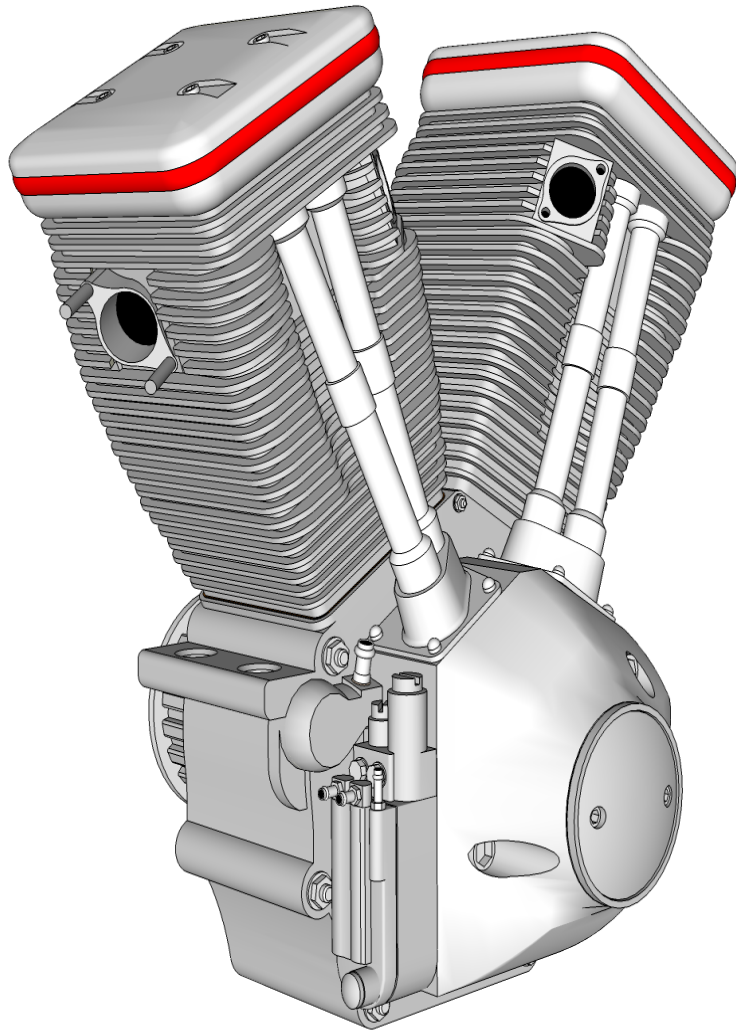
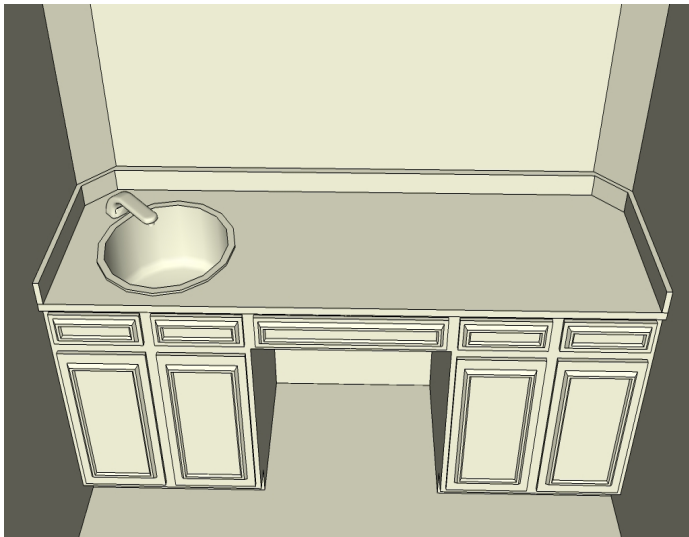


# Ruby Script Mirror Tutorial



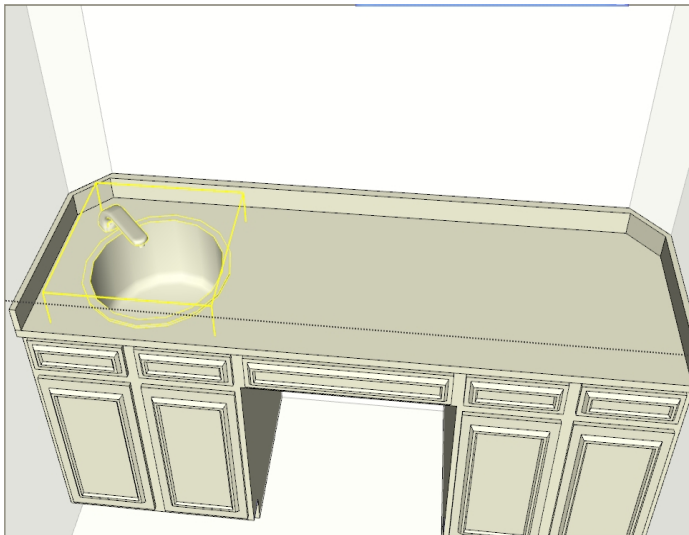
12 January 2008  
Joel S. Kell



**Part 1 #1**

You only have one lavatory and you would like to have the same lavatory on the other side of the counter top

There is a few ways to accomplish this task. Copy and past the component and spend time orientating into position. Select component + ctrl and drag to the right and hope you hit the spot you would like it and then rotate in to position.



**Part 1 #2**

A simple solution

Enter the component group

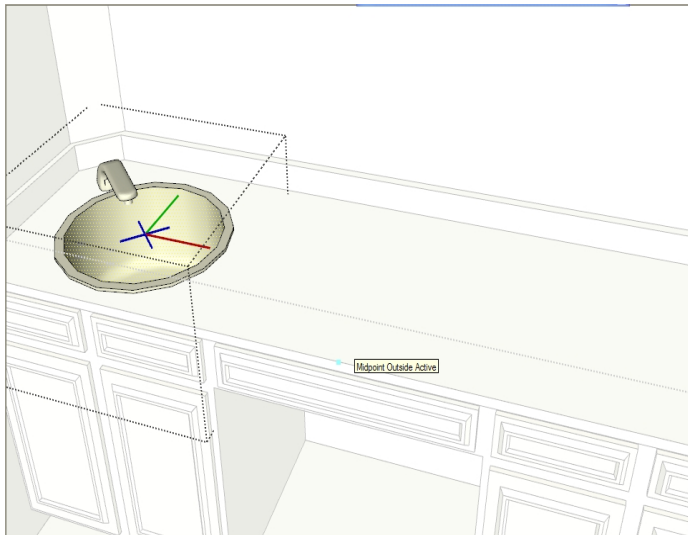


**Part 1 #3**

Selecting a Rectangle

By selecting a rectangle tool for the next step looks a little odd other then to draw a line tool.

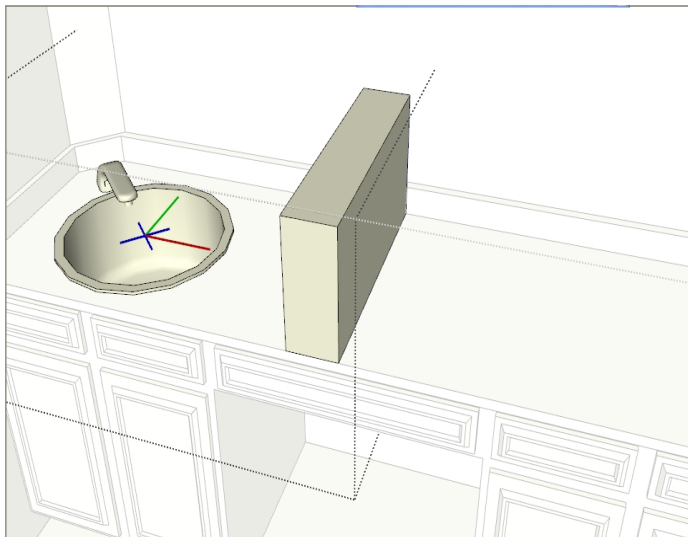
What we do in the next step is use the counter top as a working plane.



**Part 1 # 4**

Locate the Midpoint Outside Active

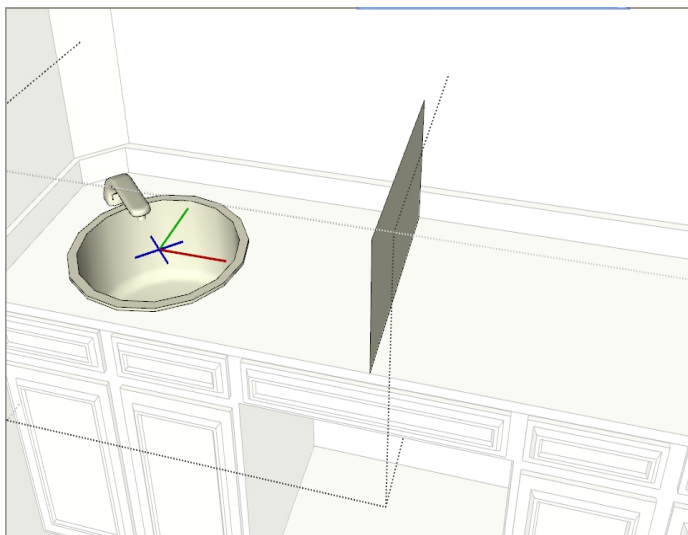
Locate the Midpoint Outside Active, In this example its the counter top. The counter top is now a working plane.



**Part 1 # 5**

The working plane.

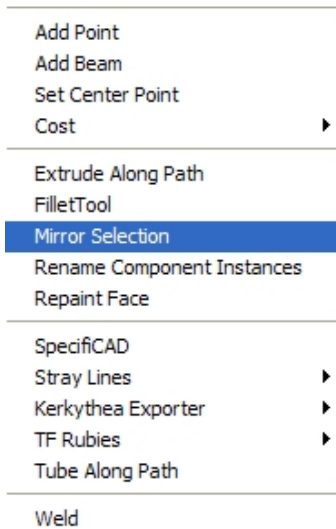
Start the rectangle tool at an upper portion of the working plane and finish the rectangle tool on the midpoint outside active working plane. Using the Push/Pull tool, Pull "extrude" the rectangle away from the midpoint outside active working plane



**Part 1 # 6**

Why The rectangle tool?

Now Delete all of the extrude rectangle behind midpoint outside active working plane.  
Yes you can make a flat face with a draw a line tool. Lets say you go up in blue, line on green, down in blue and back to the start in green. You will have a complainer face that is orientated with SketchUp world. Using a extrude rectangle the single face is orientated to the working plane.



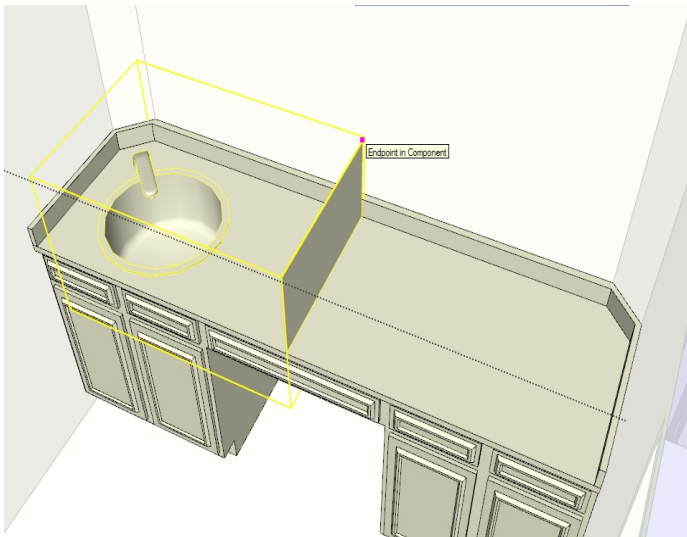
**Part 1 # 7**

The Plugins

Exit the group that is containing the newly created 2D face.

Keeping that group selected

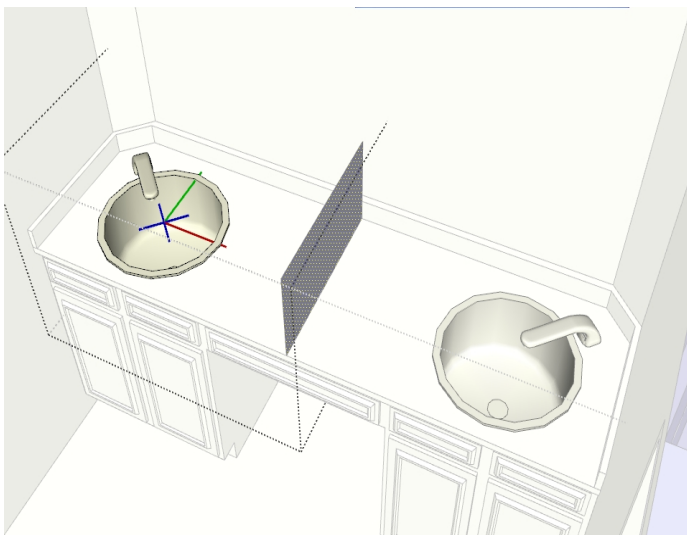
Go to the plugins pull-down menu and select Mirror Selection.



**Part 1 # 8**

Mirror The Selection

Select three separate corner points on the 2D face. Lower front corner > left click, Upper front corner > left click and Back Upper corner > left click.



**Part 1 # 9**

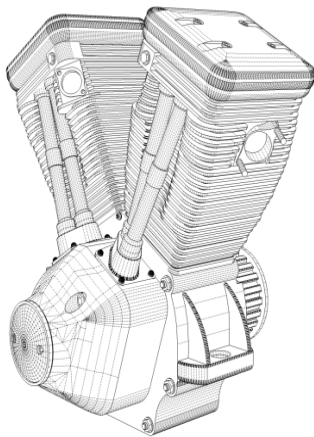
The 2D face

After you make the last left click your Mirror of you lavatory is completed with a small popup asking if you would like to delete the original, Select no. What you do is delete is the original 2D face and the Mirror 2D face that are in the same location but in a separate group.



**Part 1 # 10**

The Completion



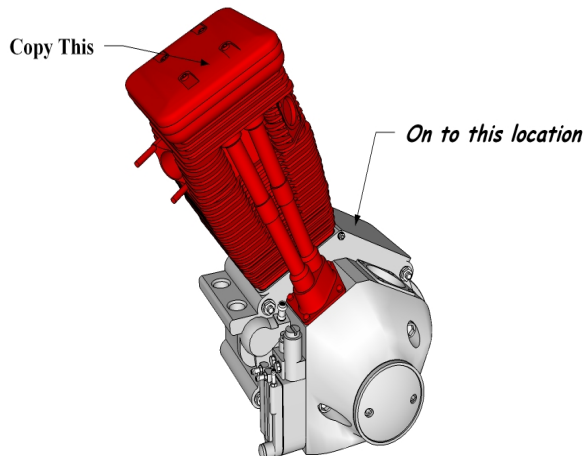
**Part 2**

Complex Modeling

That's nice you now have a Mirror of you lavatory. But how to apply this method to other more complex modeling.

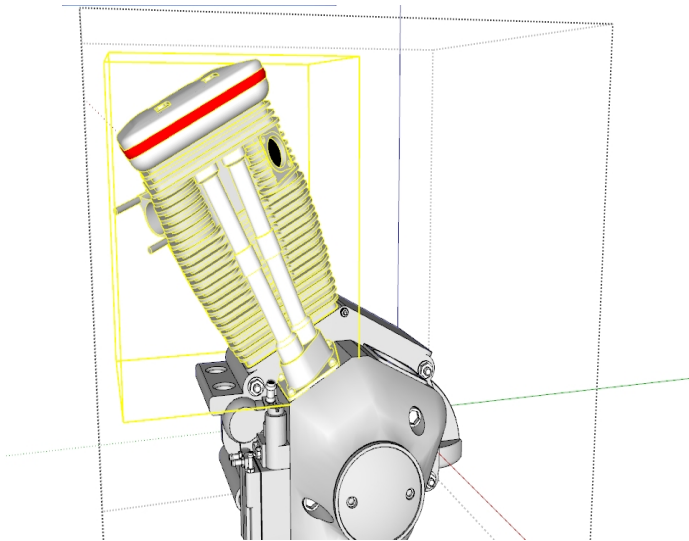
**Part 2 # 1**

Back Cylinder onto the Front



At first glance this looks like a daunting task. Take the back cylinder group and make a front cylinder group. You can Copy and Paste and flip and put time into moving it into location. But by practicing steps from part one you have it completed

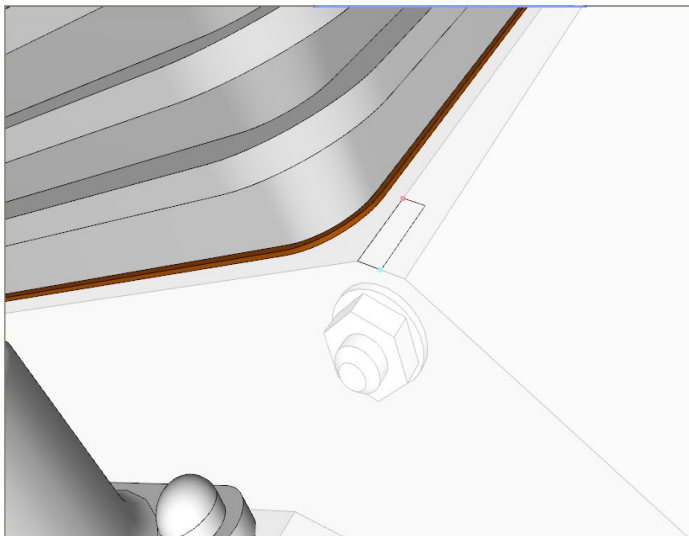




**Part 2 # 3**

A simple solution

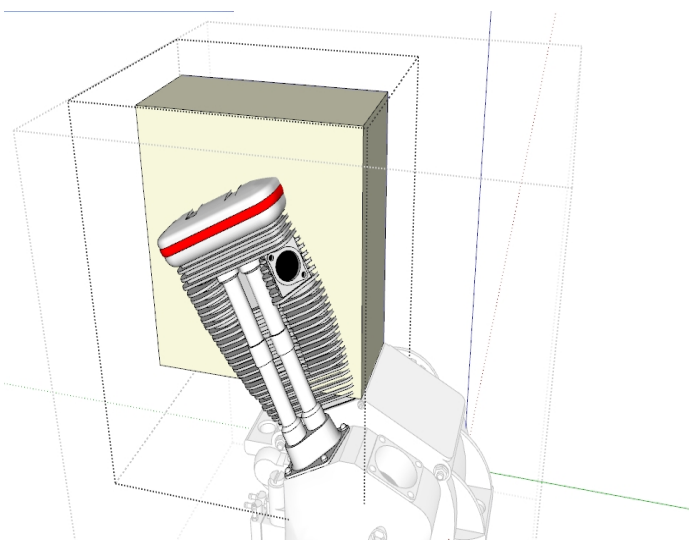
Enter the component group of Back Cylinder then  
Selecting a Rectangle as in part one.



**Part 2 # 4**

The working plane

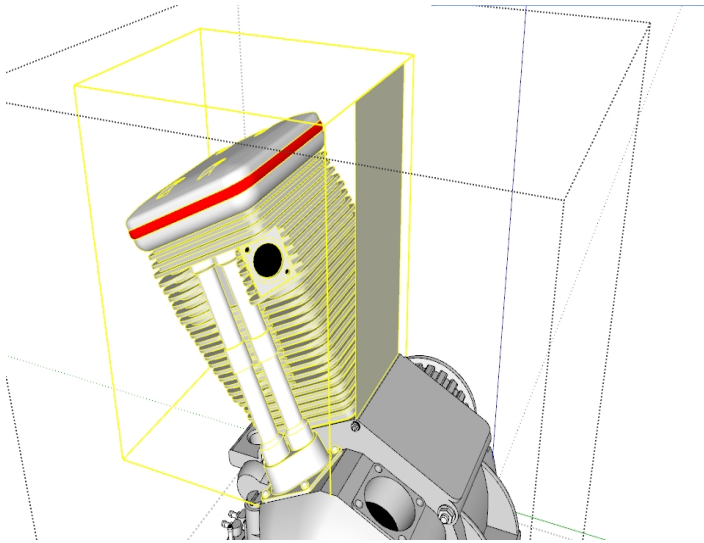
This time the working plane will be a flat surface on top  
of the engine case.  
The angle of the surface the back cylinder is located and  
the angle that the front cylinder is to be are the same and  
have been set from this location.



**Part 2 # 5**

The rectangle

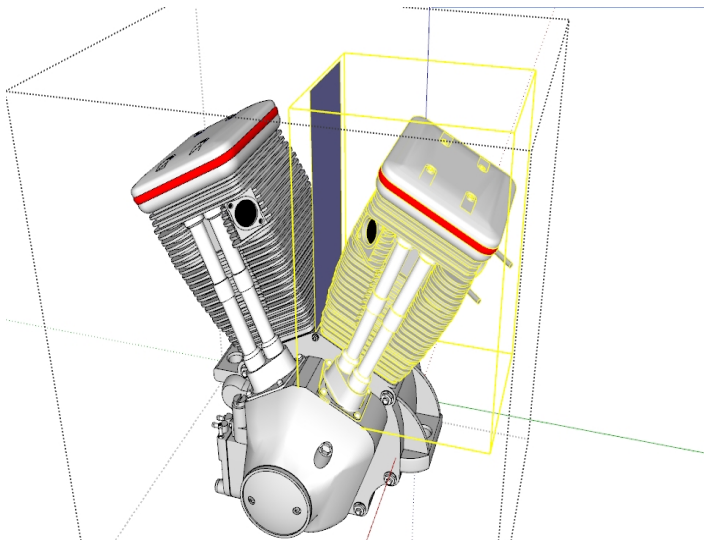
"extrude" the rectangle  
away from the midpoint outside active working plane

**Part 2 # 6**

Mirror The Selection

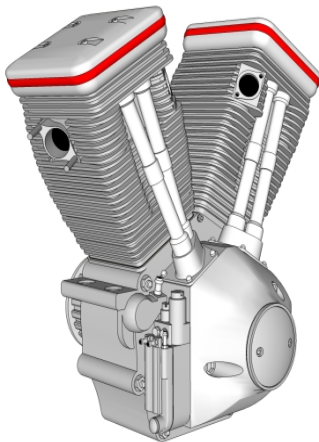
Now Delete all of the extrude rectangle behind midpoint outside active working plane.

Select three separate corner points on the 2D face.  
Lower front corner > left click, Upper front corner > left click and Back Upper corner > left click.

**Part 2 # 7**

The 2D face

After you make the last left click your Mirror of you Back Cylinder is completed with a small popup asking if you would like to delete the original, Select no. What you do is delete is the original 2D face and the Mirror 2D face that are in the same location but in a separate group.

**Part 2 # 8**

The Completion

I hope this is informative. I did not wright The Ruby Script that was used.

I have know clue who did and I forgot at what place it was downloaded from.

But my Thanks to all the people who take time to wright the Ruby Script that make a fun working software package that much more of a Blast.