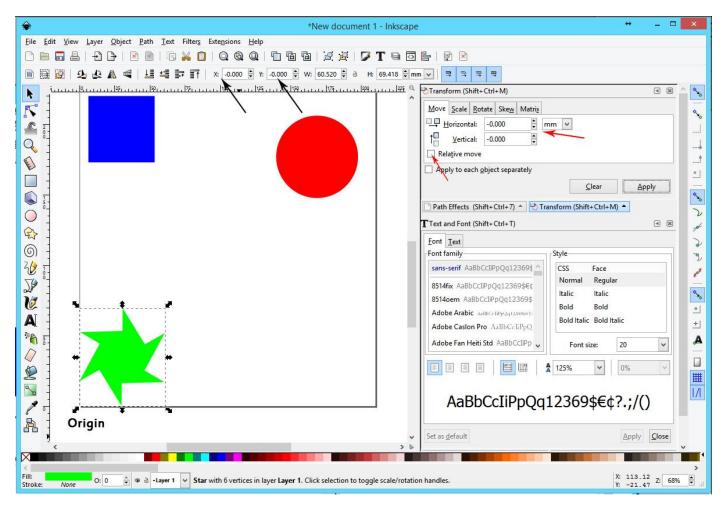
## <u>Transforming Objects in Inkscape – Transform Menu</u>

Many of the tools for transforming objects are located in the **Transform** menu. (You can open the menu in **Object > Transform**, or by clicking **SHIFT+CTRL+M**.) The menu has separate tab sections for moving, scaling, rotating and skewing objects.

#### Move



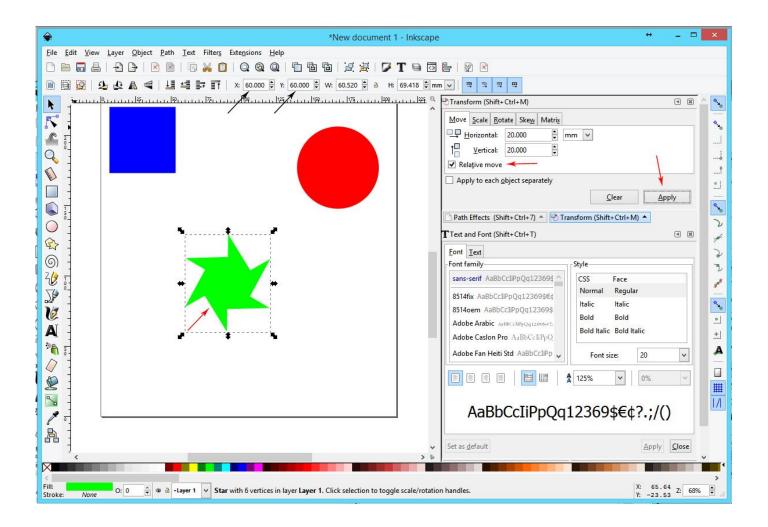
The **Origin** for Inkscape is located in the **lower left** corner of the page. Rulers across the top and left side will display the default General measurement units that you chose in **File > Document Properties** when you created the file, but whatever the units you chose, the 0,0 location is there.

Whenever you select an object, the distance along the X and Y axes from the **lower left corner of the bounding box** for that object to the origin is displayed in the third row. (In the example above, the box is set right at the origin at 0,0.) These boxes always list the distance **relative to the origin**.

In the **Transform** menu, on the **Move** tab, you have the option of moving the object relative to the origin, or moving the object relative to its current position (**Relative Move** box **Checked**).

In the picture below, I shifted the star diagonally by 20 mm in each direction, by entering the values and hitting **Apply** three times. But I had the **Relative Move** box checked. So each time, the star jumped out 20 mm farther from the position where it was located before. Notice that the total distance from the **origin** in the boxes in the third row now show a total of 60 mm distance from the origin.

(Checking the **Relative Move** box is a way to shift an object a fixed distance from its **current** position.)



**Designer Tip:** Inkscape handles **formulas** in its value slots as well as straight number entry. If you wanted to, you could type **+20** behind the values shown in the X and Y slots and shift the position relative to the current position that way as well.

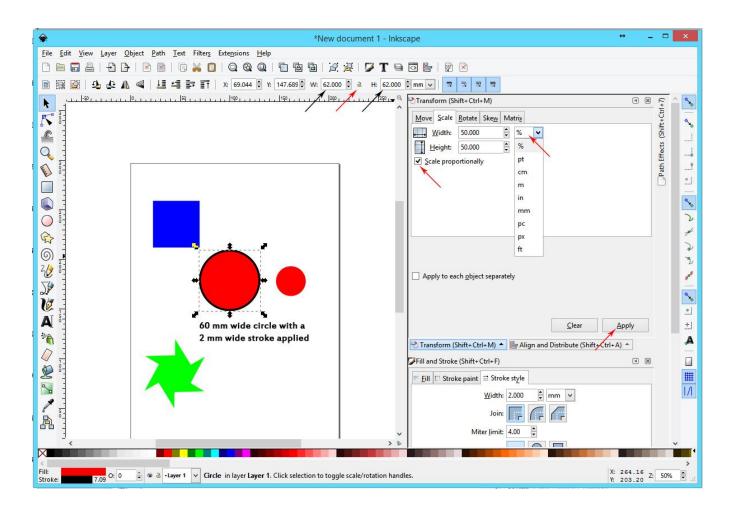
And of course, if accuracy isn't needed, you can just drag the object around after selecting it.

### **Scale**

The **Scale** tab tools are fairly standard. You can specify either a percentage to scale by, or use some unit of measurement. Checking the box lets you scale the object proportionally. In addition, in the third row across the top there is a value slot for **Width** and **Height**. Those can be scaled proportionally by toggling the little lock icon between them.

If the proportional lock is set, you would just need to enter one value, either **Width** or **Height**, and the other value will automatically adjust.

**Designer Tip:** One thing to note about the **Width** and **Height** values shown in the third row, if you use a wide stroke, the width of the stroke **is** included in the measurements shown. If the actual size of the object is critical to your design, either make adjustments for the stroke width or leave the stroke off so you can get a true measurement.



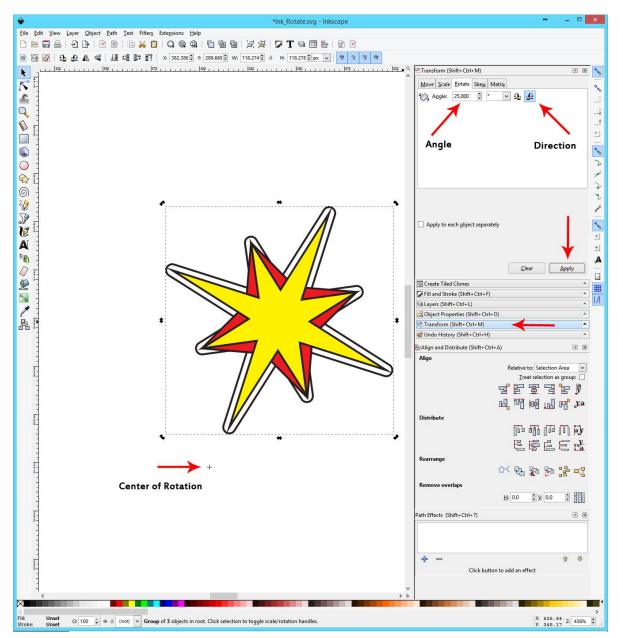
Scaling can also be accomplished by multiplying the width and height values in the slots by a factor.

If accurate scaling is not required, you can scale an object by dragging on the corner and side handles of the bounding box.

#### **Rotate**

Objects in Inkscape rotate around the little center axis cross (*plus sign*). You can drag the cross to where you wish to fix the rotation point – the object will rotate around it when you enter an angle value.

Select your object and drag the rotation axis cross (*plus sign*) to the location you want to use, enter your rotation angle, and choose the direction (*clockwise or counter-clockwise*) that you want to use. Hit **Apply** to rotate the object.



(Note: You can also rotate using the boundary handles of the selection box. See "Rotate in Inkscape" for the steps.)

# **Flipping**

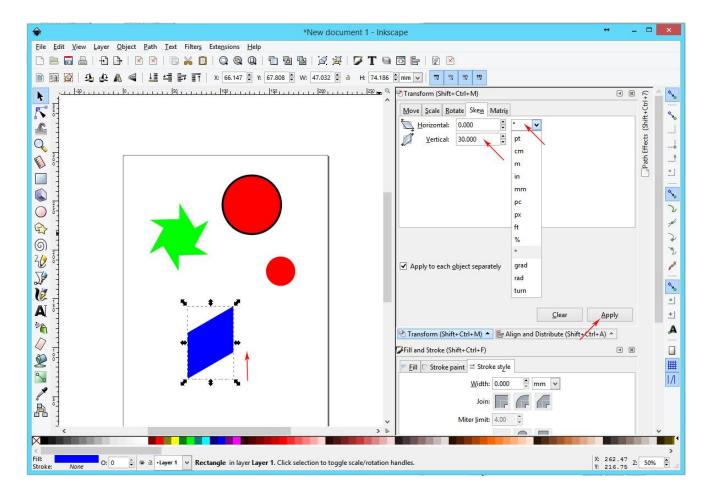
You can Flip any object horizontally by pressing the **H** key on the keyboard, and vertically by pressing **V**.

## **Skew**

You can skew your objects using the dialog, either horizontally or vertically. Groups of objects can be skewed all at once.

Negative values entered into the slots will skew the object opposite to the direction shown in the little diagrams.

(Note: You can also **skew** objects using the side boundary handles of the selection box. See **"Rotate in Inkscape"** for the steps.)



## **Matrix**

The Matrix is an advanced coding method of manipulating your objects. For more information on using it, refer to the **Help > Inkscape User Manual** under the **Positioning and Transformation** section.

