

(Backward Prototype Systems)
Amazon.com
(Enclosure, battery clip, PCB, screws)
2) Arduino Pro Mini 328-5V/16MHz
Sparkfun.com DEV-11113

3) SPST switch

4) Red LED

5) Green LED

Make Your Own DinoCalc Inlay

Using the DinoCalc Inkscape Files

OPTIONAL

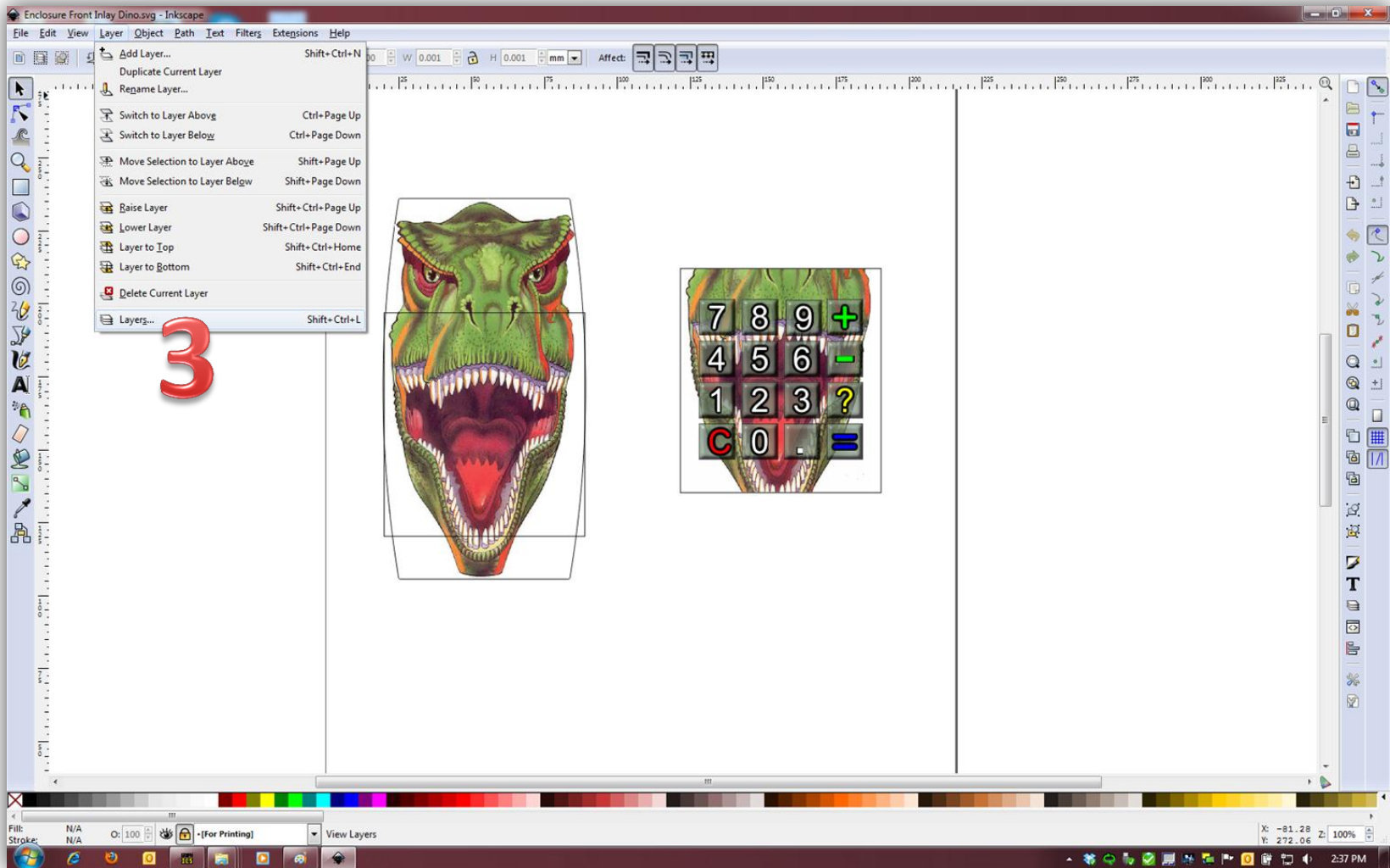
2) Qty

Red Cathode
Common Anode
Blue Cathode
Green Cathode

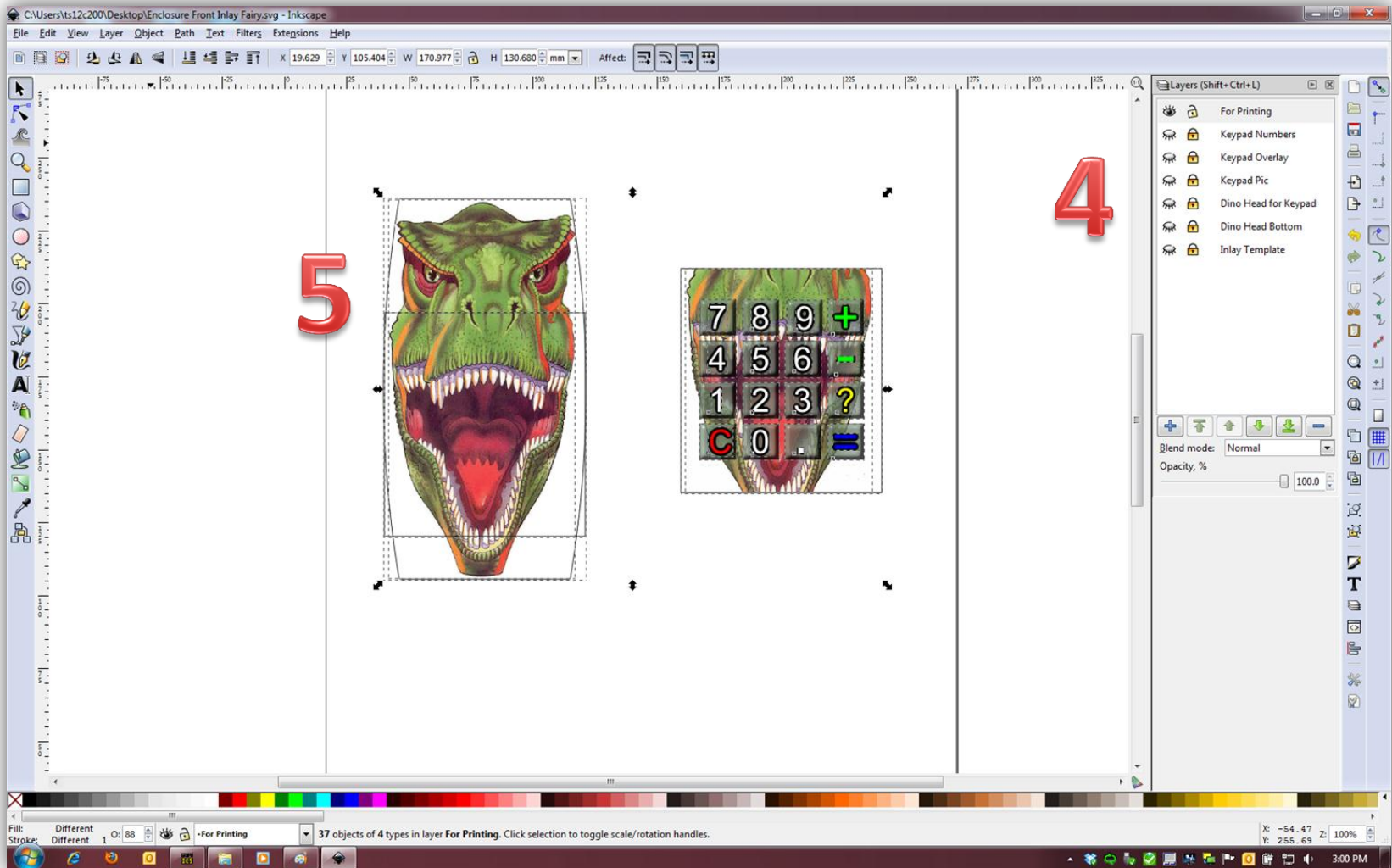
(Not sure if power
Arduino Pro Mini (50mA
current requirements of

13) LED Holders

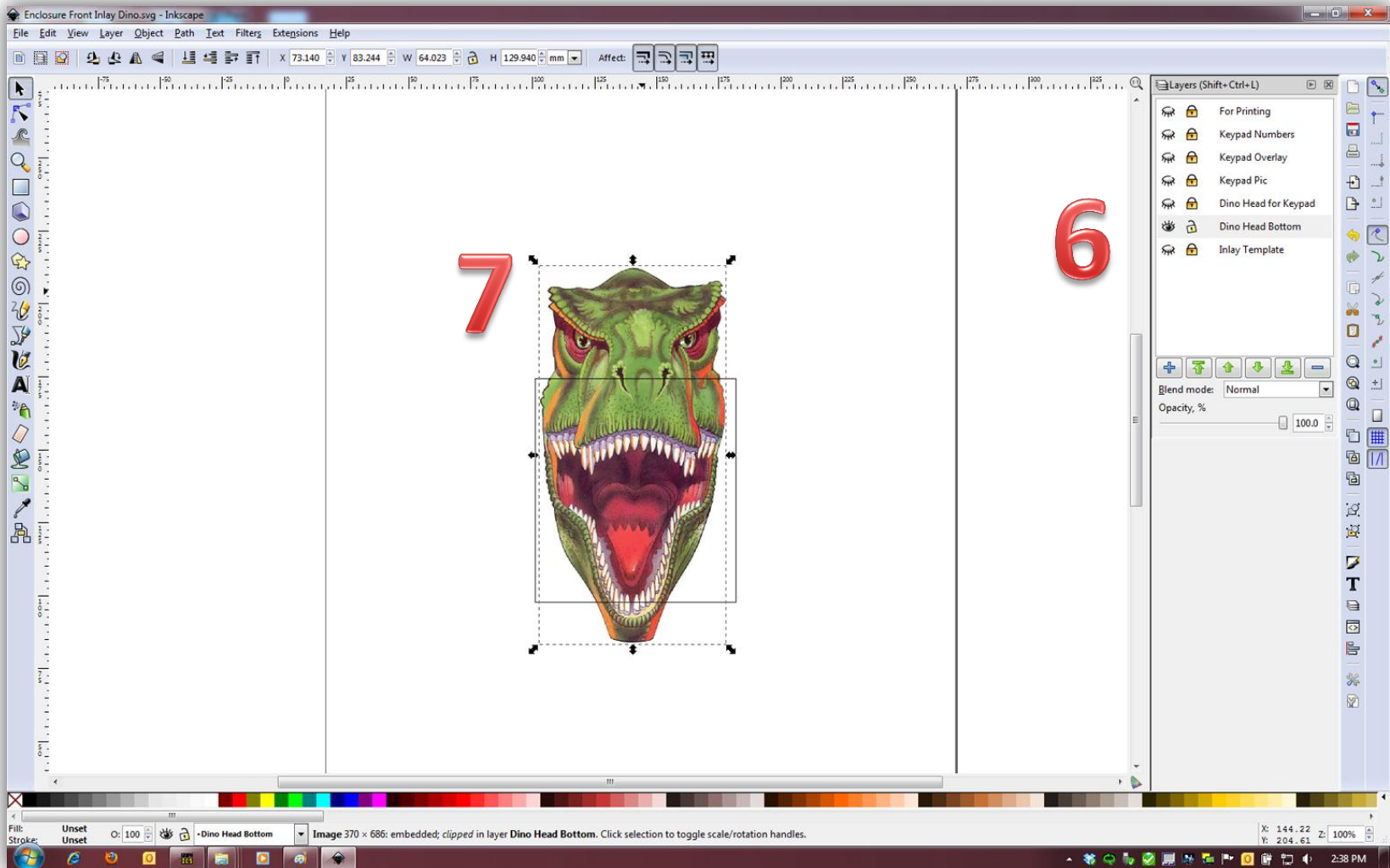
14) Old Canon wire for jumpers



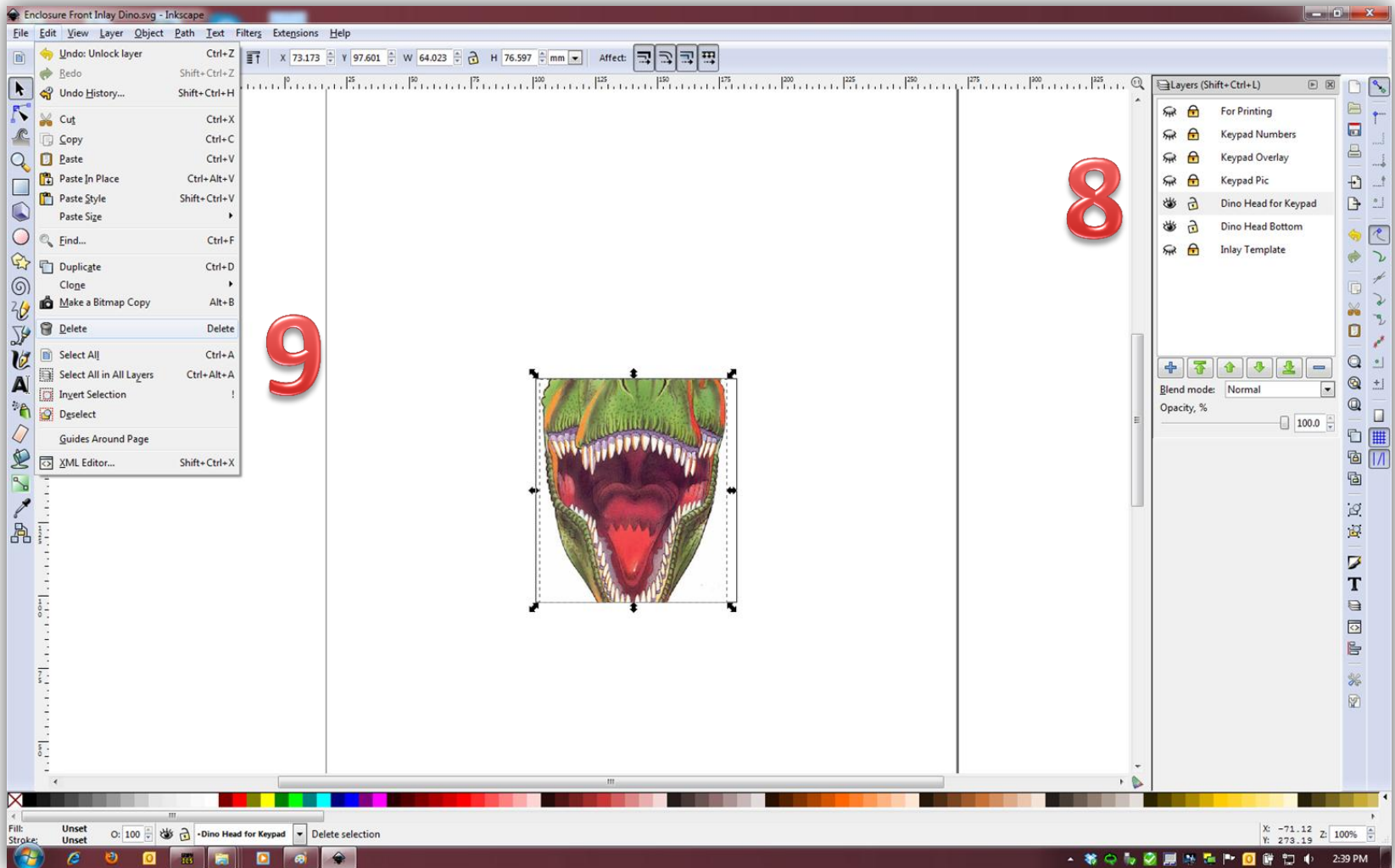
- 1) Open “Enclosure Front Inlay Dino.svg” in Inkscape
- 2) Do a “Save As” to save your new file. Pick a relevant name, eg. Enclosure Front Inlay Fairy.svg
- 3) Open the “Layers” Side Bar from the Menu bar or by pressing “Shift-Ctrl-L”



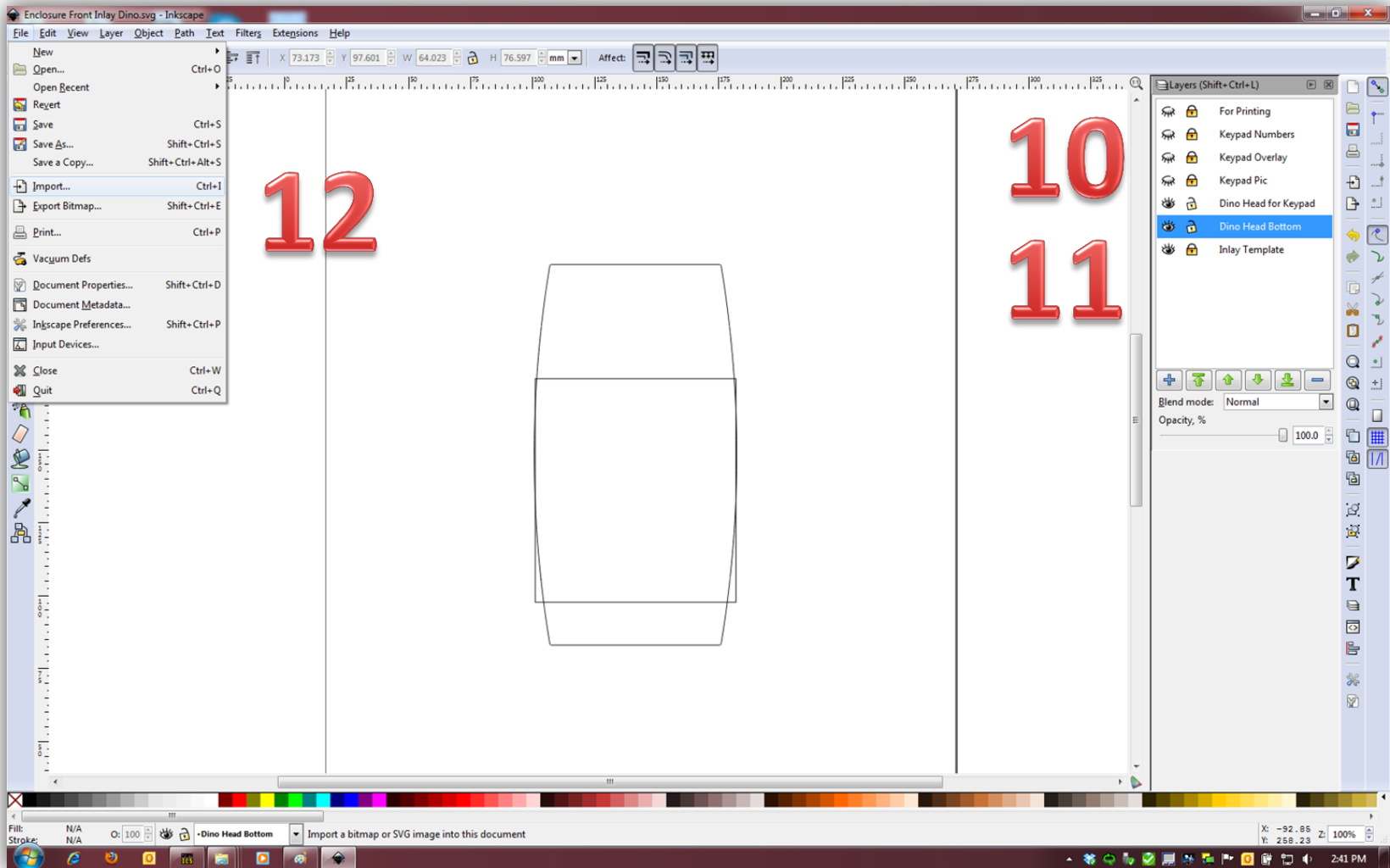
- 4) Make sure all the layers are hidden and locked, except for the “For Printing” Layer. It needs to be shown and unlocked.
- 5) Select all (Ctrl-A) and Delete



- 6) Make sure all the layers are hidden and locked, except for the “Dino Head Bottom” Layer
- 7) Select just the “Dino Head” graphic and press delete (Don’t delete the square).



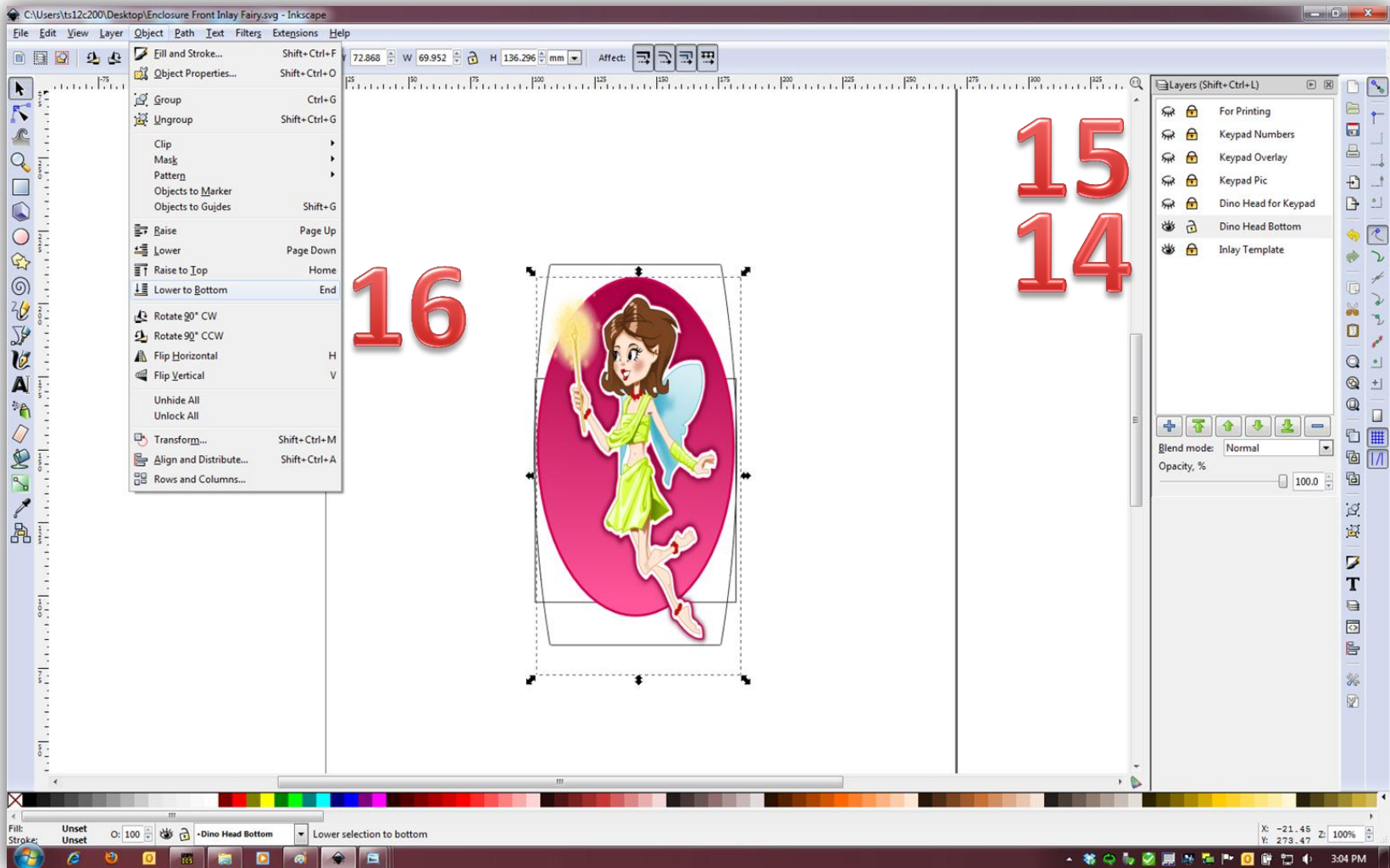
- 8) Unlock and make visible the “Dino Head for Keypad” Layer.
- 9) Select and Delete just the “Dino Mouth” graphic.



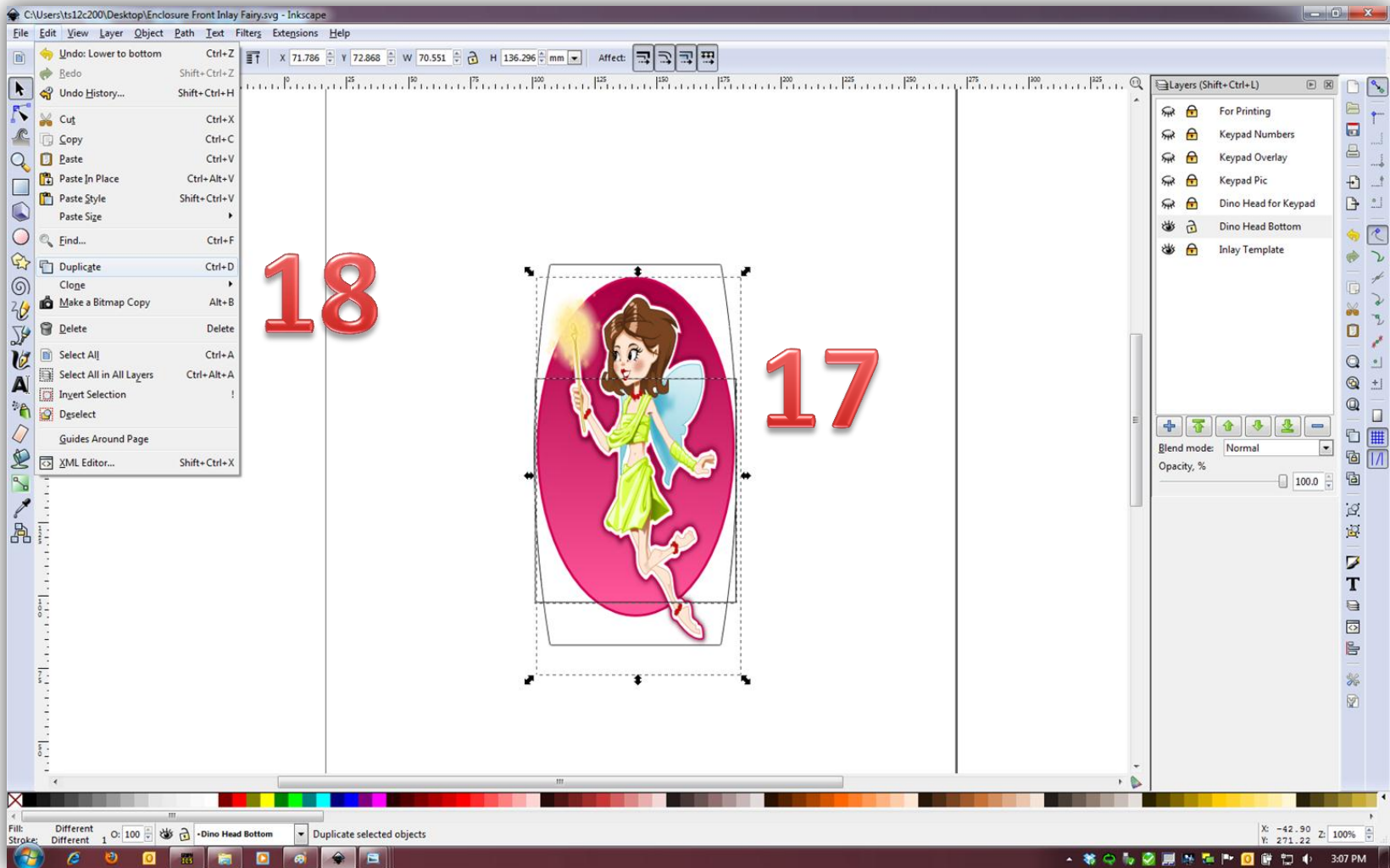
- 10) Make the “Inlay Template” layer visible, but don’t unlock.
- 11) Select the Dino Head Bottom Layer
- 12) Select “Import” from the File Menu and select the graphic you want to import ([I chose a fairy from OpenClipArt.org drawn by “tzunghaor”](https://openclipart.org/drawing/tzunghaor))



13) Select and Resize your imported graphic to fit inside the Inlay outline

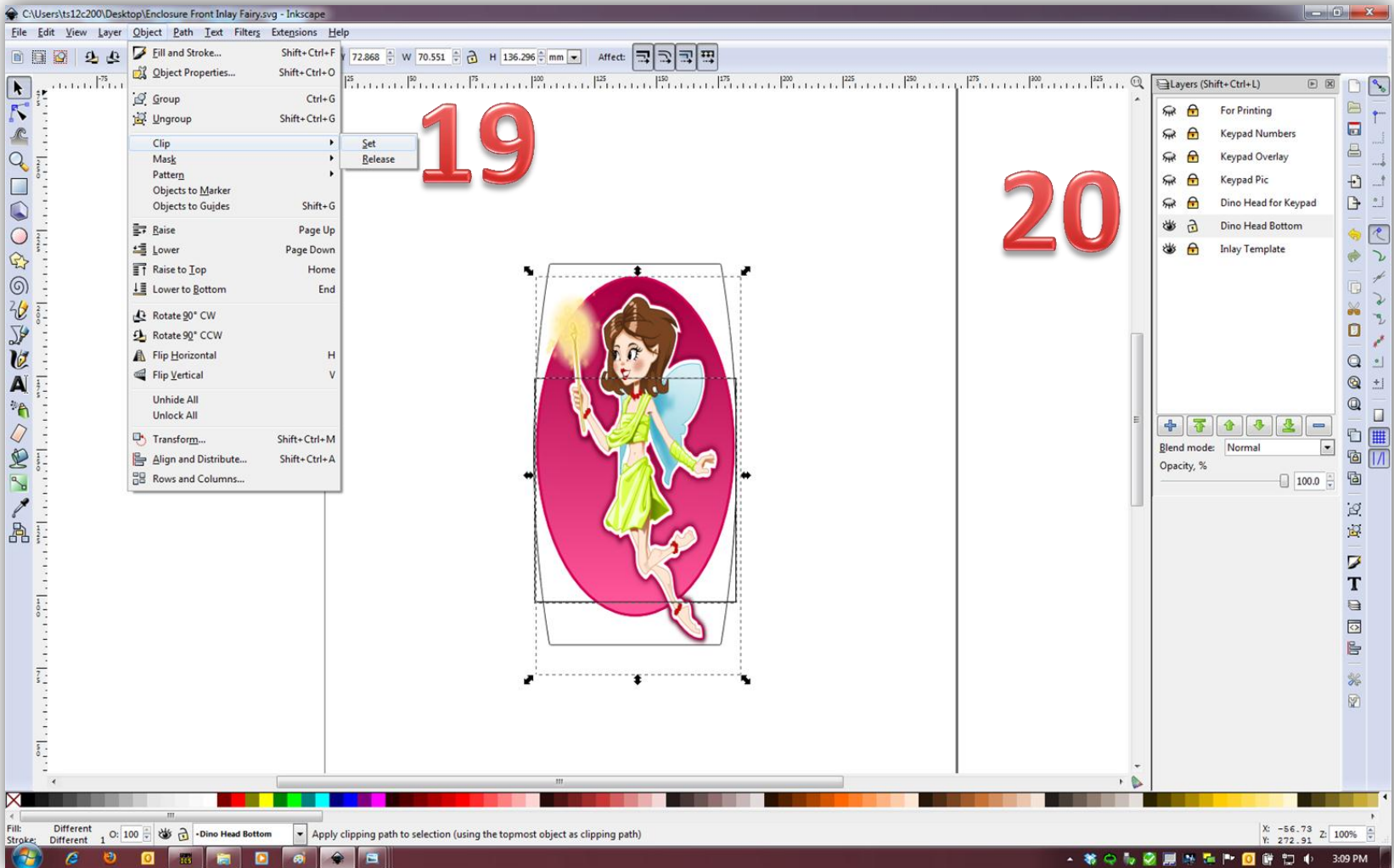


- 14) Make sure all layers are locked, except for “Dino Head Bottom”
- 15) Make sure all layers are hidden, except for “Dino Head Bottom” and “Inlay Template”
- 16) Make sure your graphic is still selected and select “Lower to Bottom” from the Object Menu



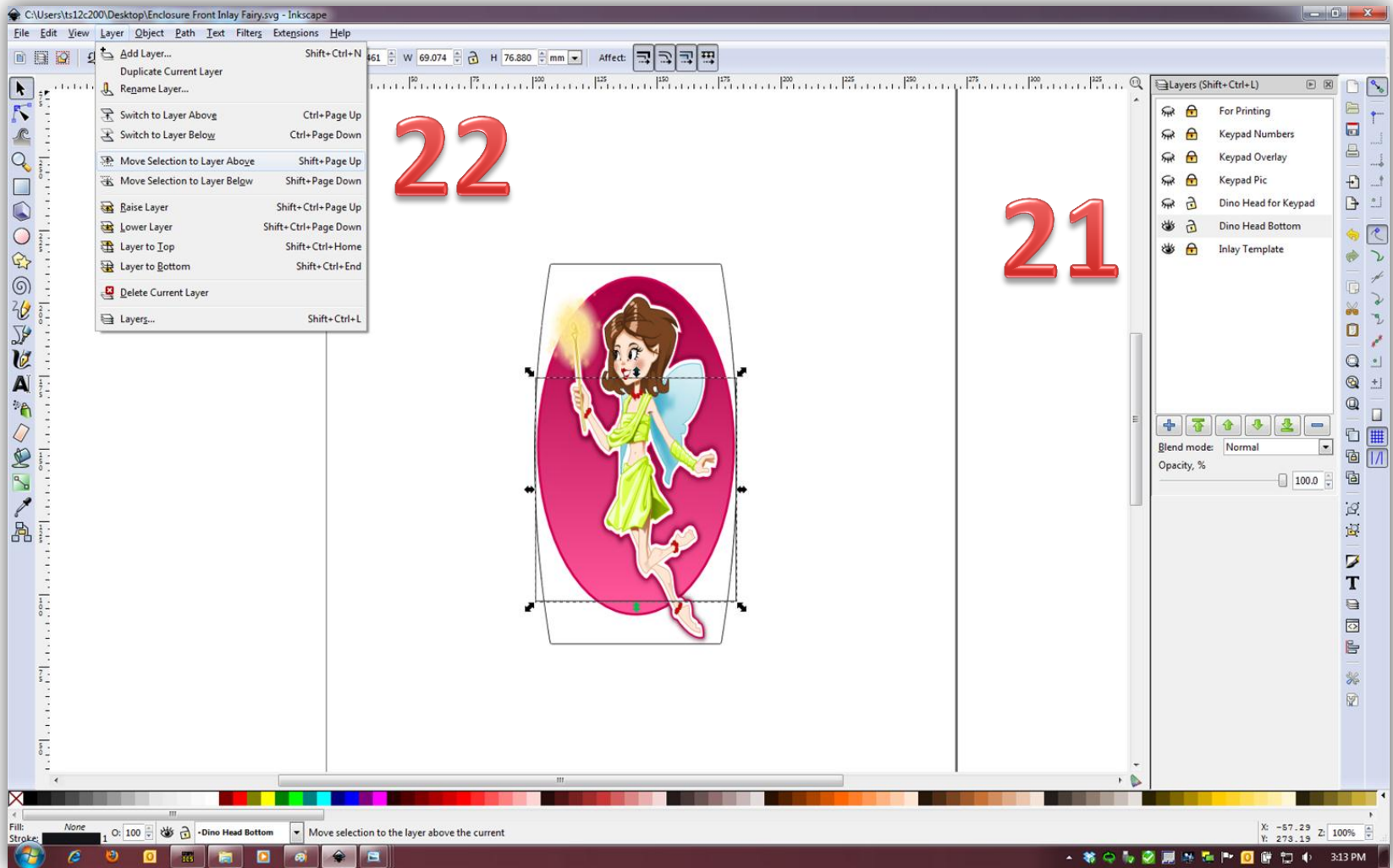
17) The square outline of where the keypad will be should now be in front of your graphic.

18) Select the graphic and the keypad outline and then from the Edit Menu select “Duplicate” or Ctrl-D.

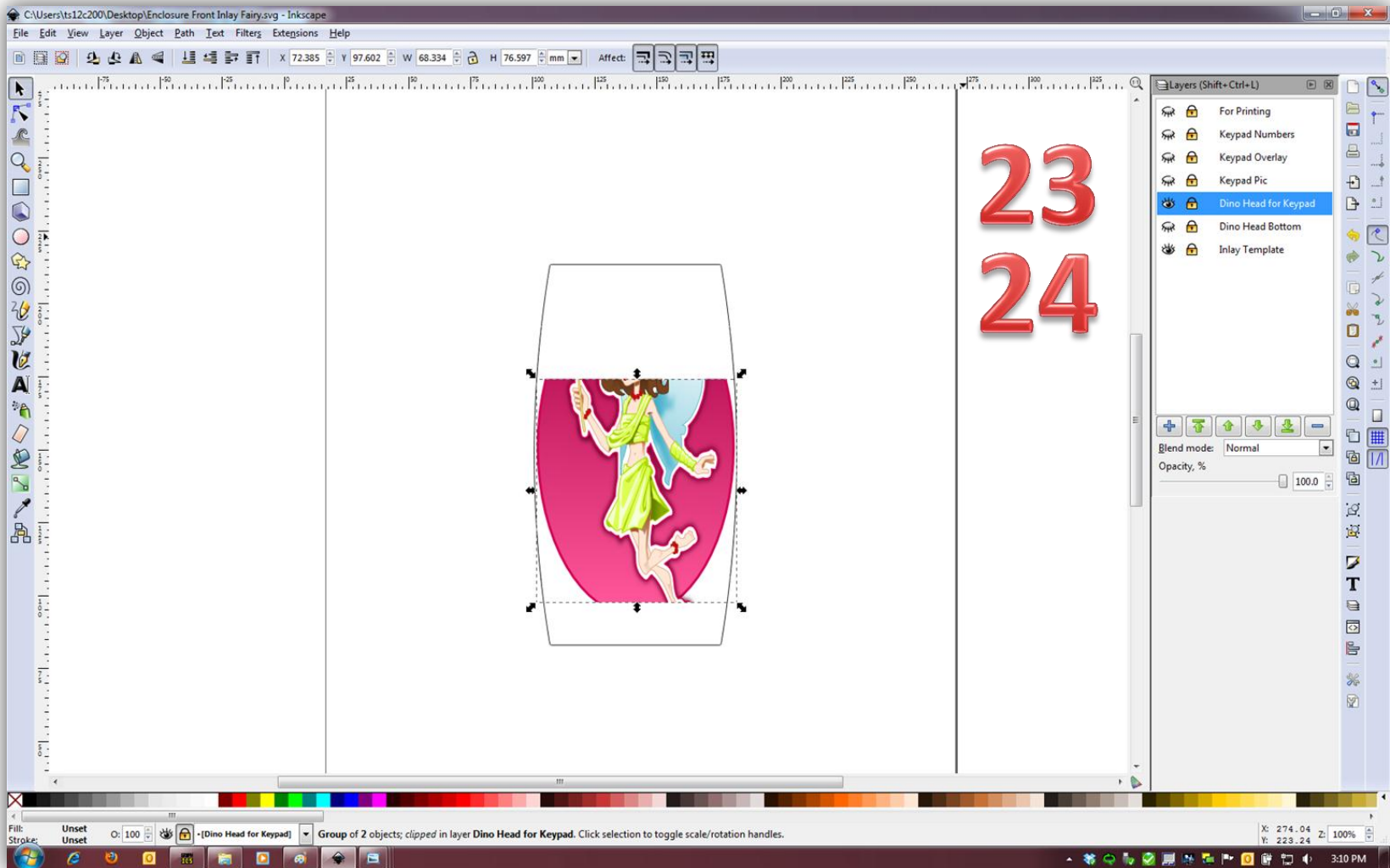


19) While the “duplicate” is now still selected, from the Object Menu select “Clip” and “Set”. This crops the duplicate we just made to match the square Keypad outline.

20) Unlock the “Dino Head for Keypad” layer

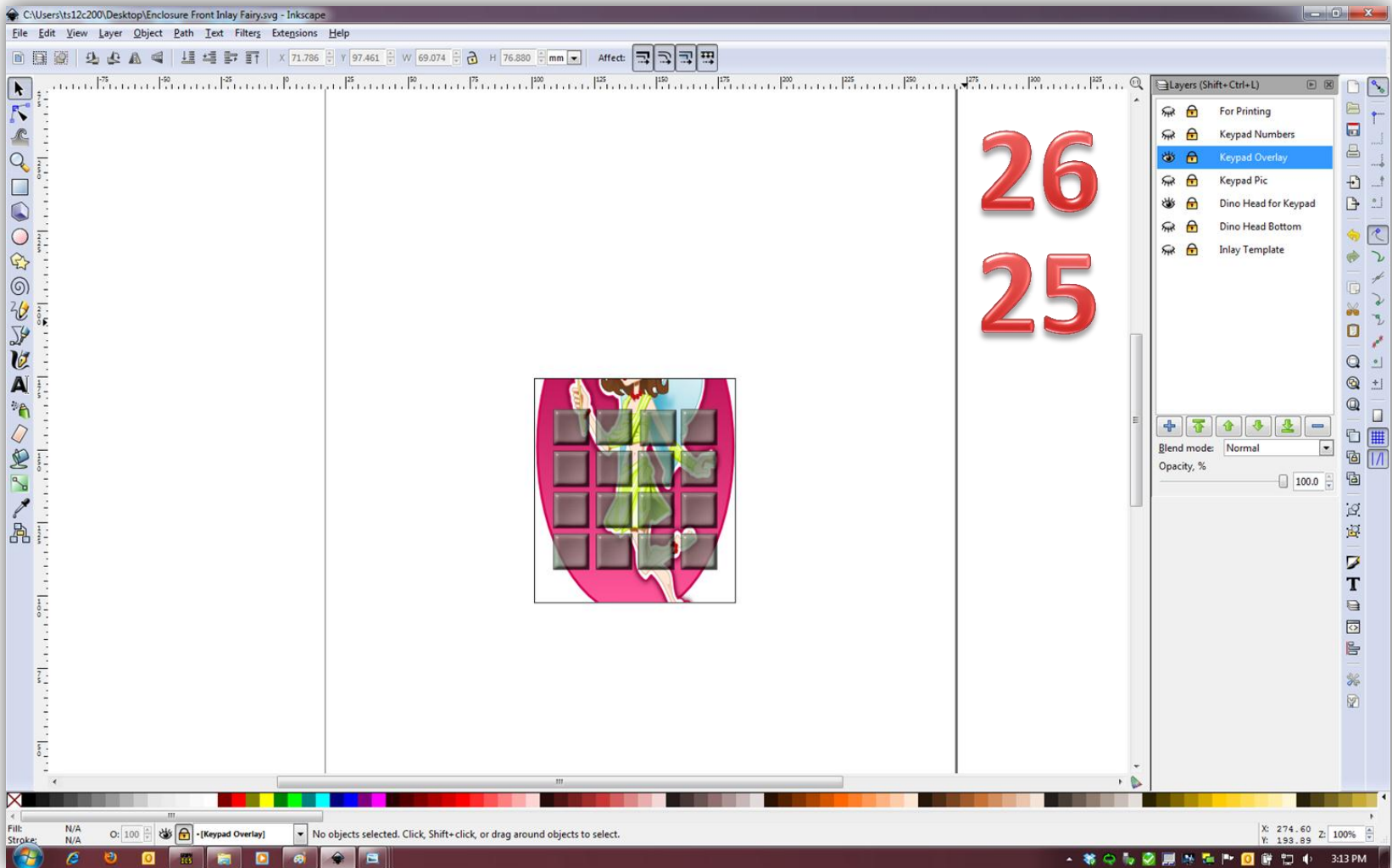


- 21) Make sure the “Dino Head for Keypad” layer is unlocked
- 22) Now from the Layer Menu select “Move Selection to Layer Above”

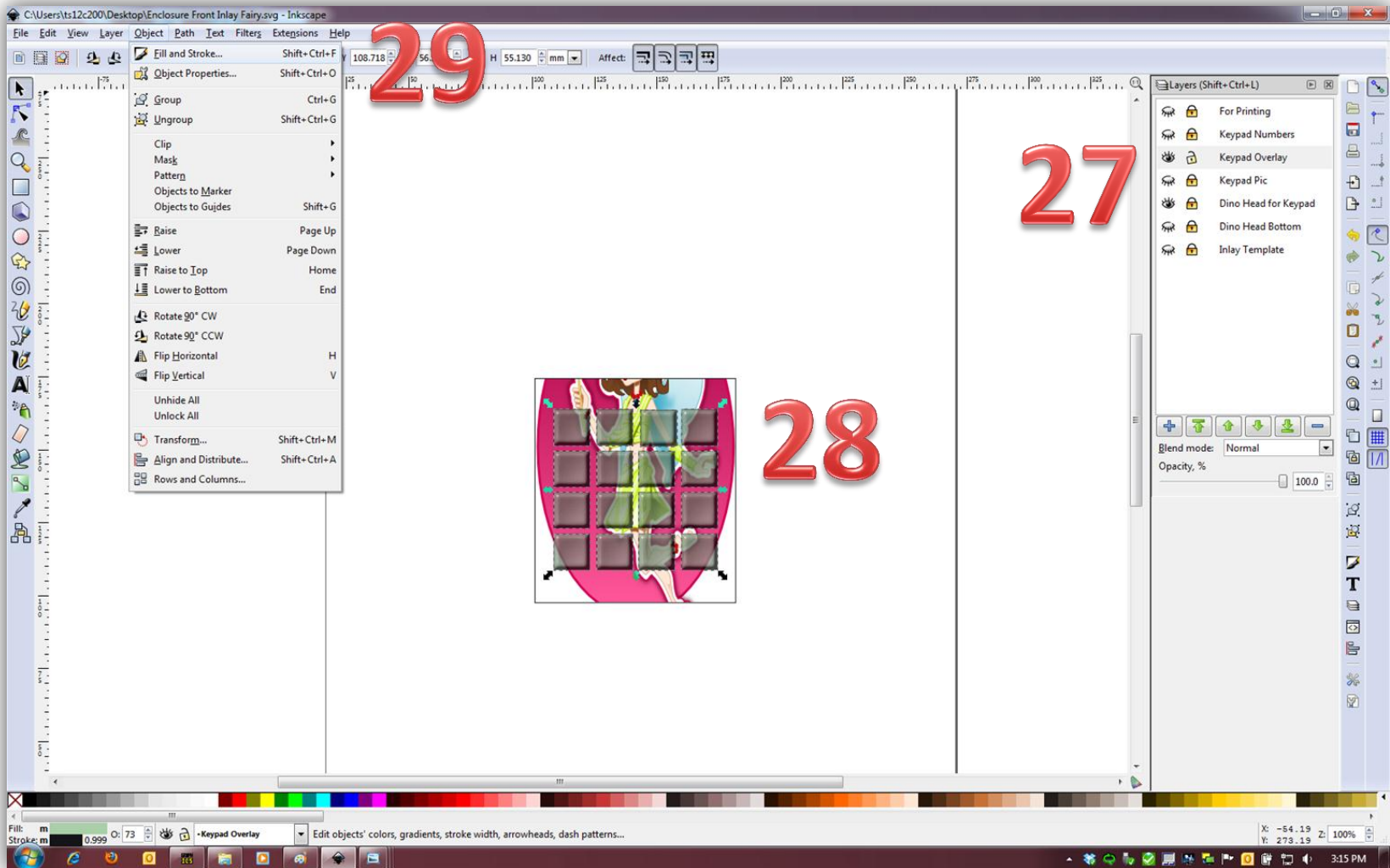


23) Verify that you were successful by hiding all the layers but the “Inlay Template” and the “Dino Head for Keypad”. You should have a graphic inside the Keypad square.

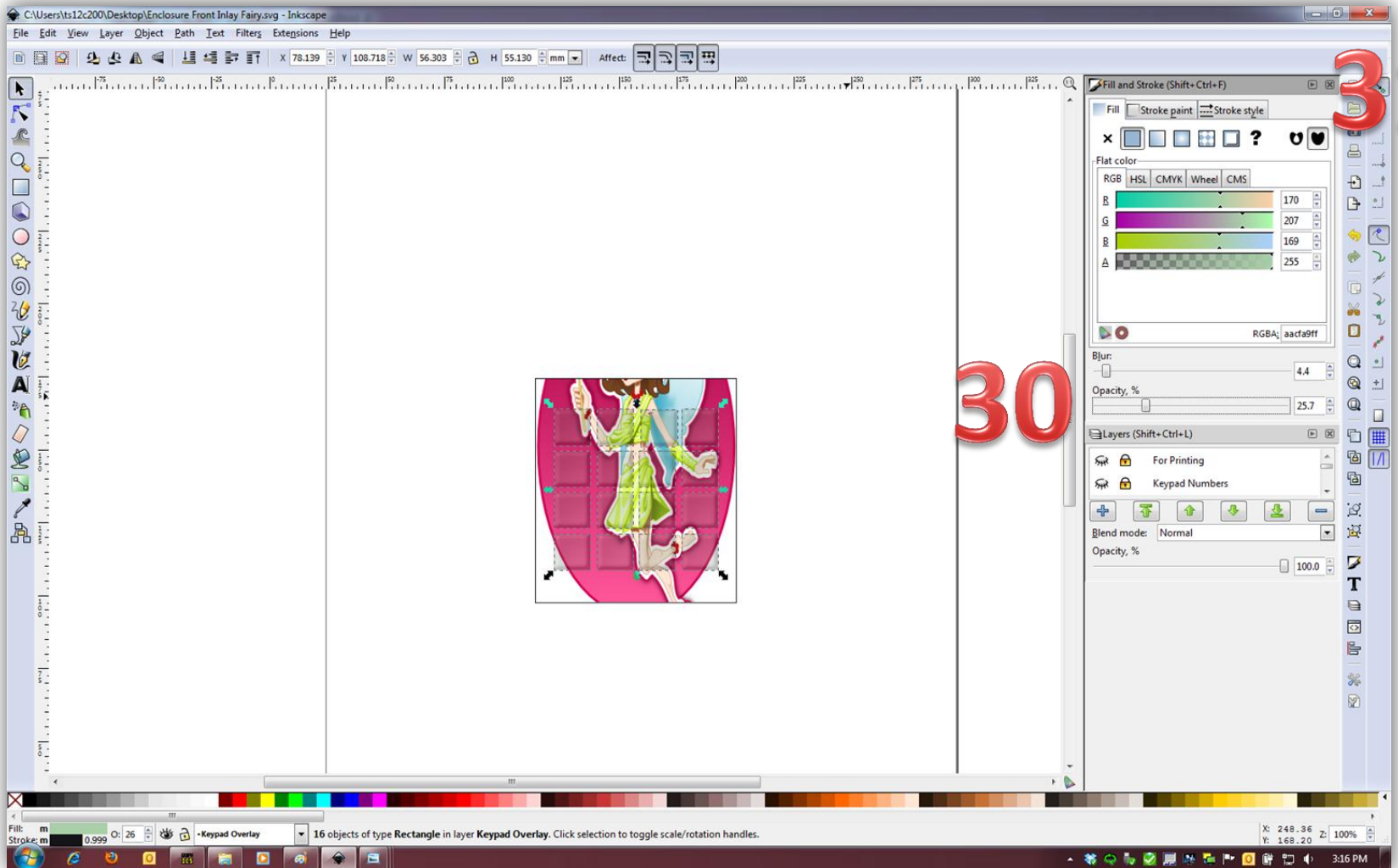
24) Lock your layers



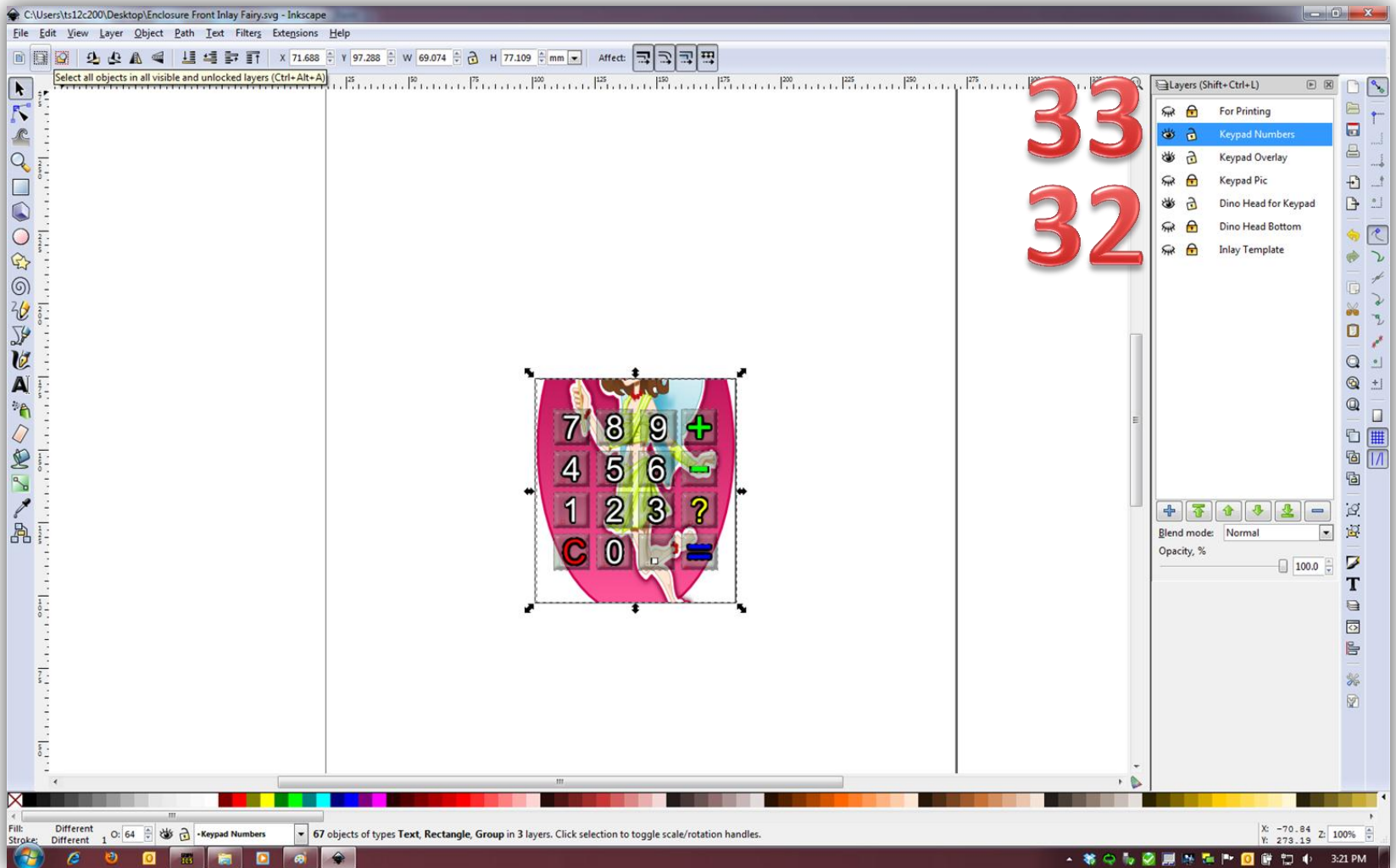
- 25) Hide the “Inlay Template” layer
- 26) Un-hide the “Keypad Overlay” layer



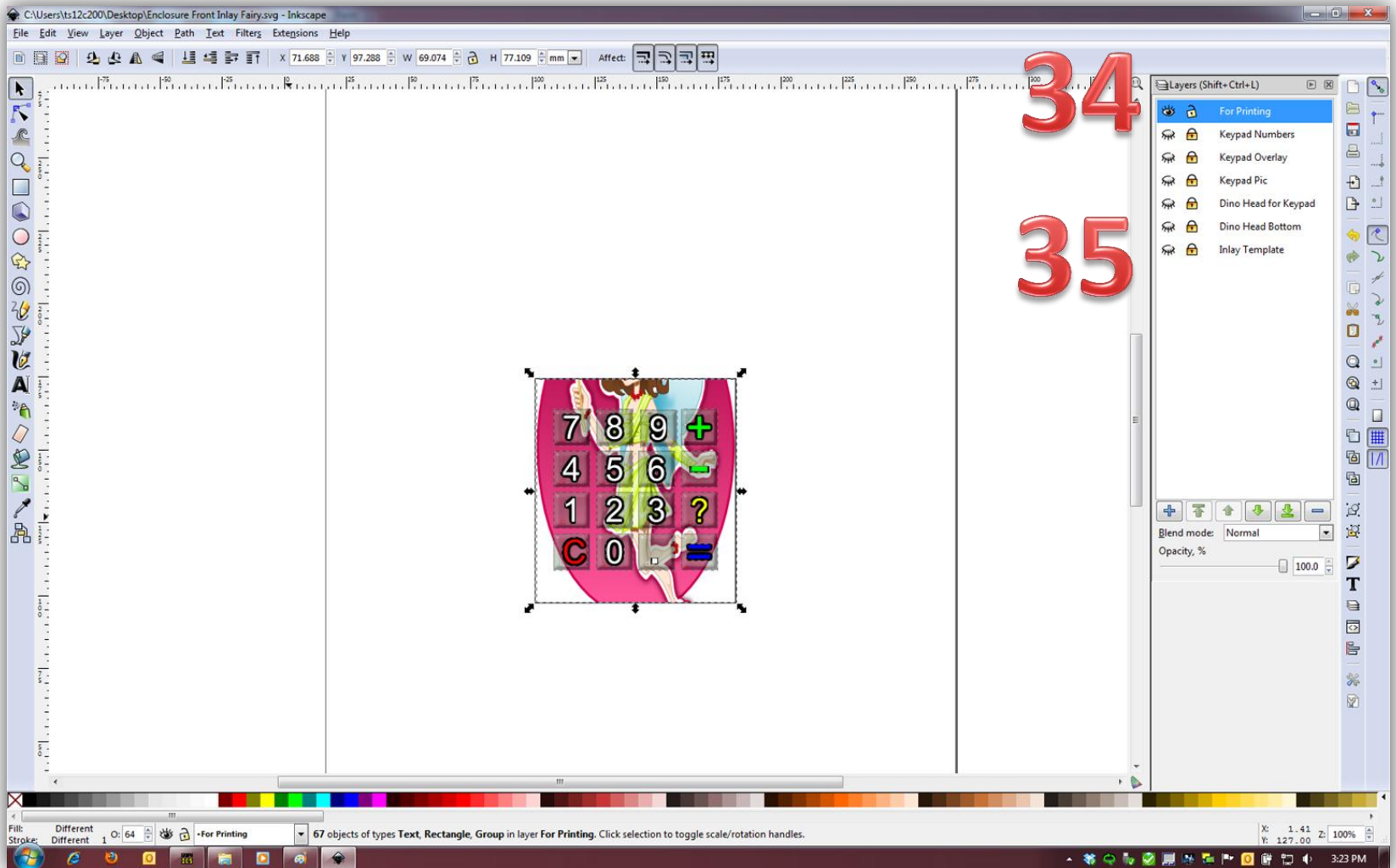
- 27) Unlock the “Keypad Overlay” layer
- 28) Highlight and select the Keypad buttons
- 29) Click on the Object Menu and select “Fill and Stroke”



- 30) Use the slider bar to adjust the opacity of the button to your preference.
- 31) Click on the “X” to close the Fill and Stroke Menu when you are finished.

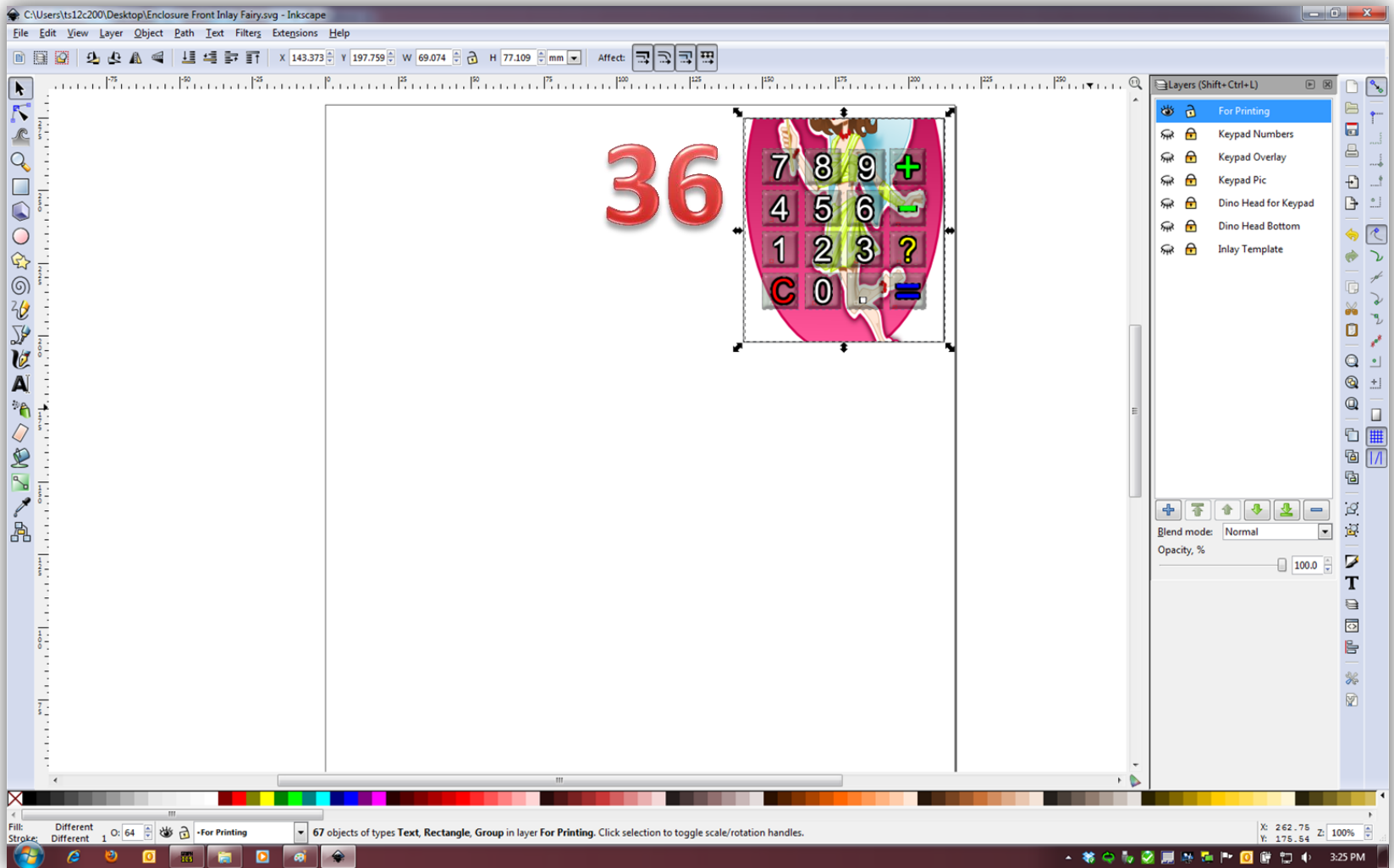


- 32) Unlock the layer “Dino Head for Keypad”.
- 33) Unhide and Unlock the layer “Keypad Numbers”.

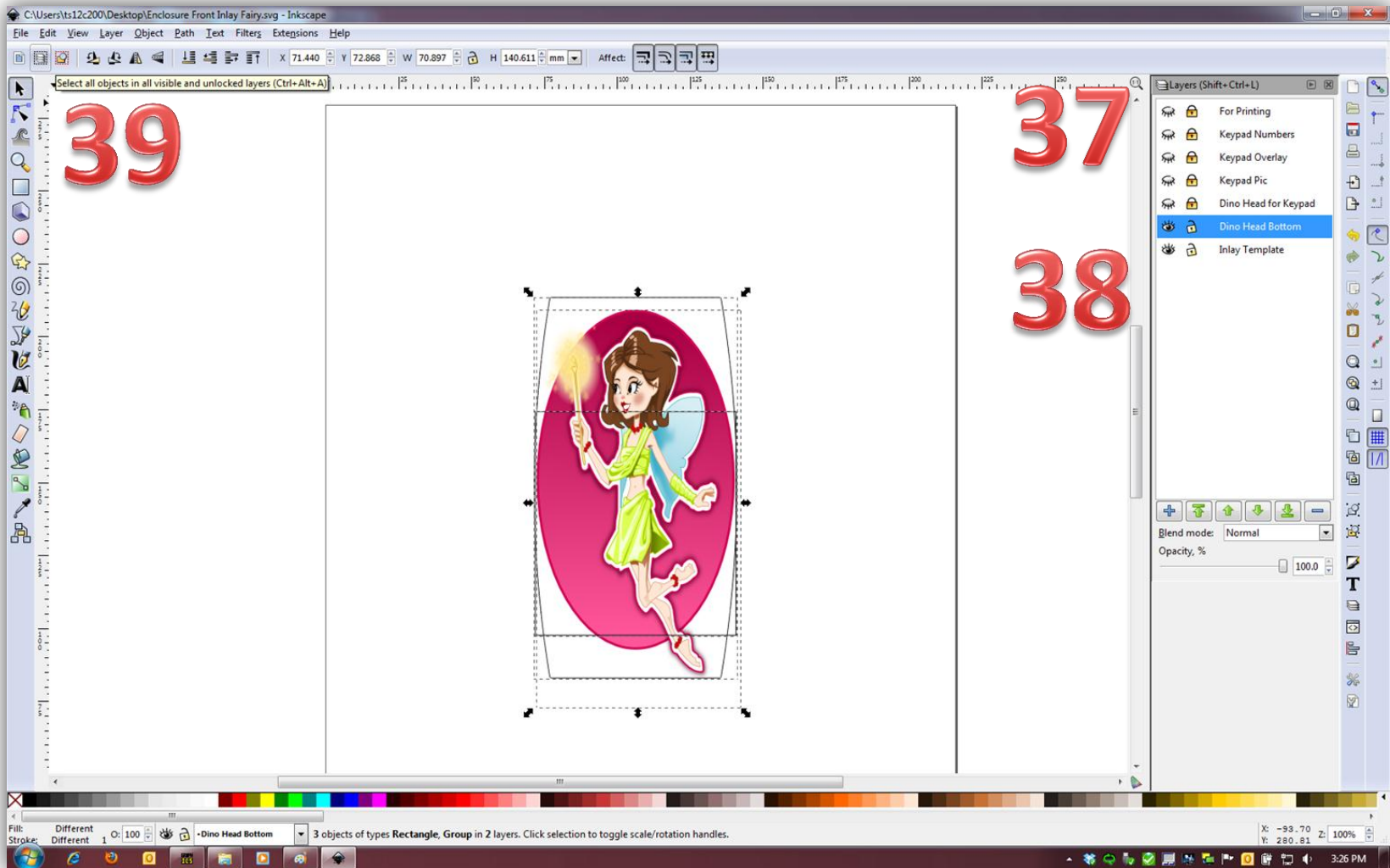


34) Unlock and Show the “For Printing” layer, Duplicate your selection (Ctrl-D) and then from the Layer Menu select “Move Selection to Layer Above”.

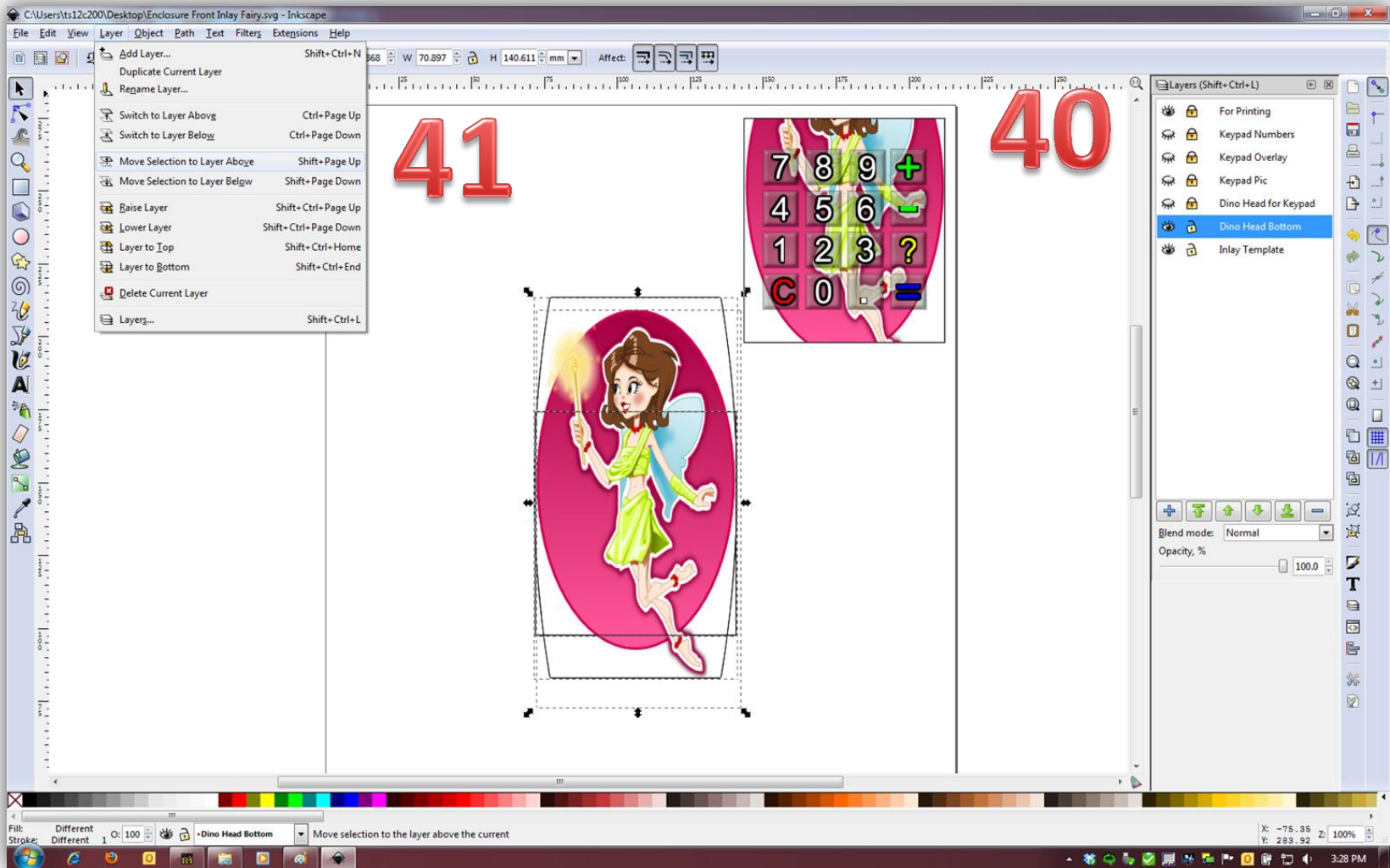
35) Hide and Lock all of the other Layers



36) Move your selection up to the corner (so it'll be out of the way).

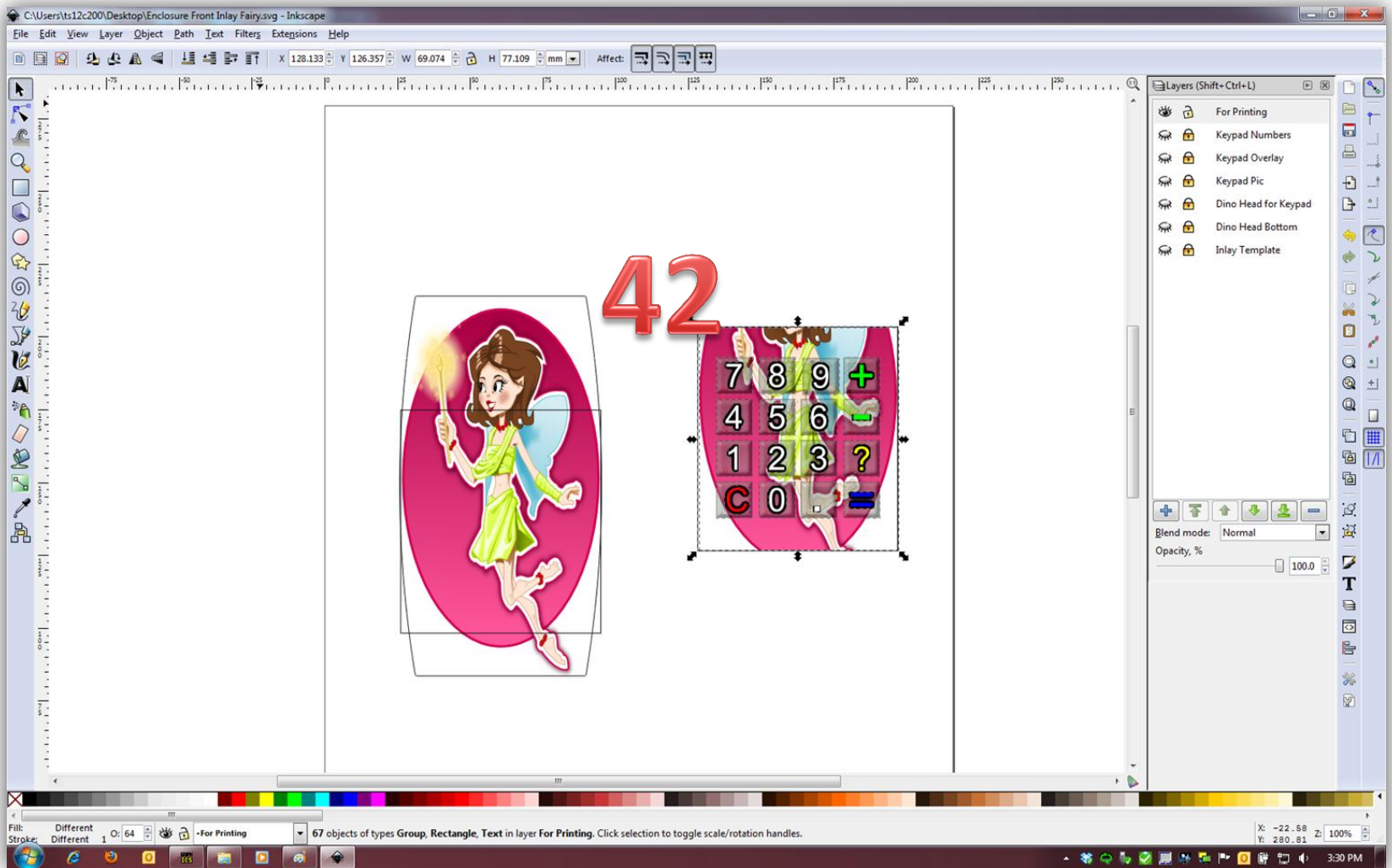


- 37) Lock and Hide the layer “For Printing”.
- 38) Show and UnLock the layers “Dino Head Bottom” and “Inlay Template”
- 39) Click on the “Select all objects in all visible and unlock layers” button or press Ctrl-Alt-A, and Duplicate or press Ctrl-D

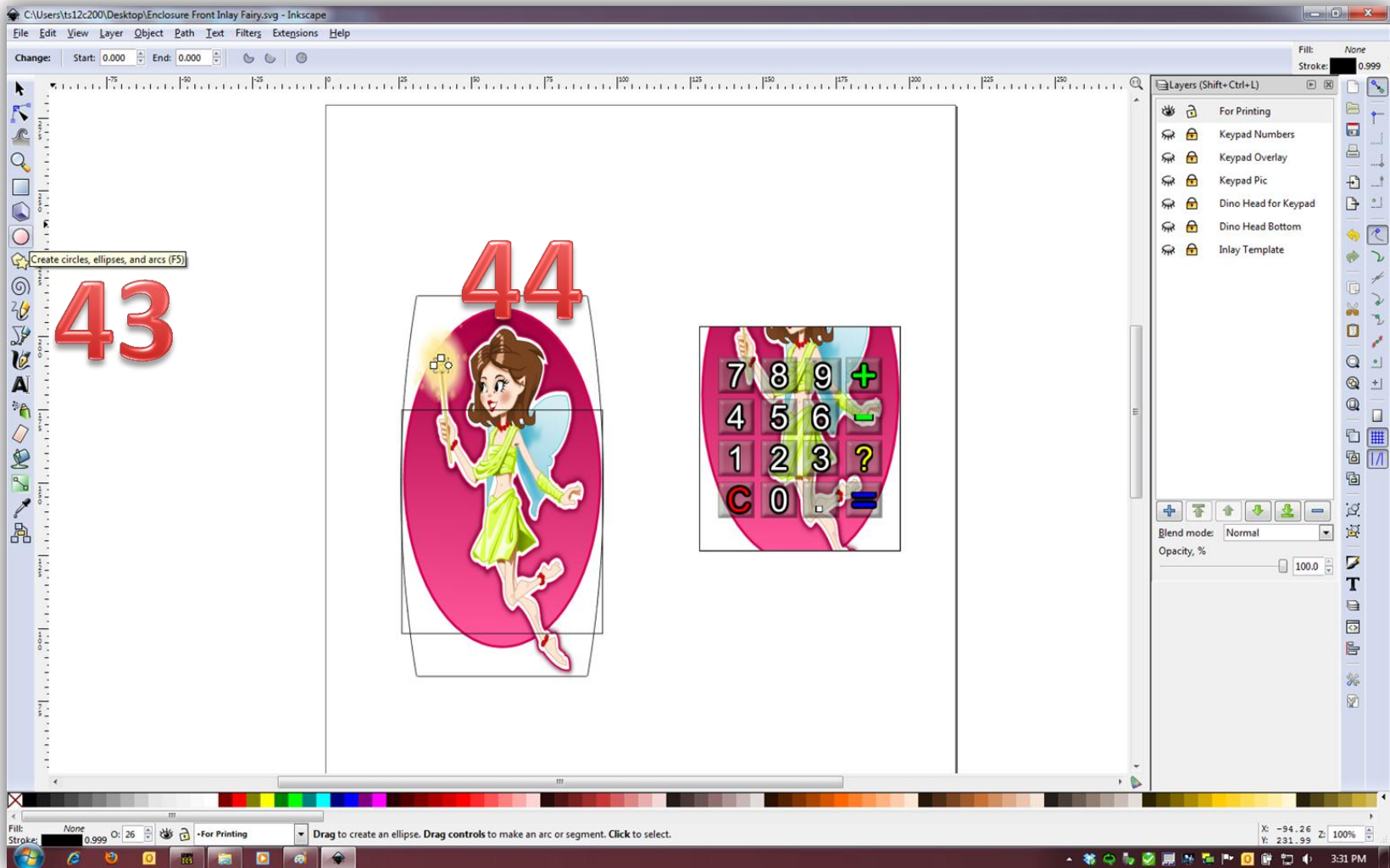


40) Show the layer “For Printing”

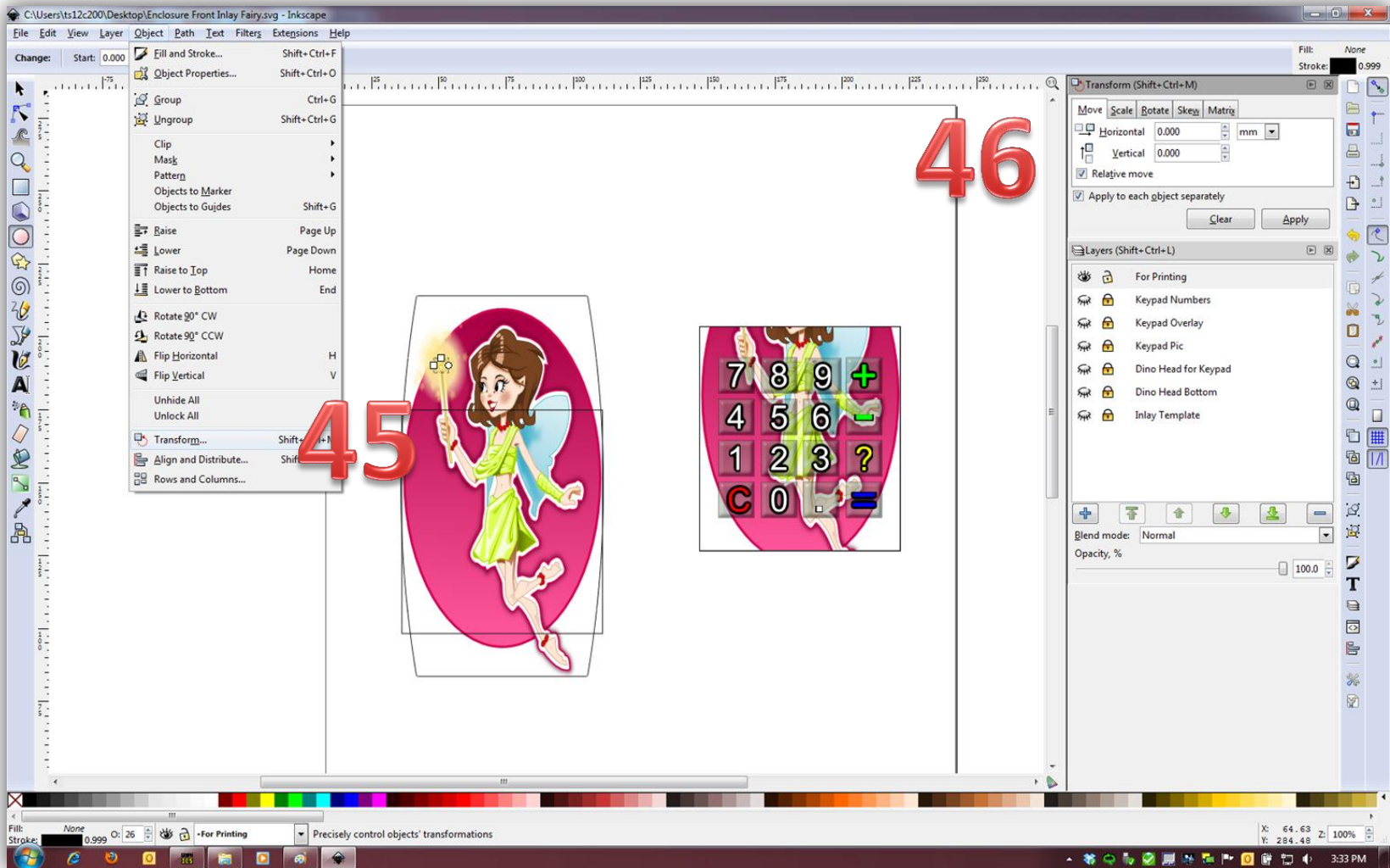
41) Select “Move Selection to Layer Above” from the Layer Menu



42) Hide and lock all your layers except the layer “For Printing”. You should see a Keypad graphic and a inlay graphic. Adjust your graphics on the page for printing.

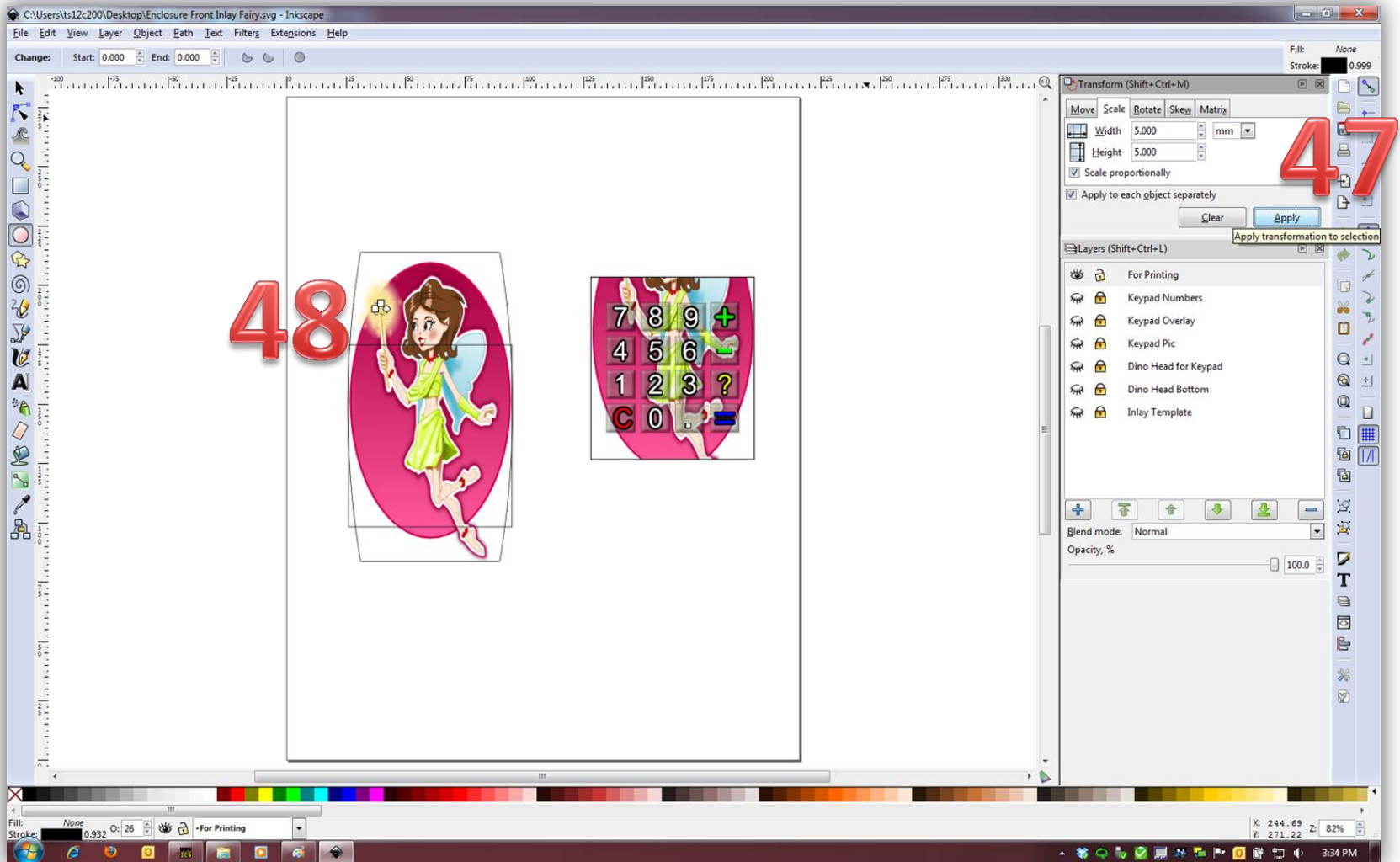


- 43) Optional: If you want to show where to drill for your LED(s) then click on the “Create Circles, ellipses, and arcs” button from the side menu.
- 44) Draw a Circle where you want your LED(s) (In this example, I plan to use one RGB LED instead of one red LED and one green LED).

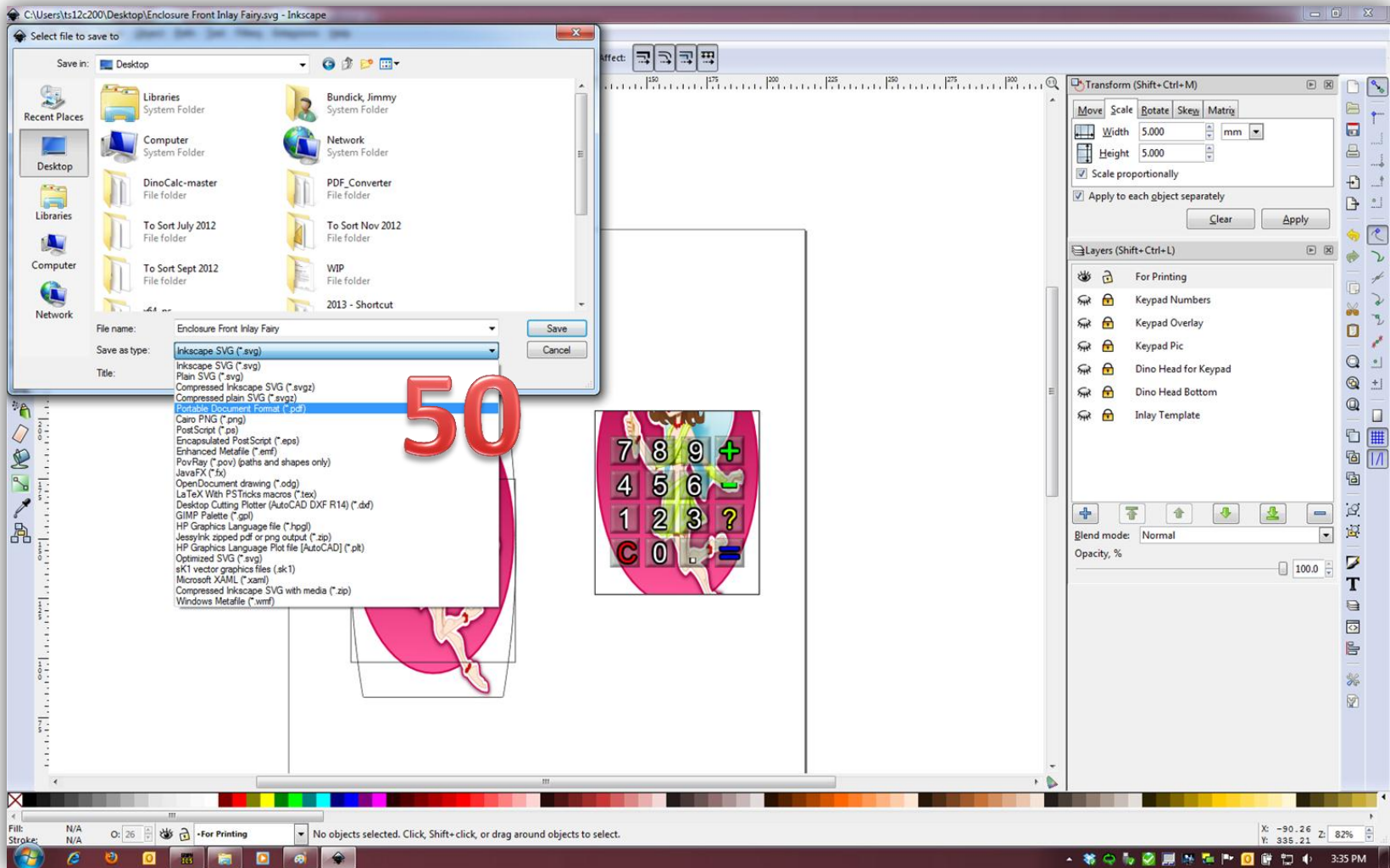


45) Select “Transform” from the Object Menu

46) The “Transform” menu will appear above the “Layers” Menu.



- 47) Click on the “Scale” tab and select 5.000 in the width and height windows. Make sure the units are set to “mm”. Click apply when done.
- 48) Adjust your perfect 5mm circle to where you want it.



49) Save your Inkscape file

50) For sharing, you can also save a copy of your file as a “pdf”. Select “Save As” and under type select “Portable Document Format”, pick a name, and then click “Save”. You now have a Custom Inlay for your own “DinoCalc”!



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Version History:

1.0 2013-03 Initial Release