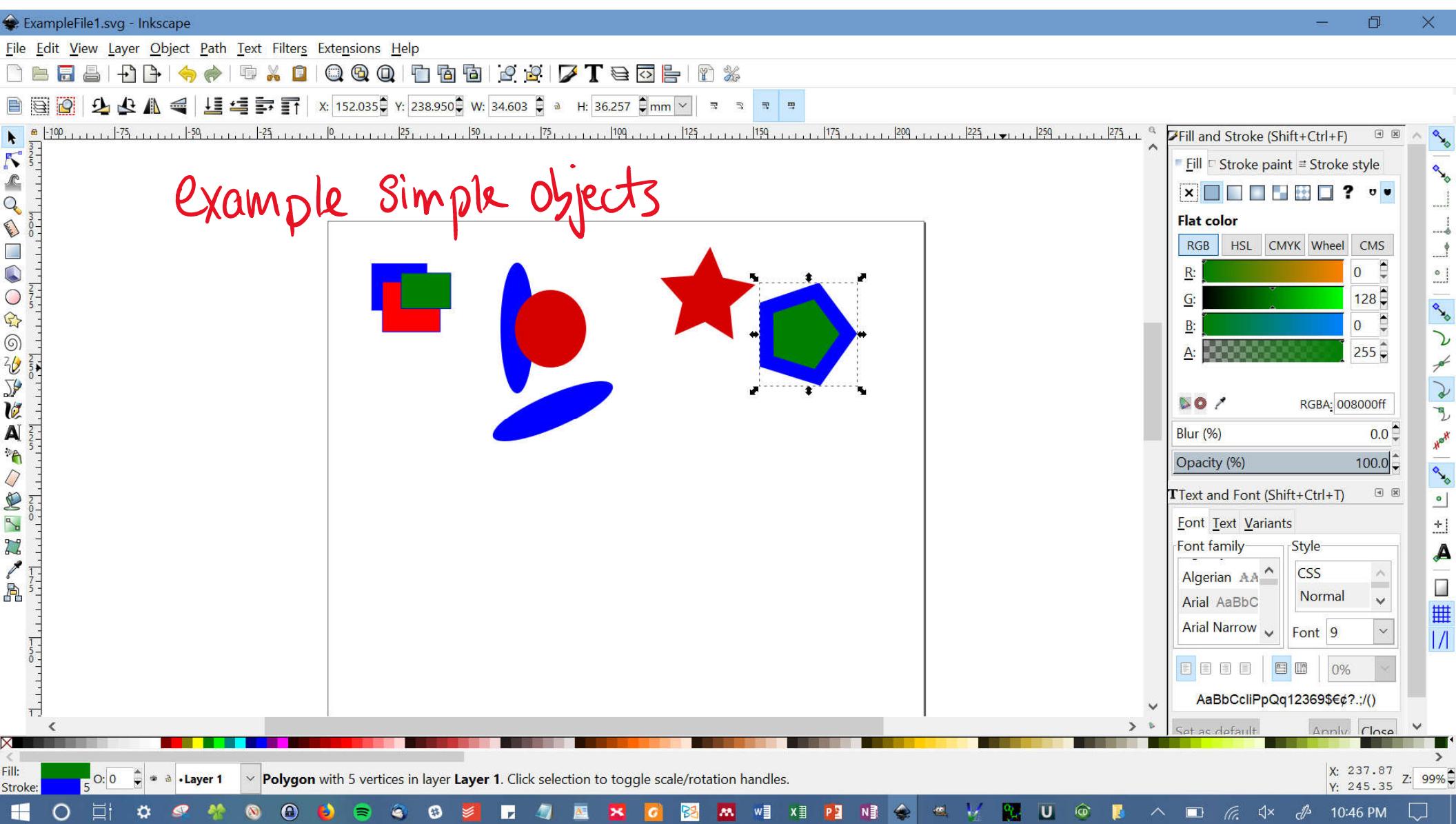
Opacity (%): 100.0

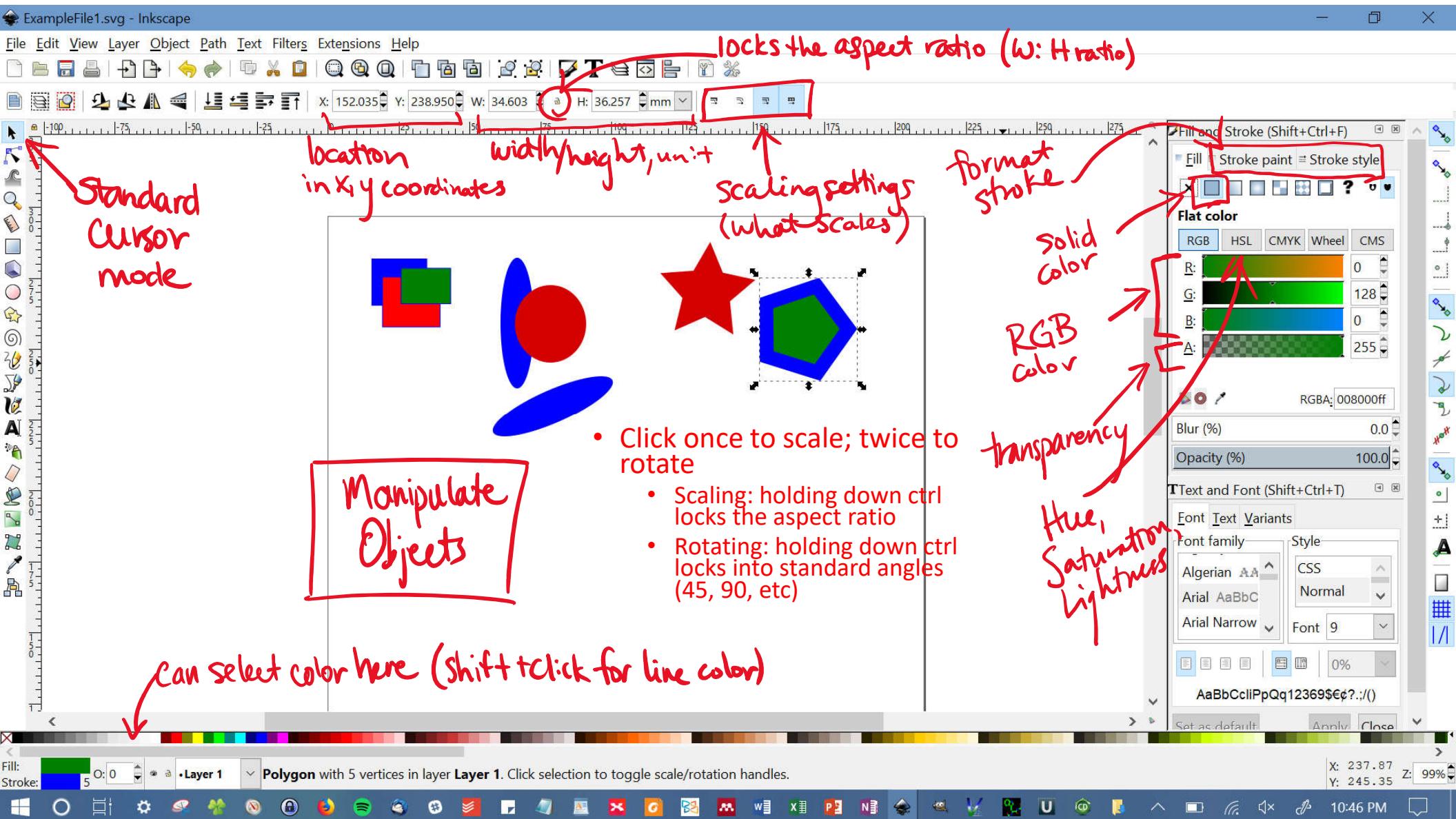
X: 33.34

Y: -43.94

Z: 198%

X: 10:15 PM







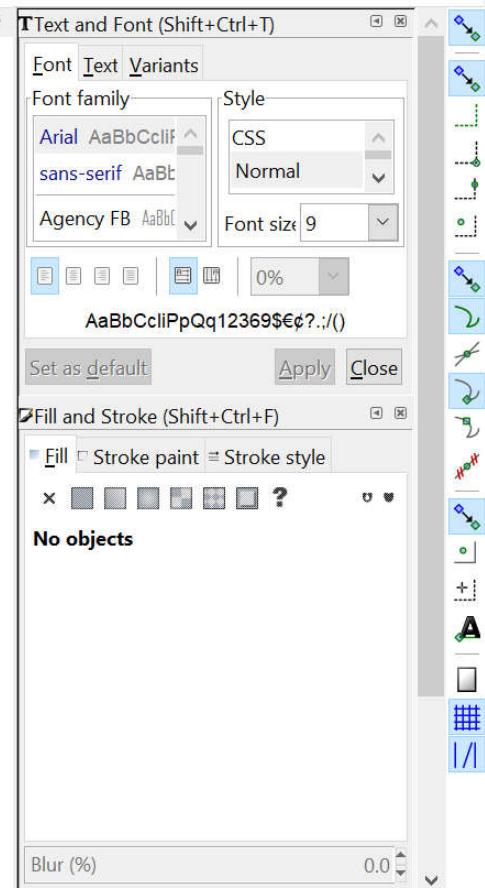
Standard cursor

- Object order
 - Can change which is on top.
 - Groups will trump order though...
- Rotate/Flip
 - Rotate 90 degrees
 - Flip horizontally or vertically

• Grouping

- Can have groups of groups of groups...
- To manipulate objects w/i groups, double click into the group. **You will stay in this group (and add to it) until you double click again.**
- I group and ungroup a lot

Basic Manipulation



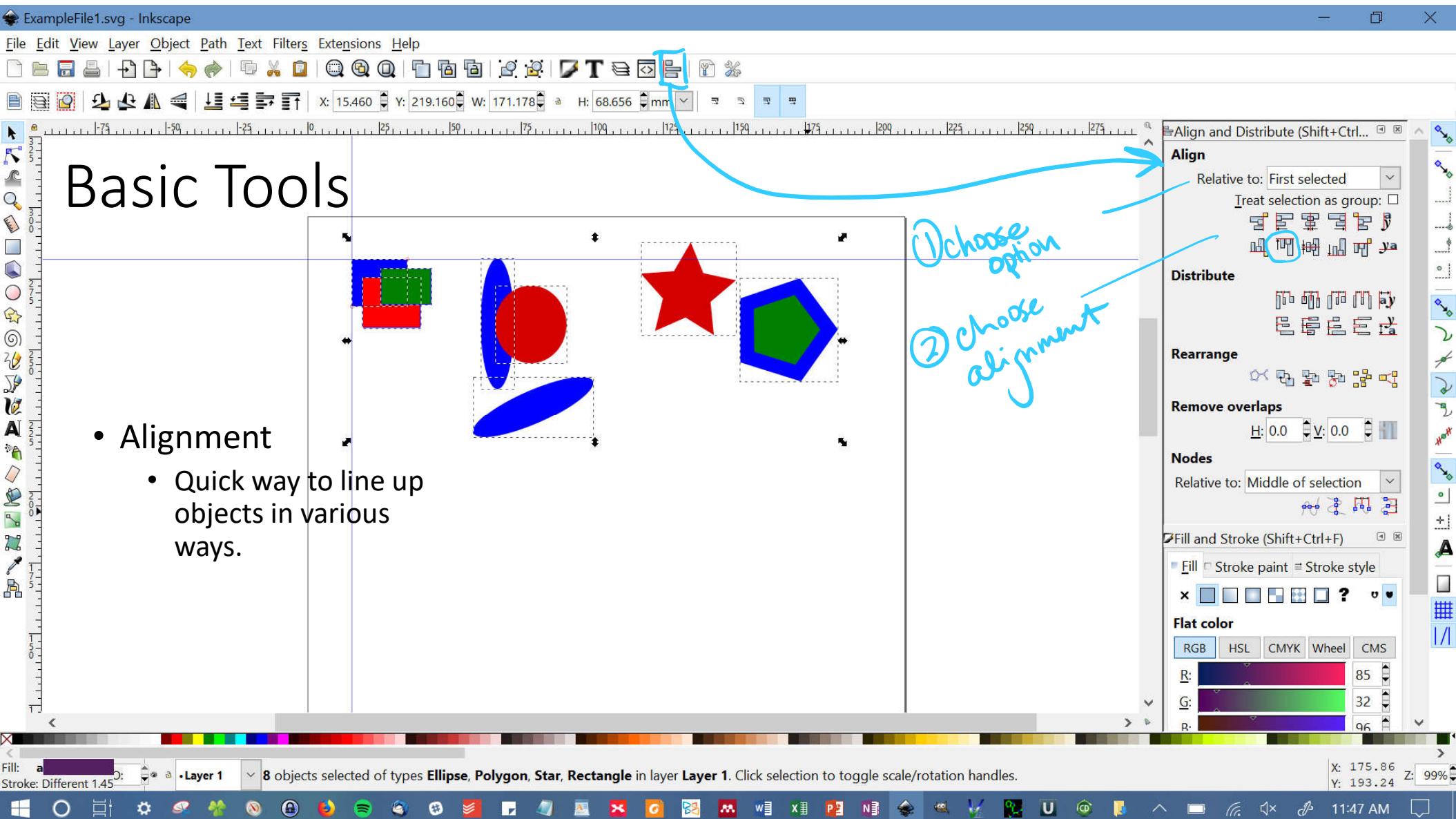
Basic Tools

- Guides
 - Drag down from the top and side rulers
 - Shift + | to see/hide
- Snap
 - A bunch of options that auto-align objects when they are moved close together
 - If left on, can be annoying when you don't want
 - Useful feature at times

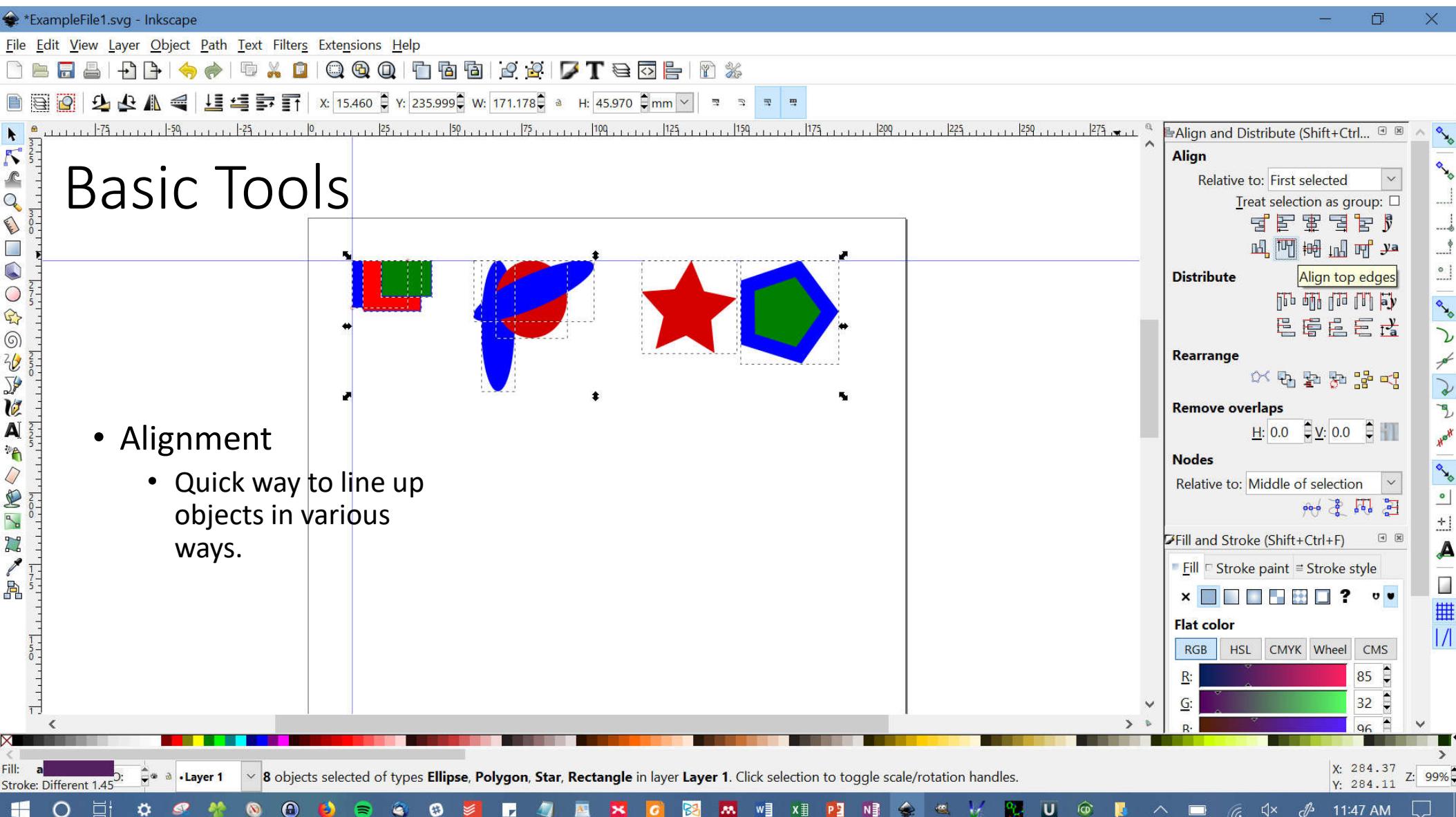
The screenshot shows the Inkscape interface with several annotations:

- A blue arrow points from the text "Drag down from the top and side rulers" to the top and left rulers, which are used for creating guides.
- A blue arrow points from the text "Shift + | to see/hide" to the vertical and horizontal grid lines on the canvas.
- A blue arrow points from the text "Snap" to the "Align and Distribute" panel on the right, which contains a "Snap" section.
- A blue arrow points from the text "A bunch of options that auto-align objects when they are moved close together" to the "Align" section of the "Align and Distribute" panel.
- A blue arrow points from the text "If left on, can be annoying when you don't want" to the "Distribute" section of the "Align and Distribute" panel.
- A blue arrow points from the text "Useful feature at times" to the "Rearrange" section of the "Align and Distribute" panel.

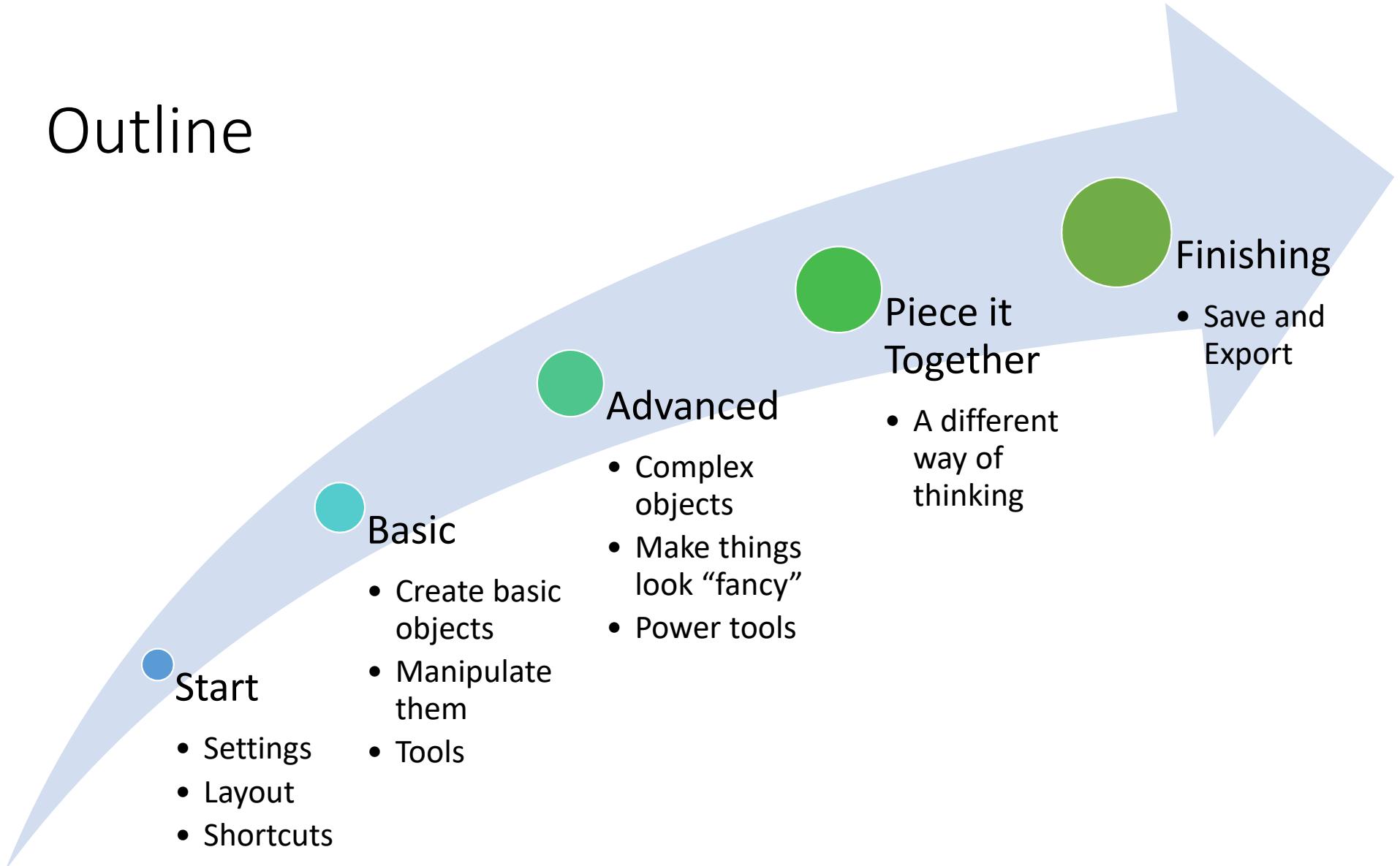
Other visible elements include the top menu bar (File, Edit, View, Layer, Object, Path, Text, Filters, Extensions, Help), toolbars, and a color palette at the bottom.



11:47 AM

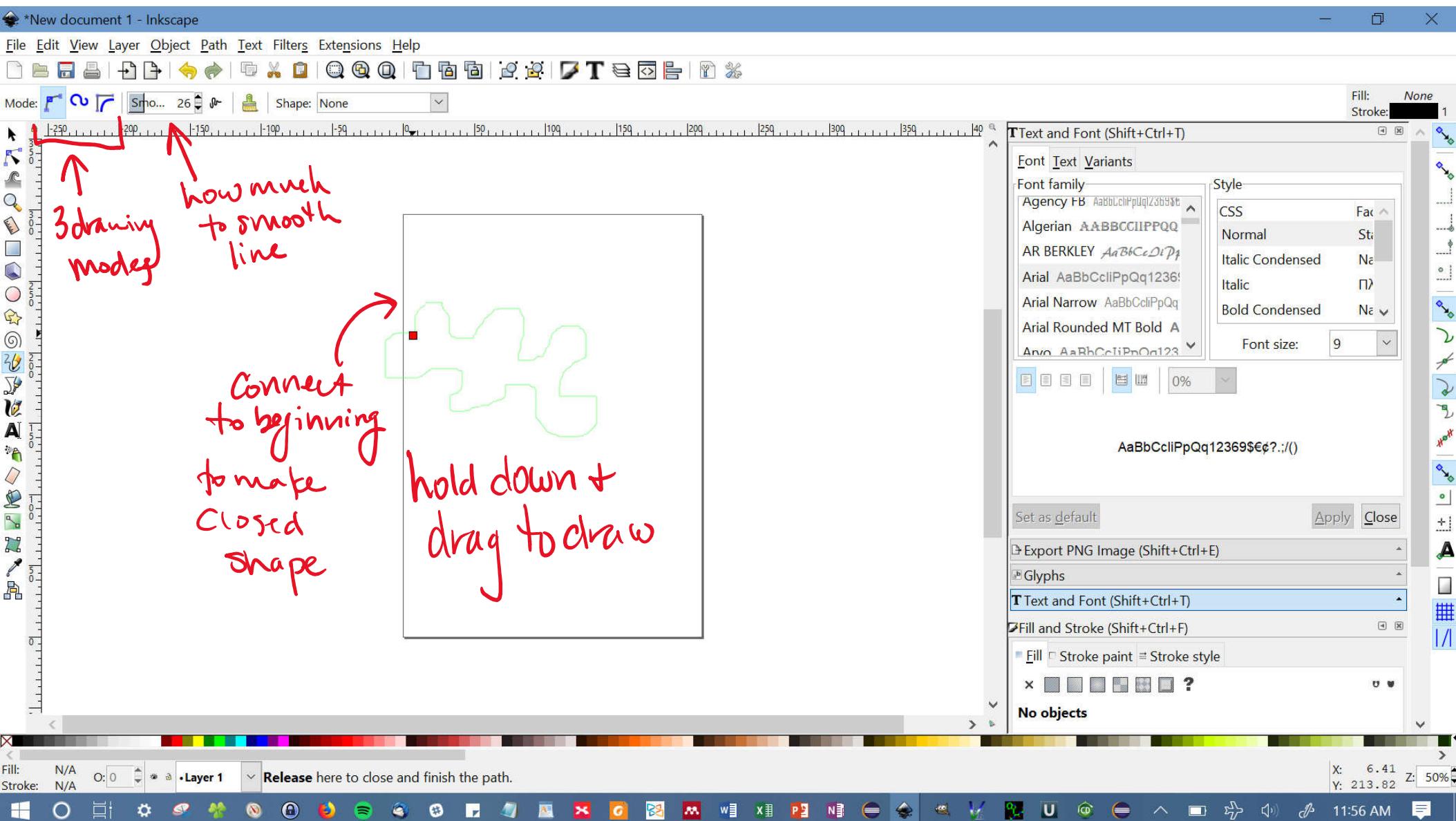


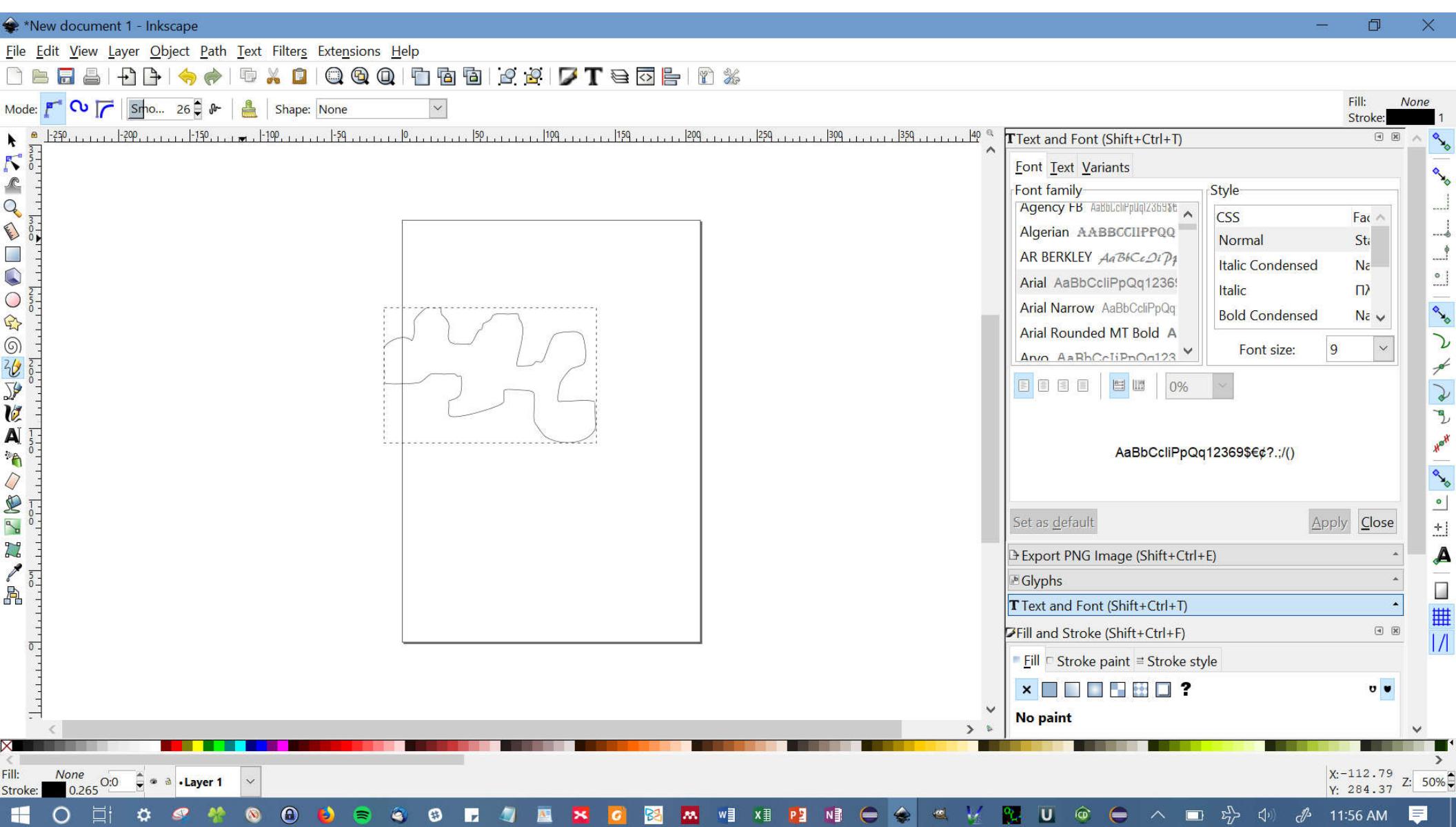
Outline

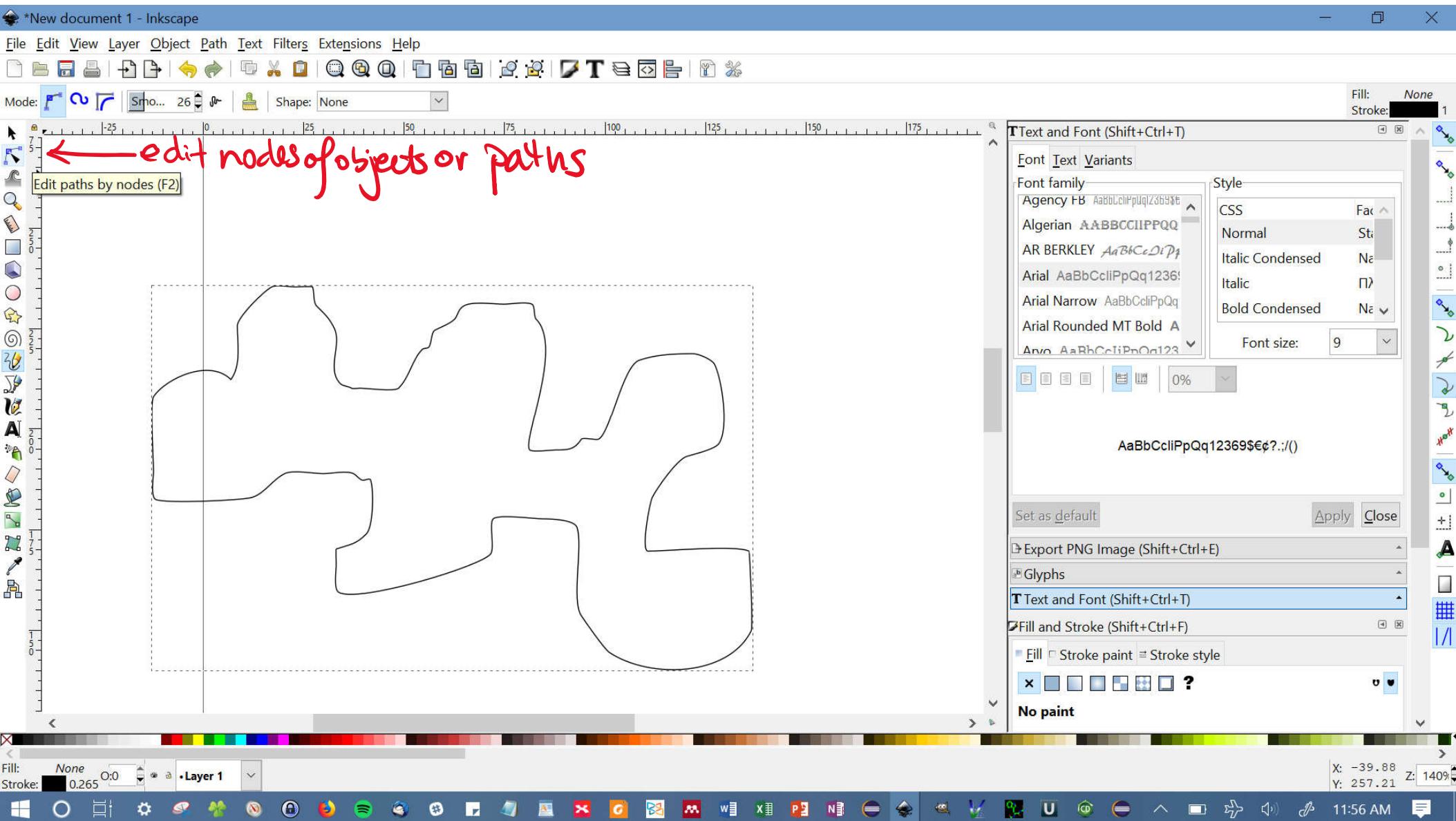


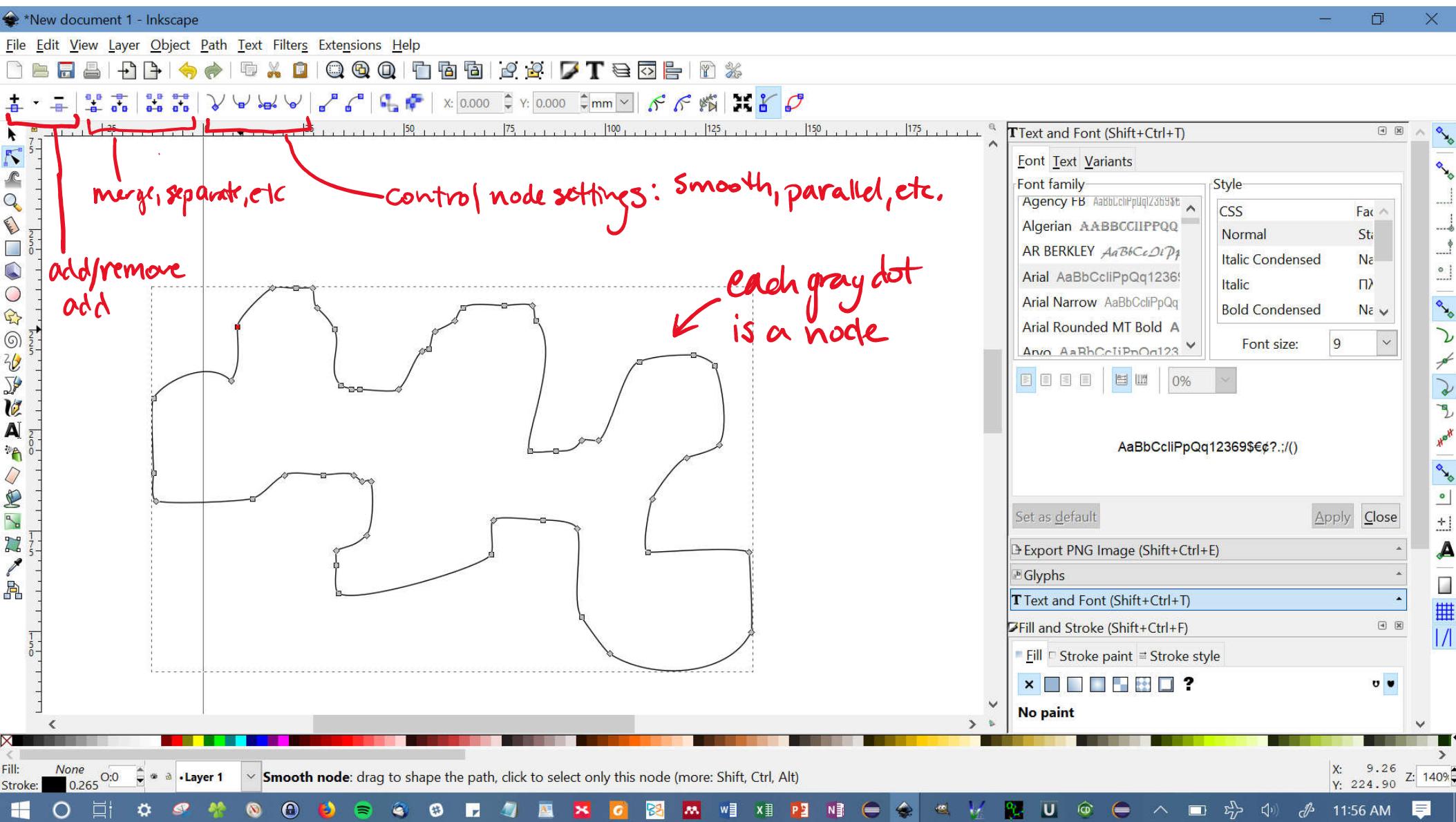
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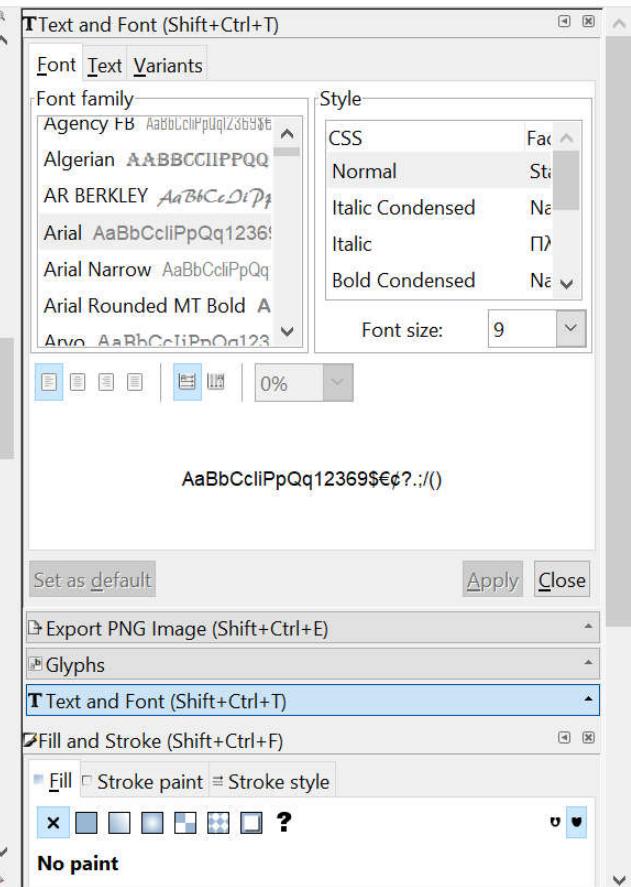
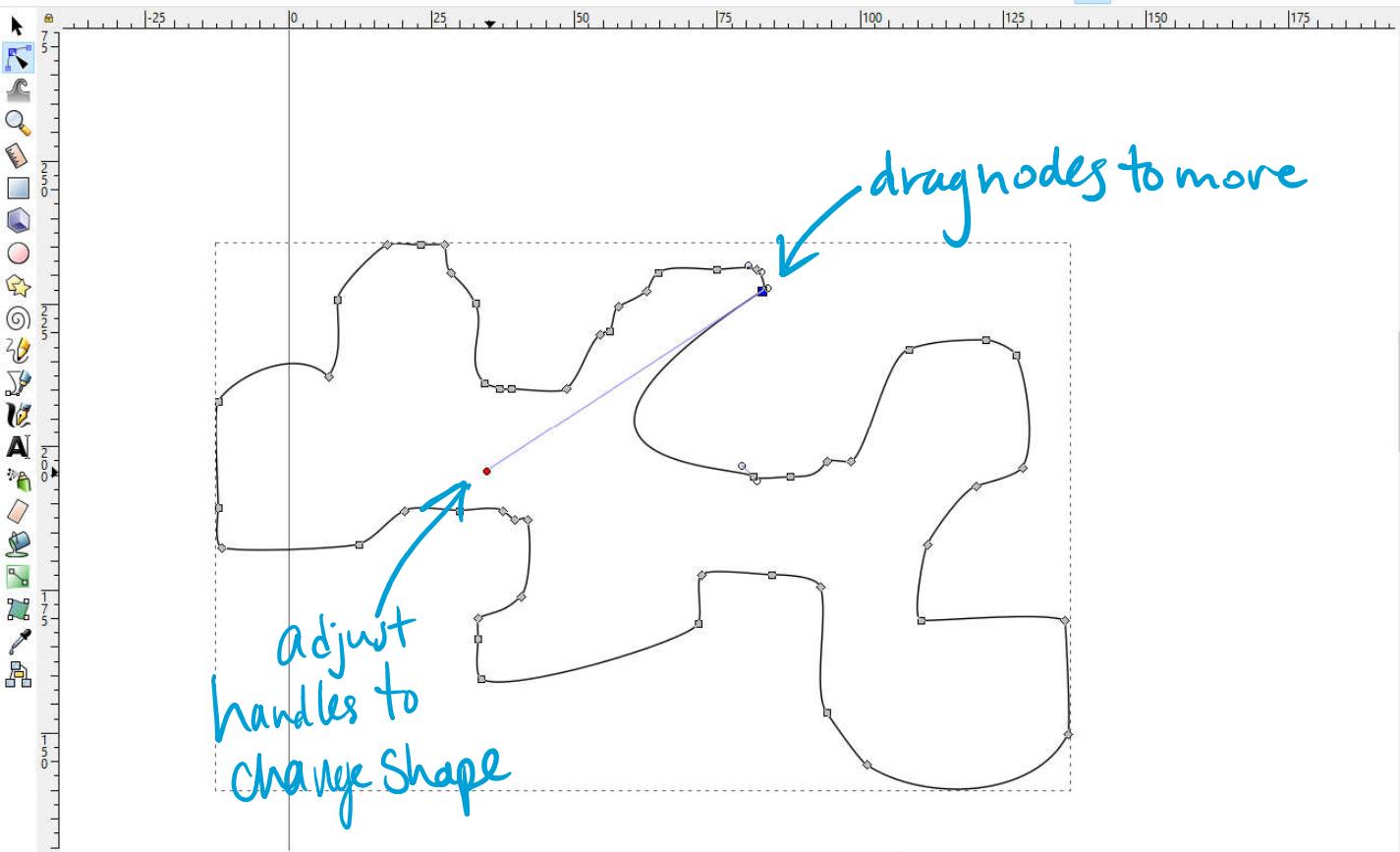
- Create
 - Hand draw
 - Paths
- Manipulate
 - Filling with gradients
 - Crop
 - Filters
- Power Tools
 - Object to path
 - Intersection, difference, union
 - Break apart or combine paths

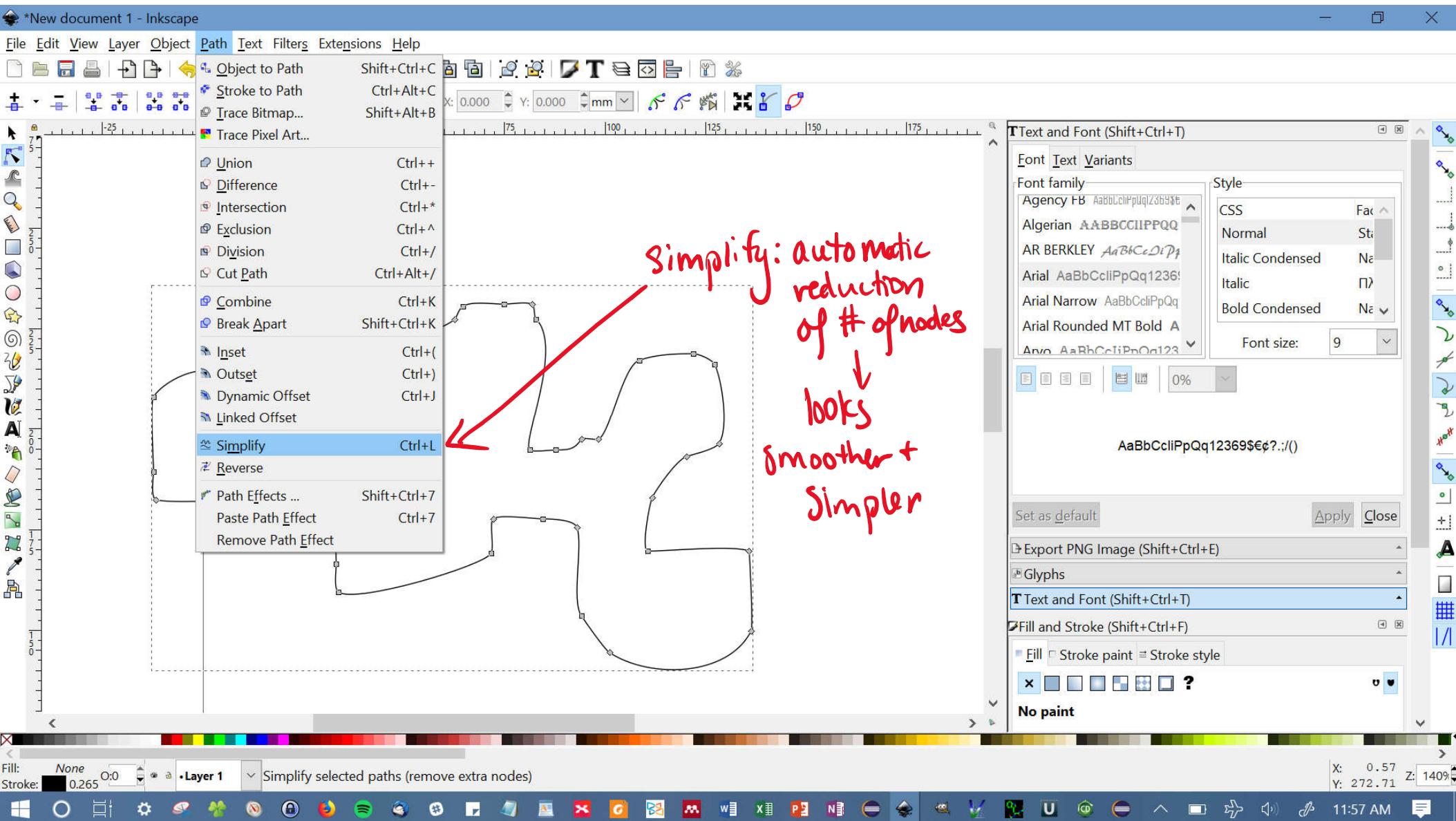


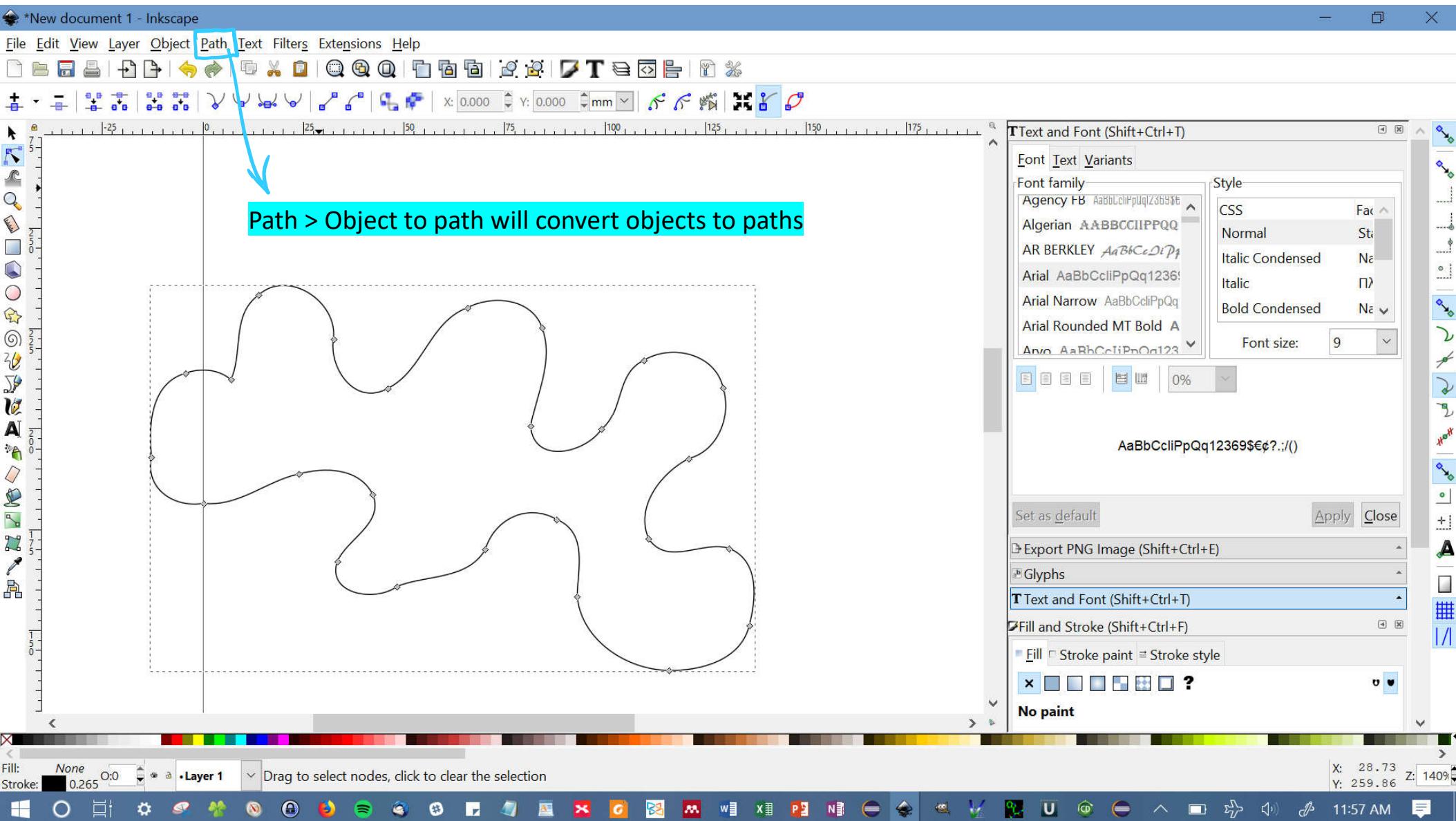


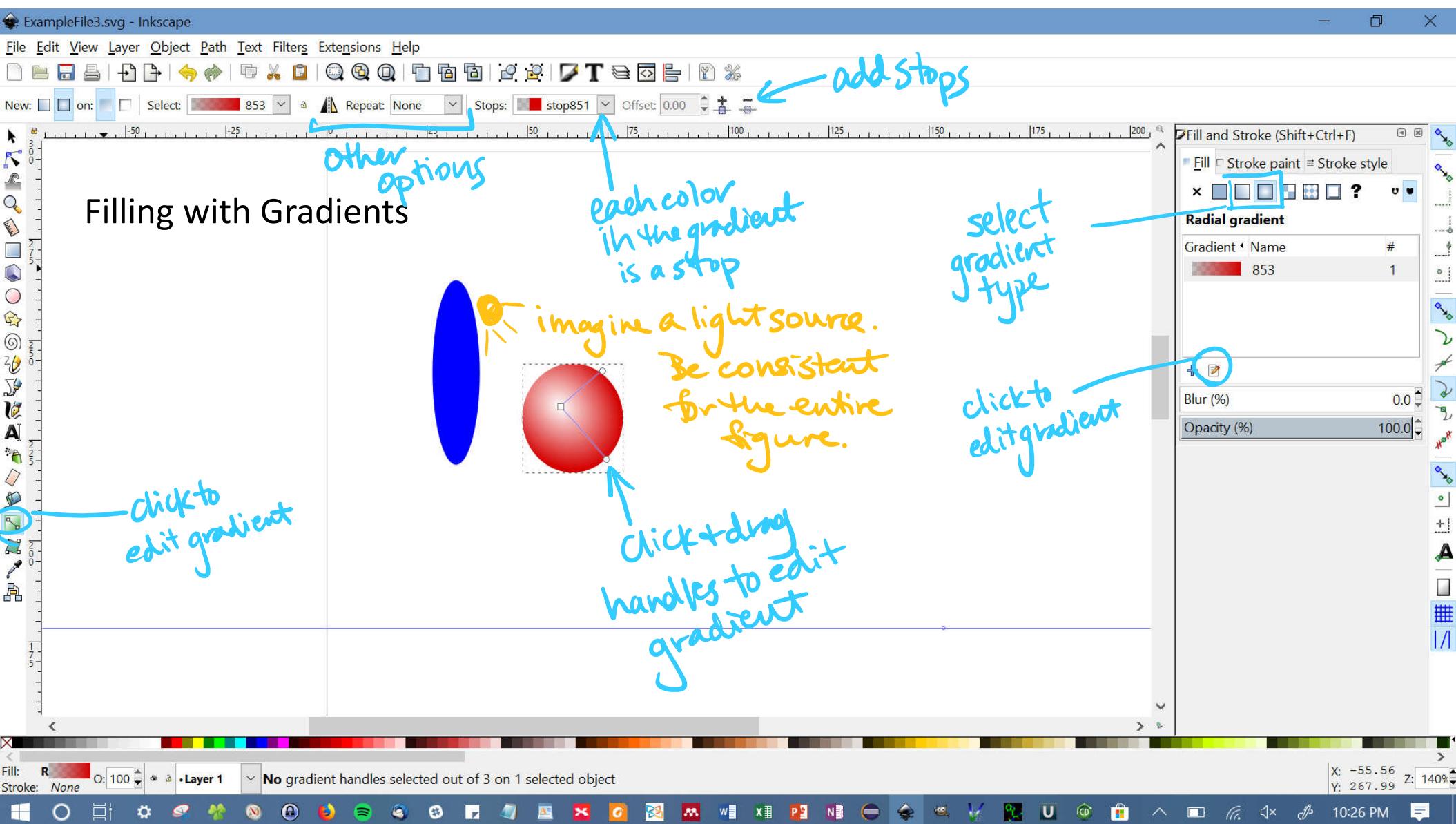


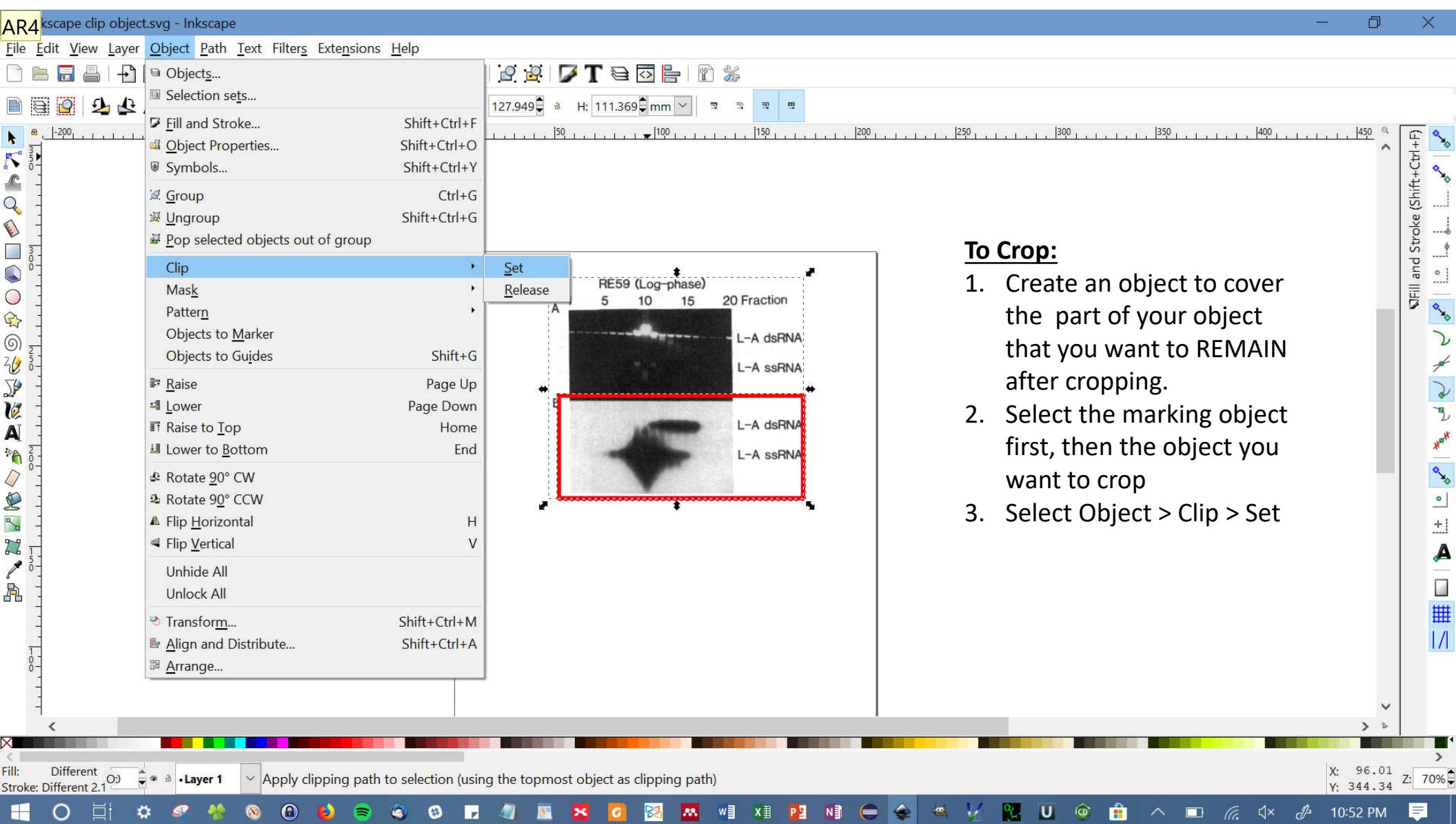








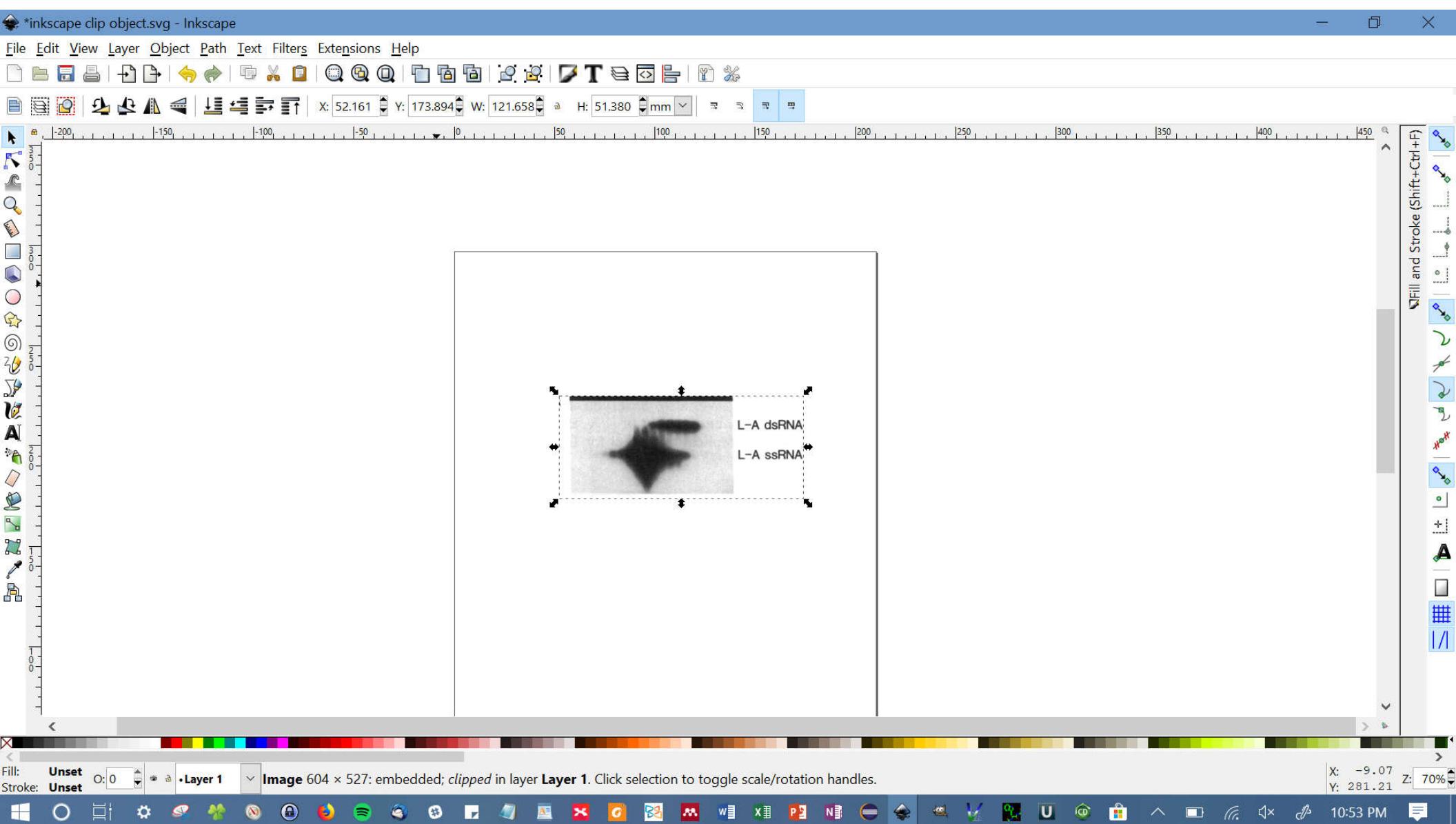


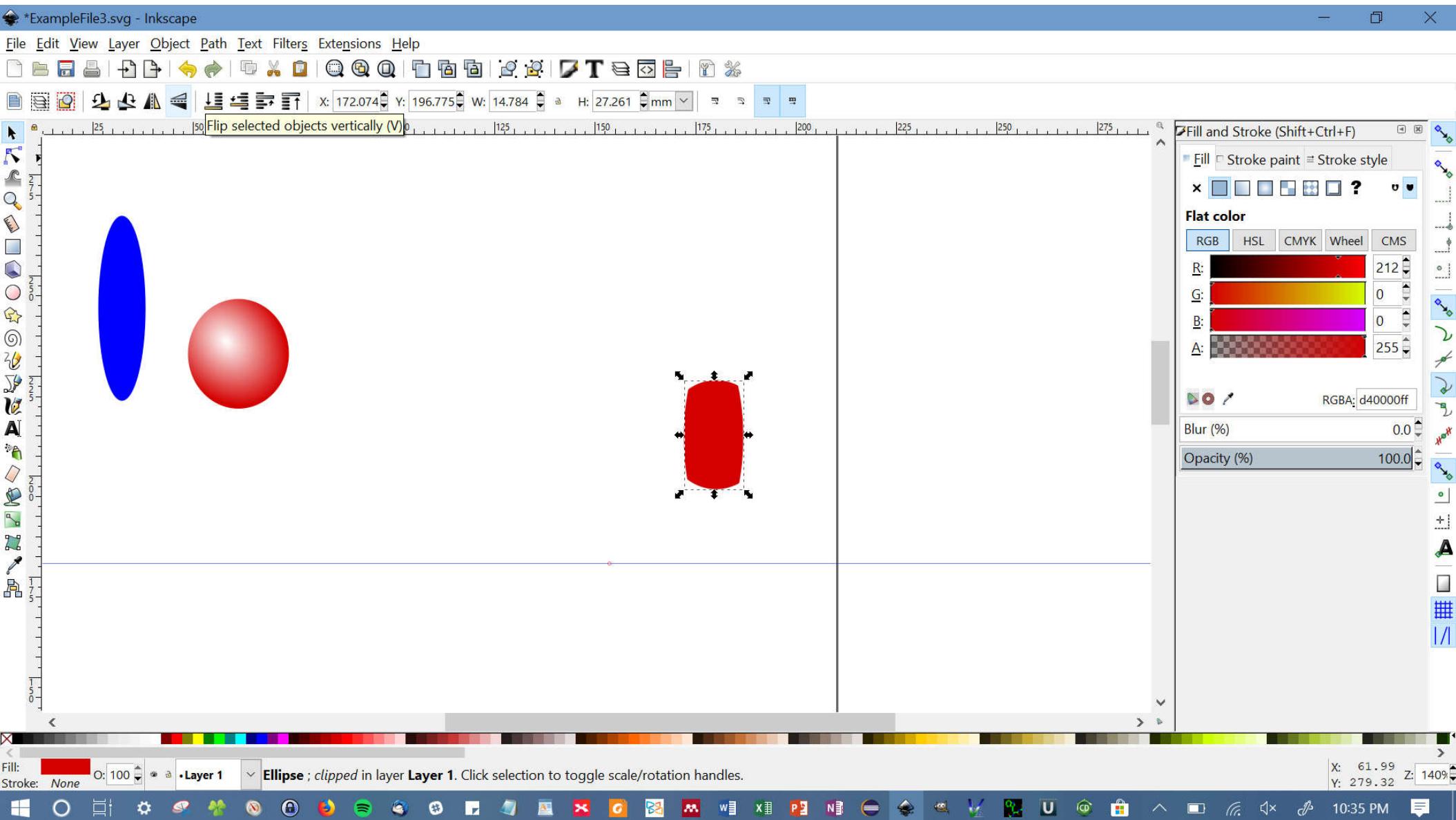


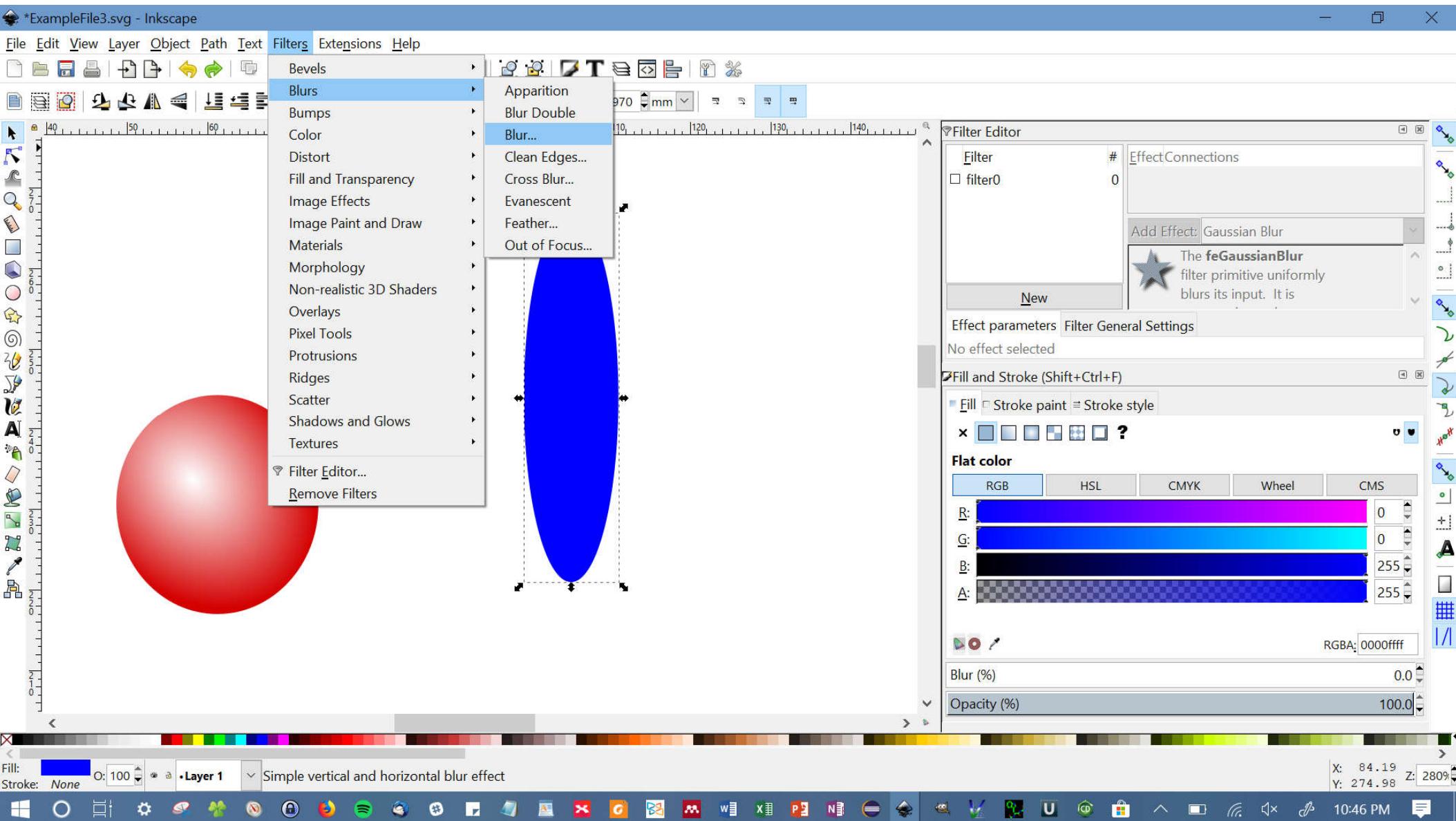
To Crop:

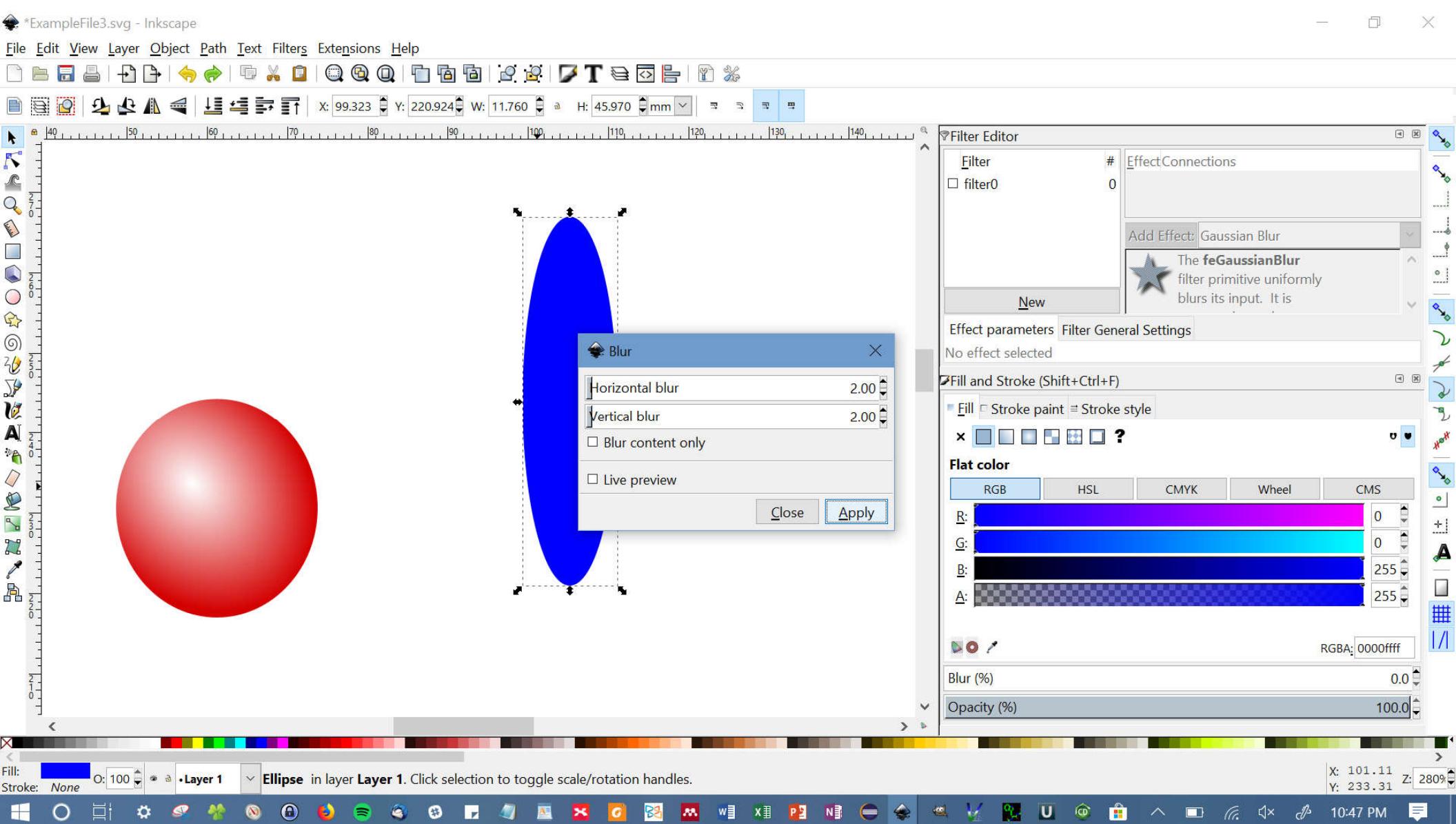
1. Create an object to cover the part of your object that you want to REMAIN after cropping.
2. Select the marking object first, then the object you want to crop
3. Select Object > Clip > Set

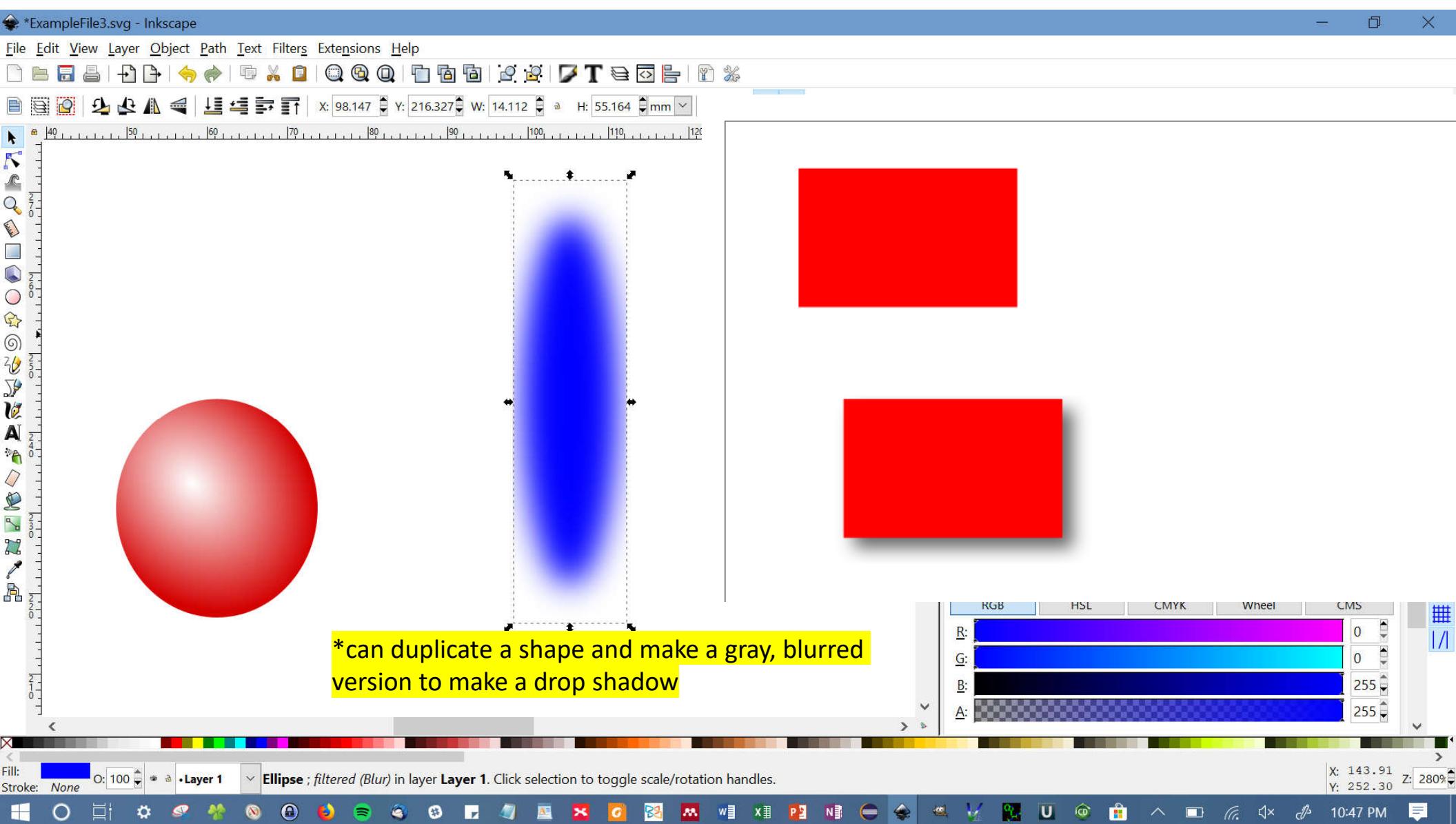
AR4 Anne Robinson, 7/16/2018

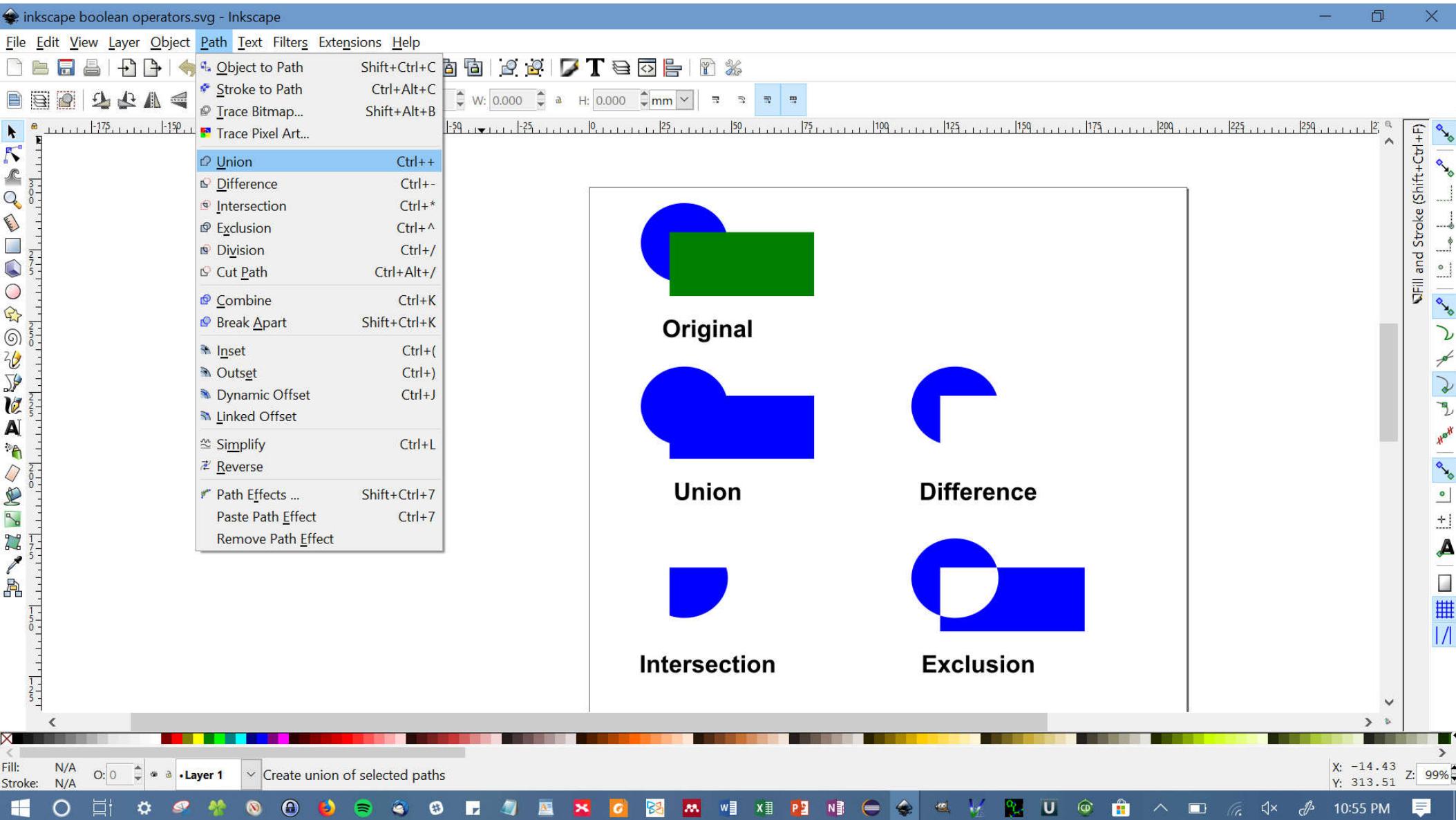


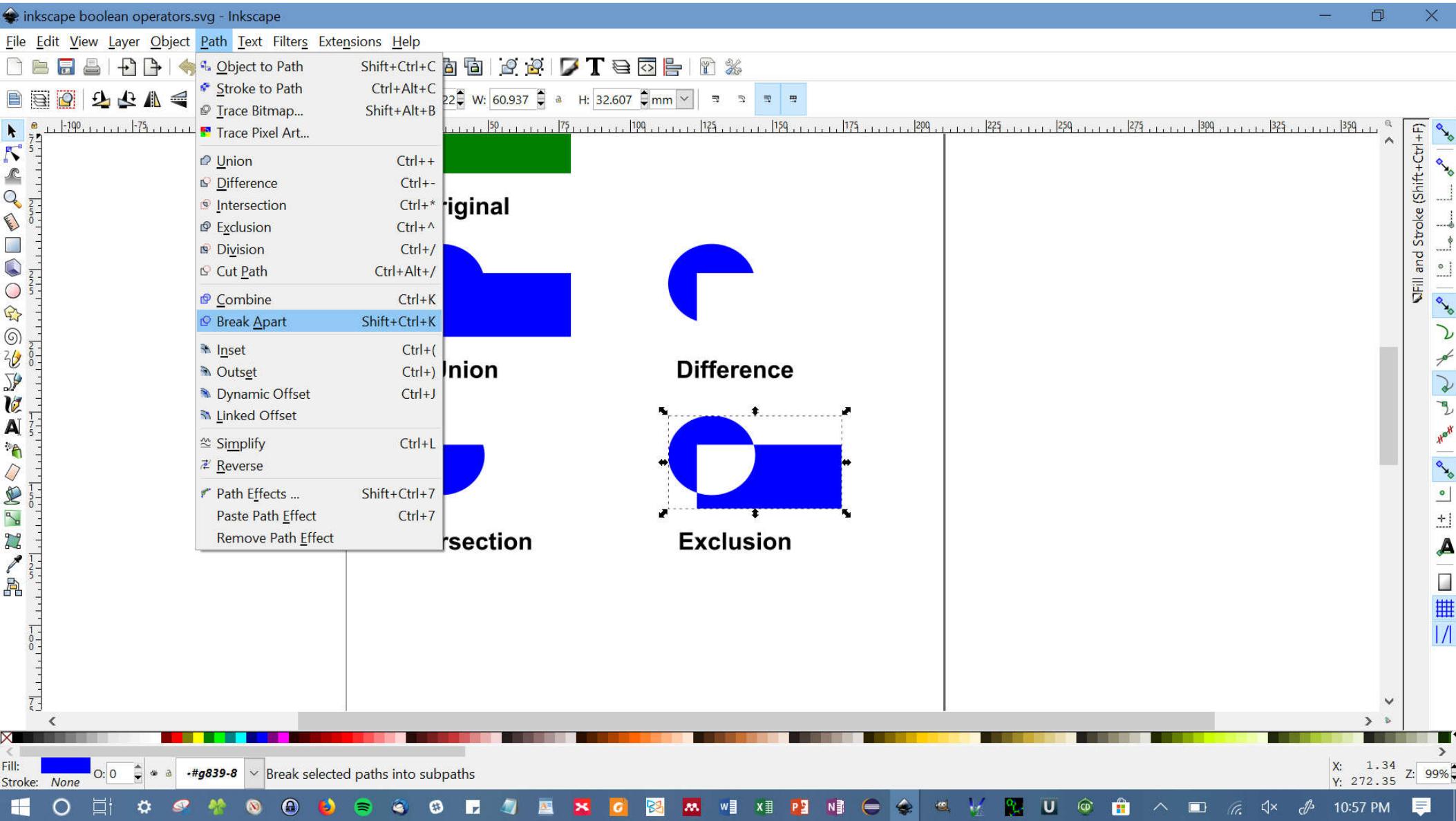


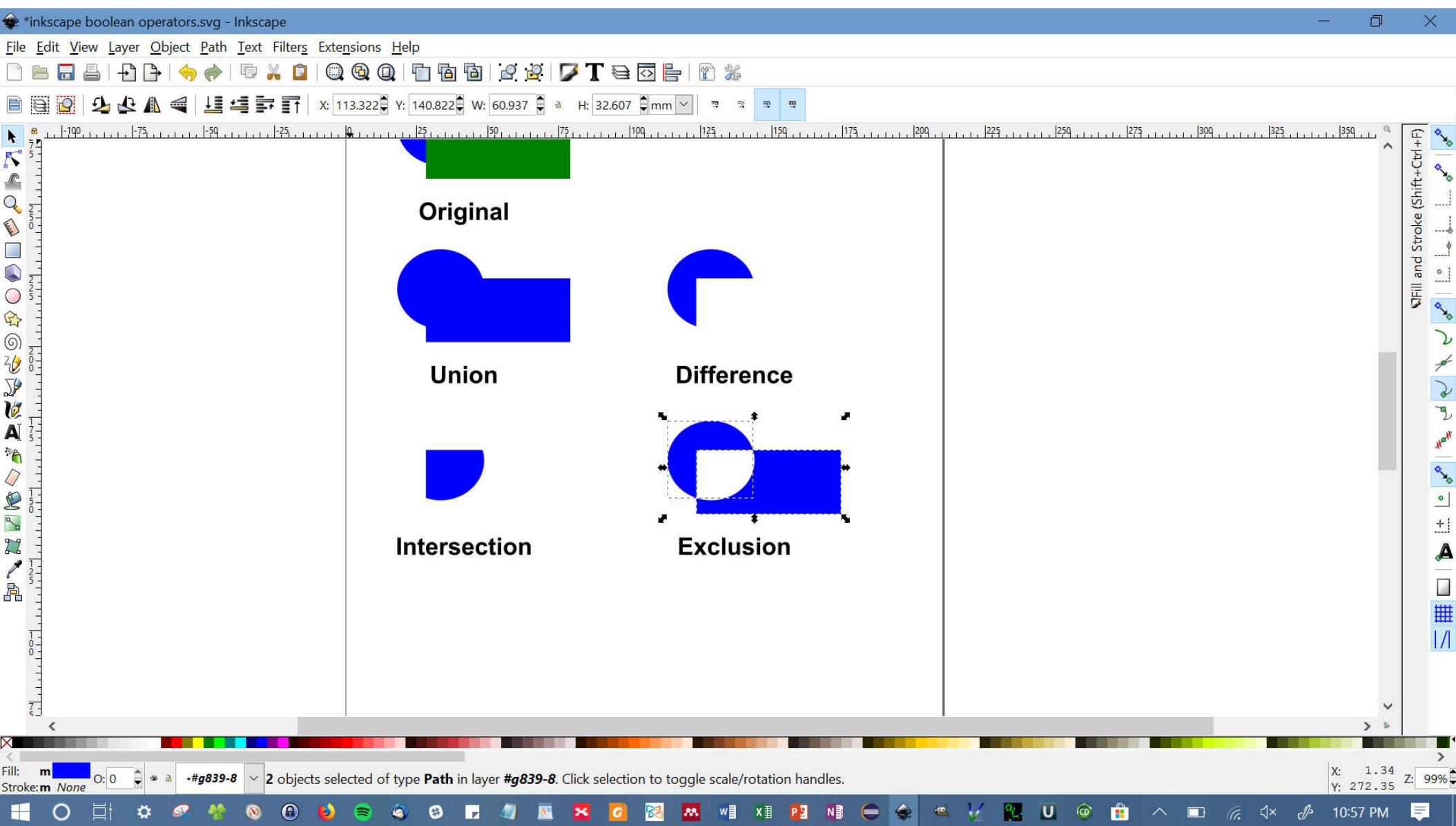


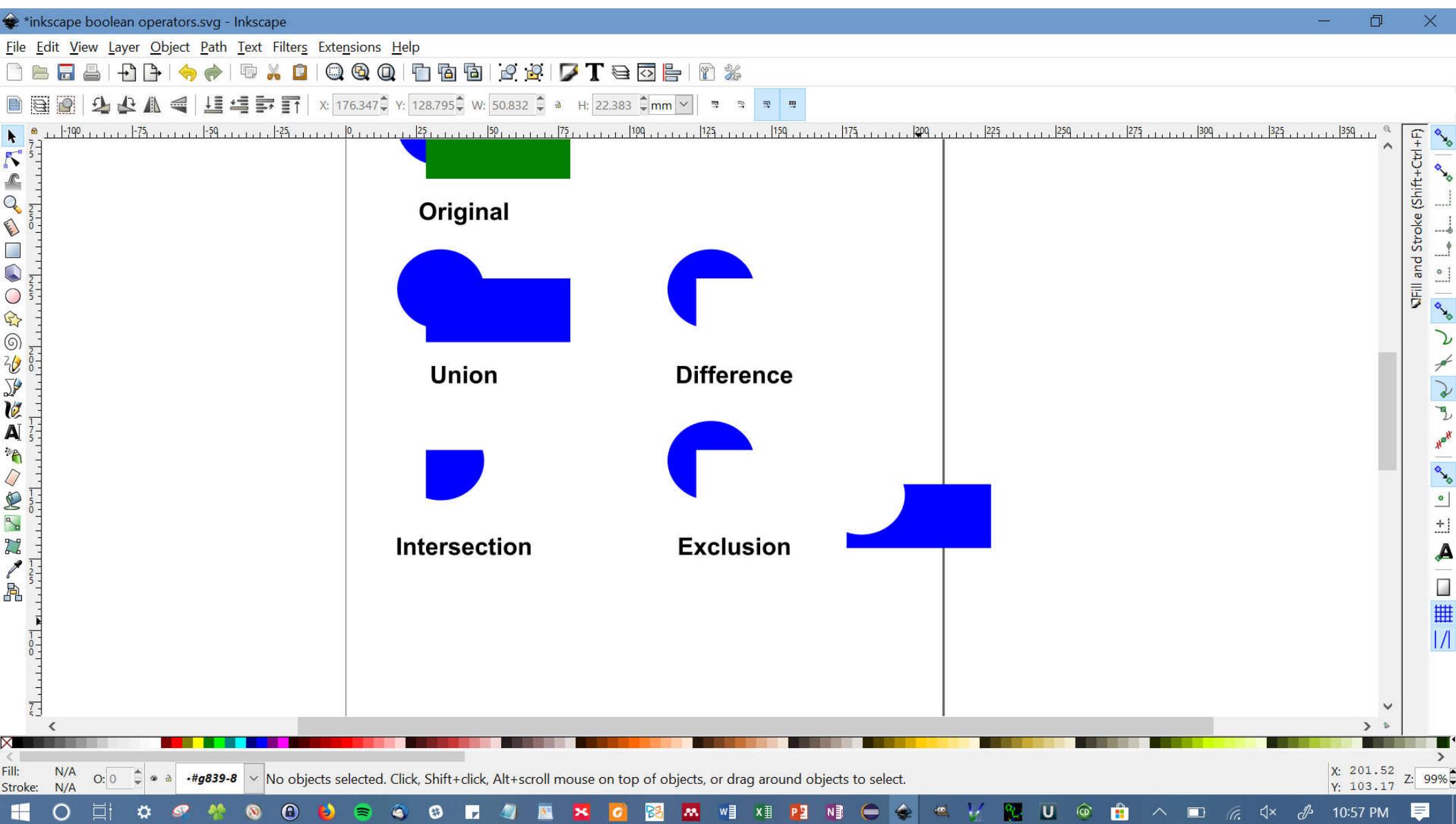




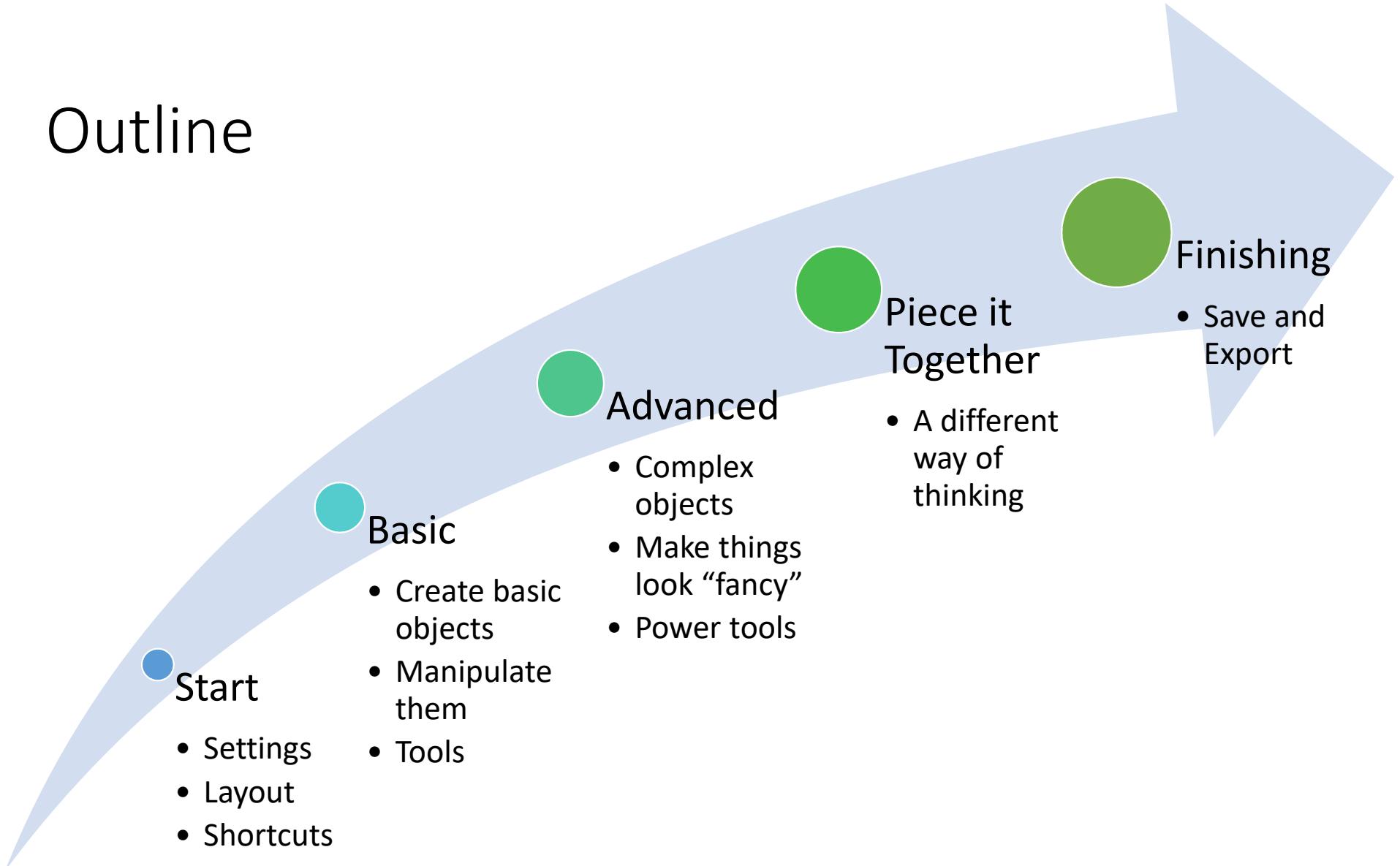








Outline

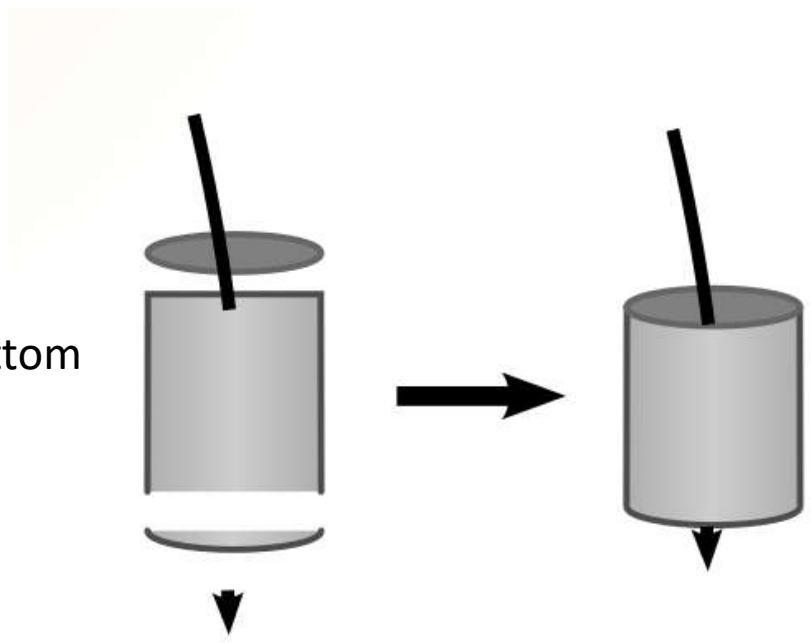


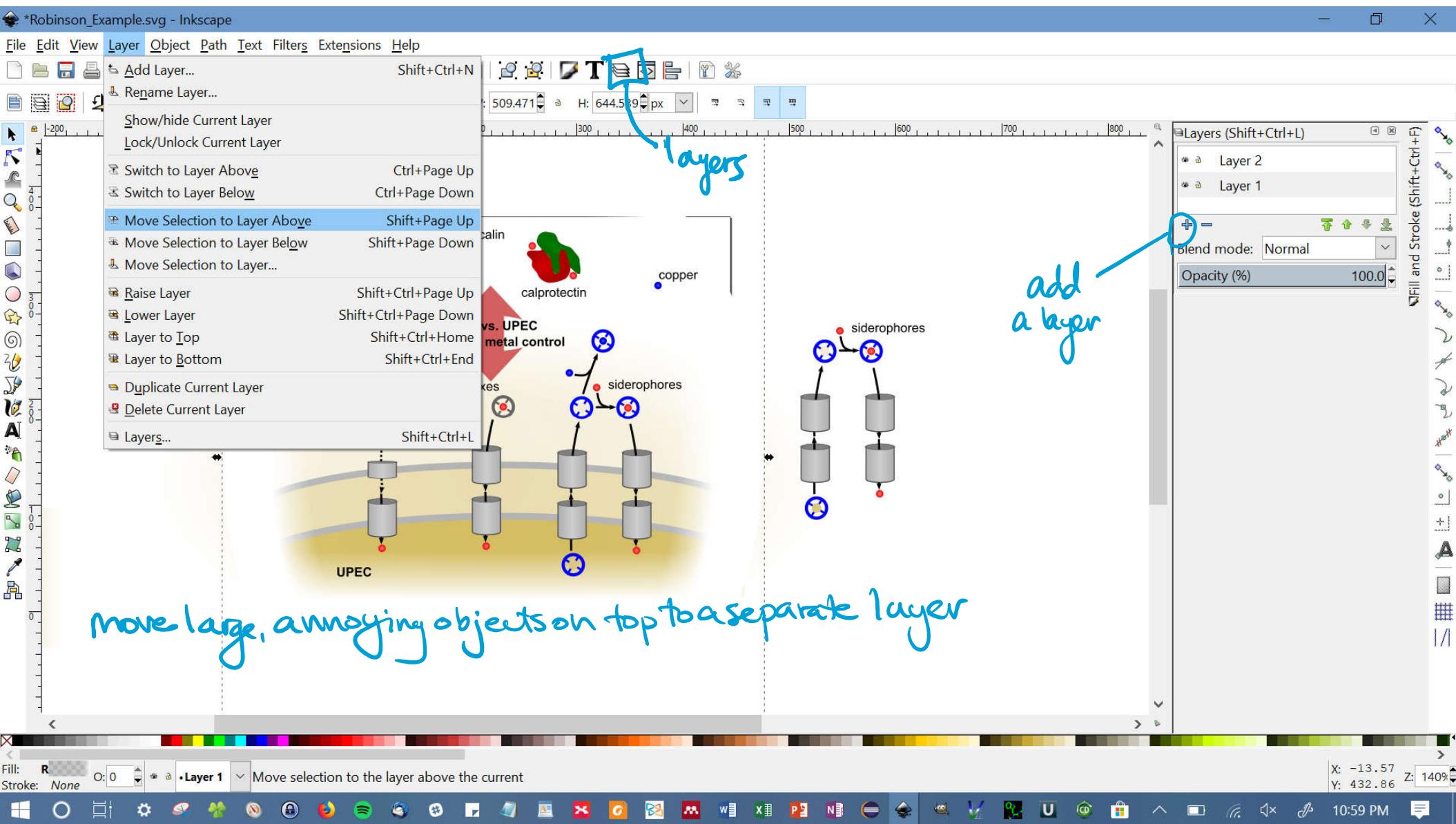


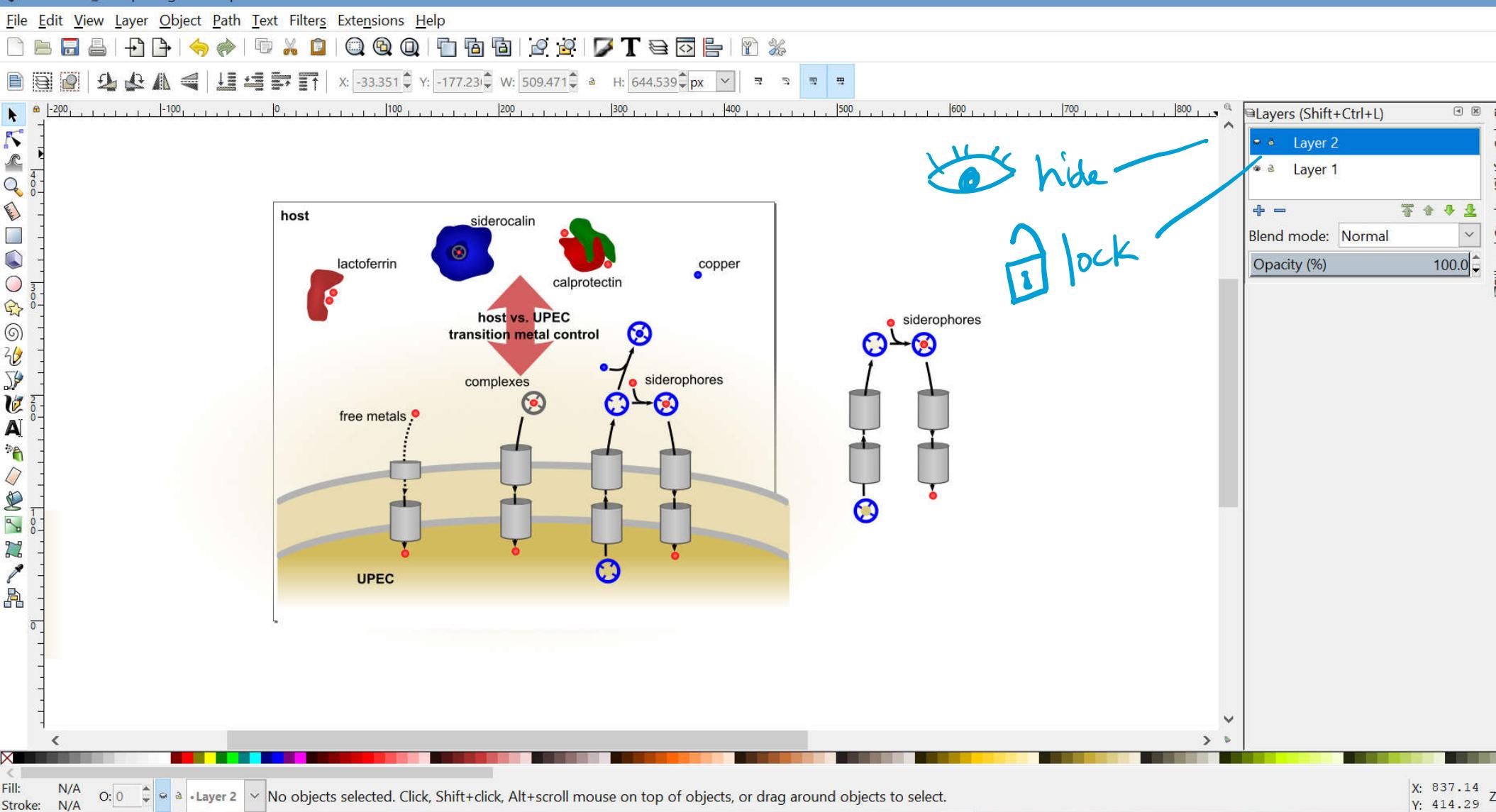
Piece it
Together

Piece it Together

- Not like drawing
 - Break into simple pieces
 - Square w/ curved bottom, 2 ellipses, lines, arrow
 - Use Constructive Geometry
 - Combine square + partial ellipse to get curved bottom
 - Control ordering (what's on top)
 - Align
 - Group
-
- Layers

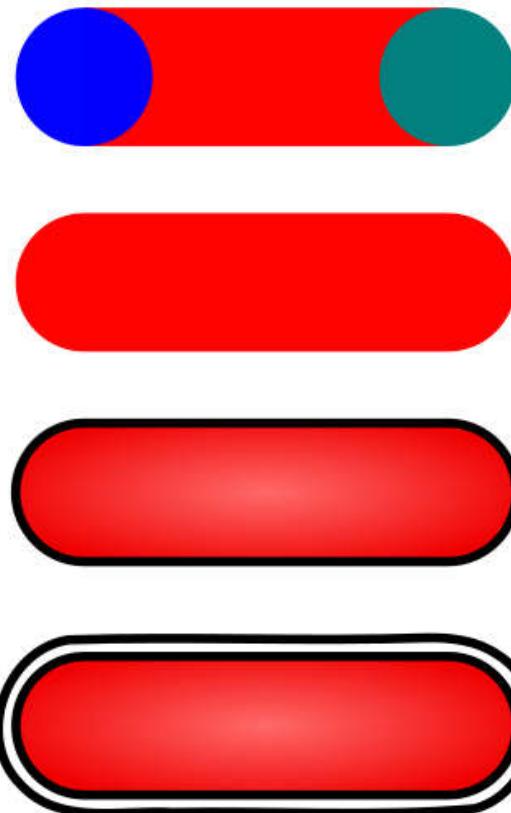








Putting it all together



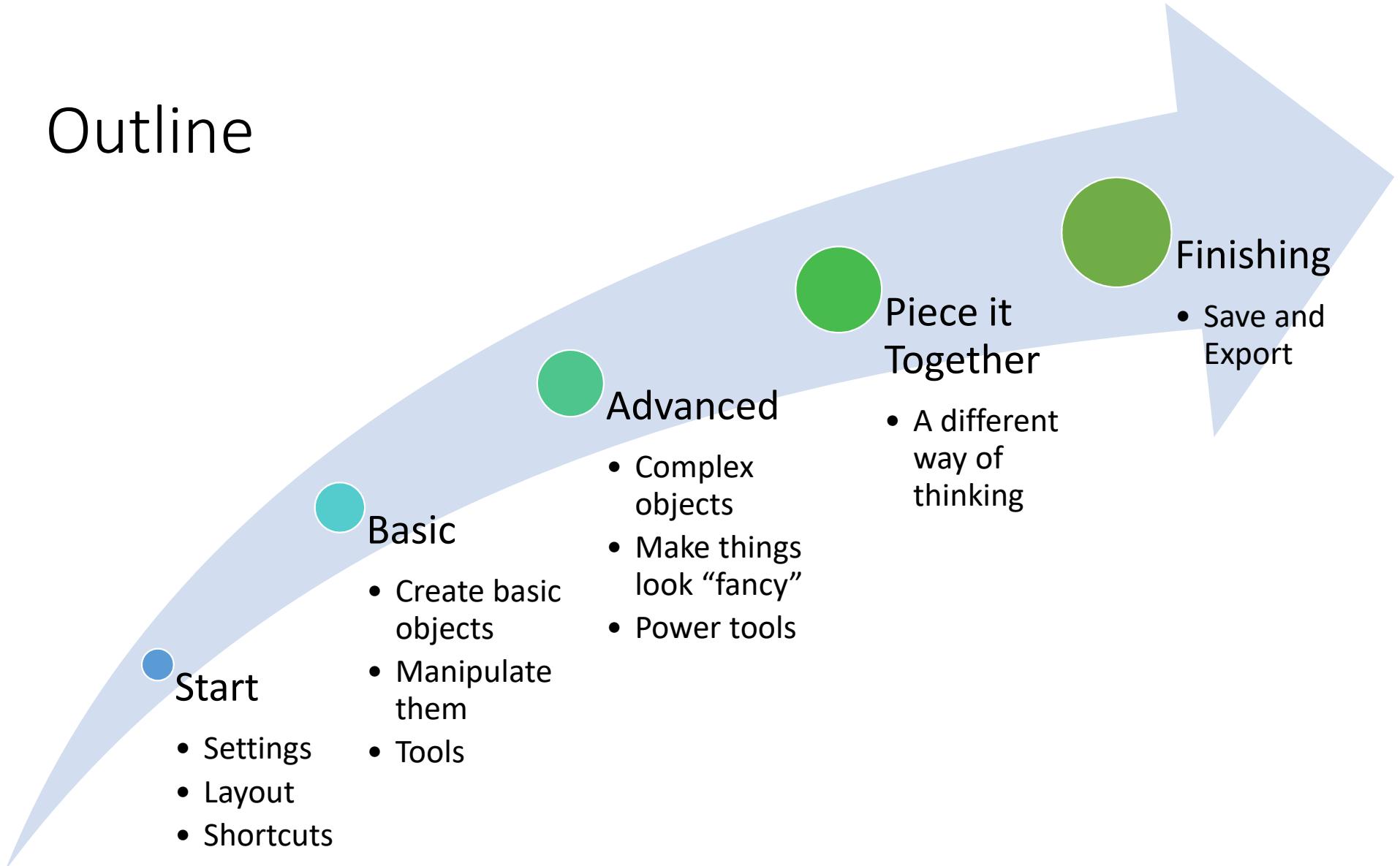
1. Make shapes
2. Convert to paths

3. Union of paths

4. Gradient fill
5. Black stroke

6. Duplicate path
7. Remove duplicate fill
8. Outset duplicate path

Outline

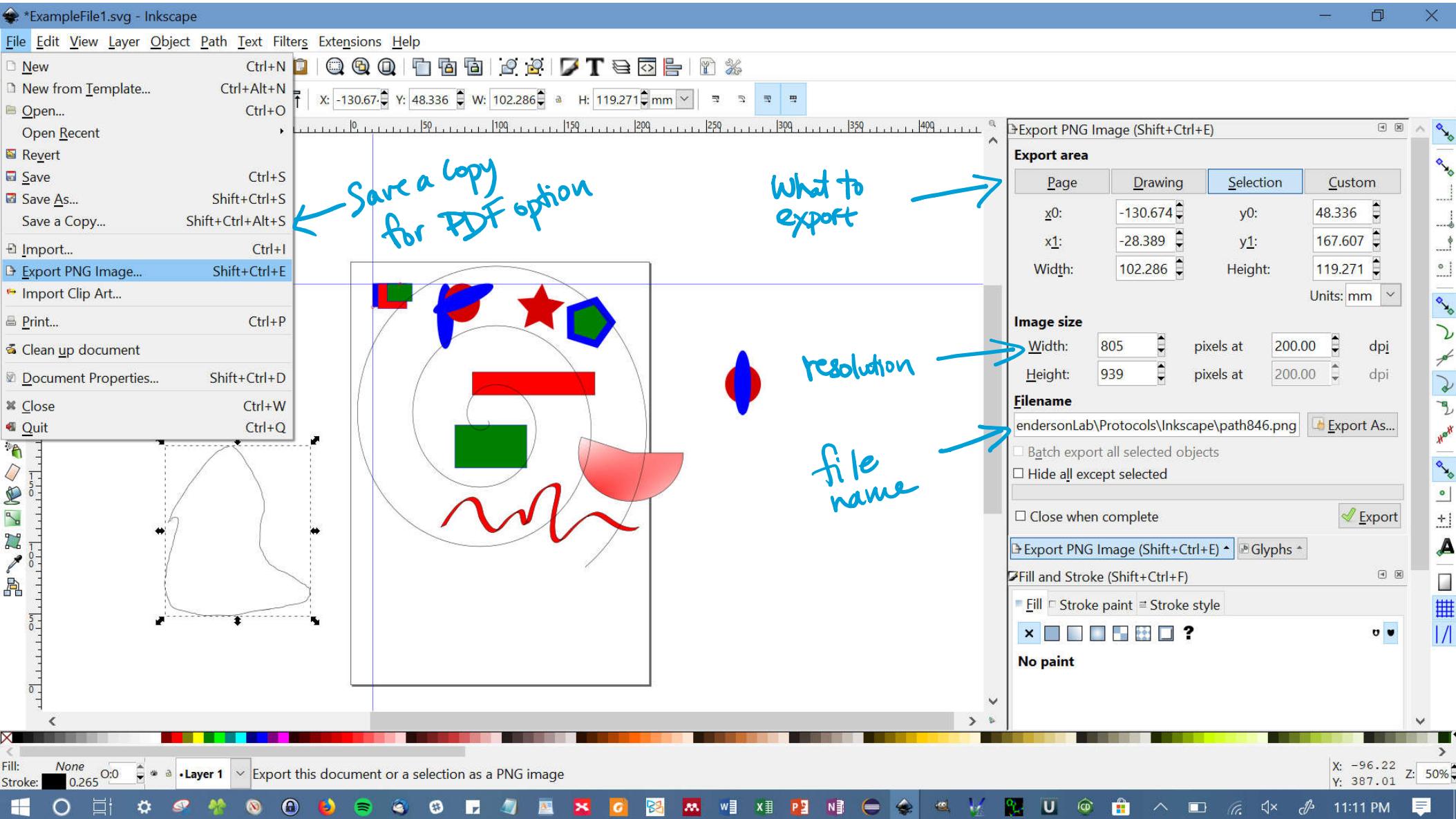


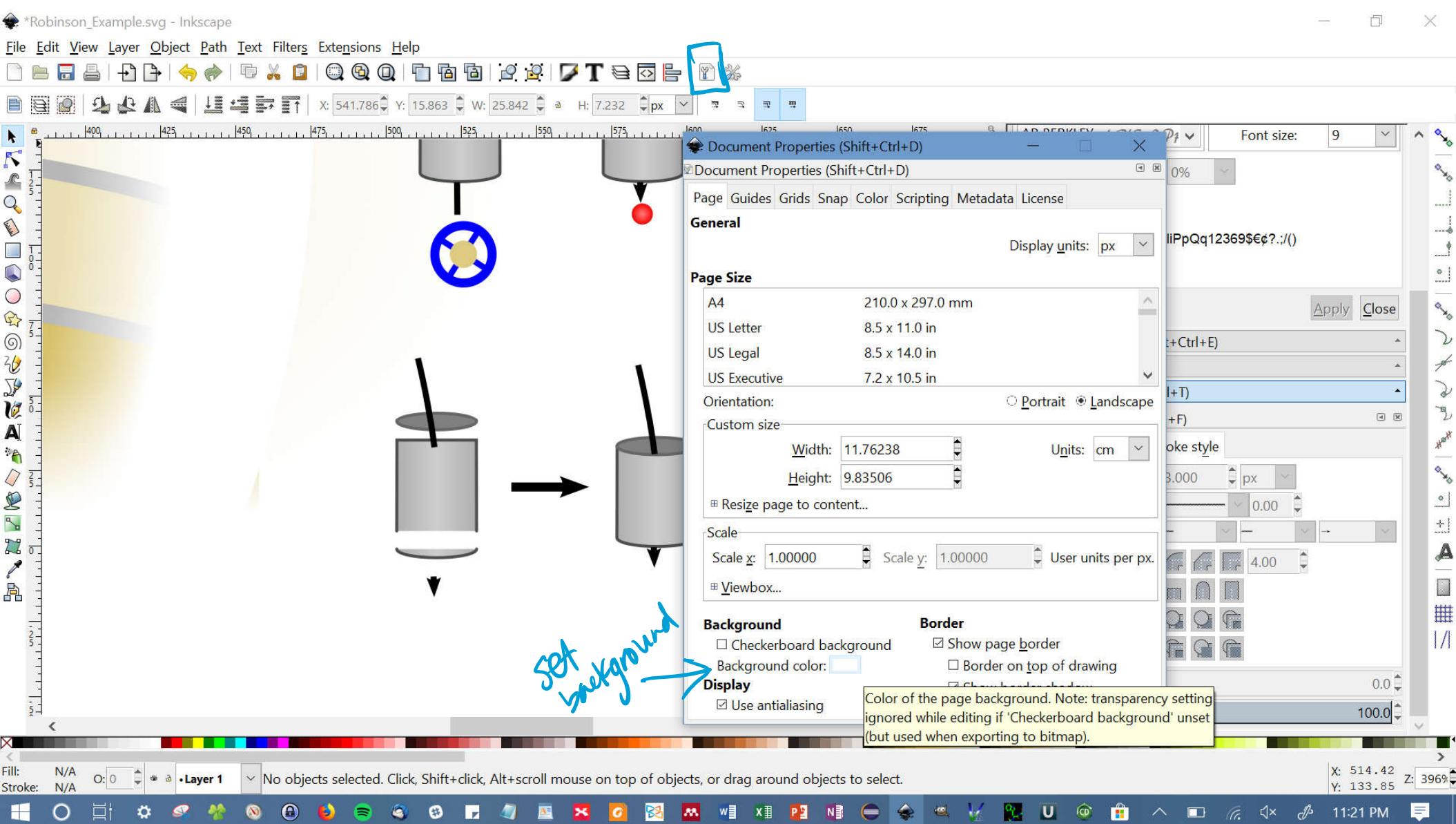


Finishing

Finishing

- Saving: File -> Save
 - Inkscape file type = svg
- Exporting:
 - File types:
 - pdf – scalable vector graphic, not good for Word or PPT (File -> Save a Copy As, chose file type)
 - png – good for Word and PPT, but not scalable (File -> Export png)
 - Settings:
 - Background color – transparent or white?
 - DPI - resolution





Resources

- [Inkscape tutorials: https://inkscape.org/en/learn/tutorials/](https://inkscape.org/en/learn/tutorials/)
 - Both “official” and “community” tutorials
 - Very useful and easy to read
- Also access the official tutorials in Inkscape: Help > Tutorials