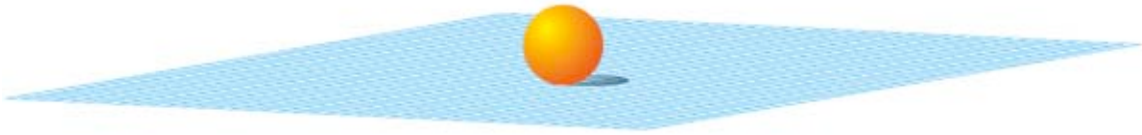


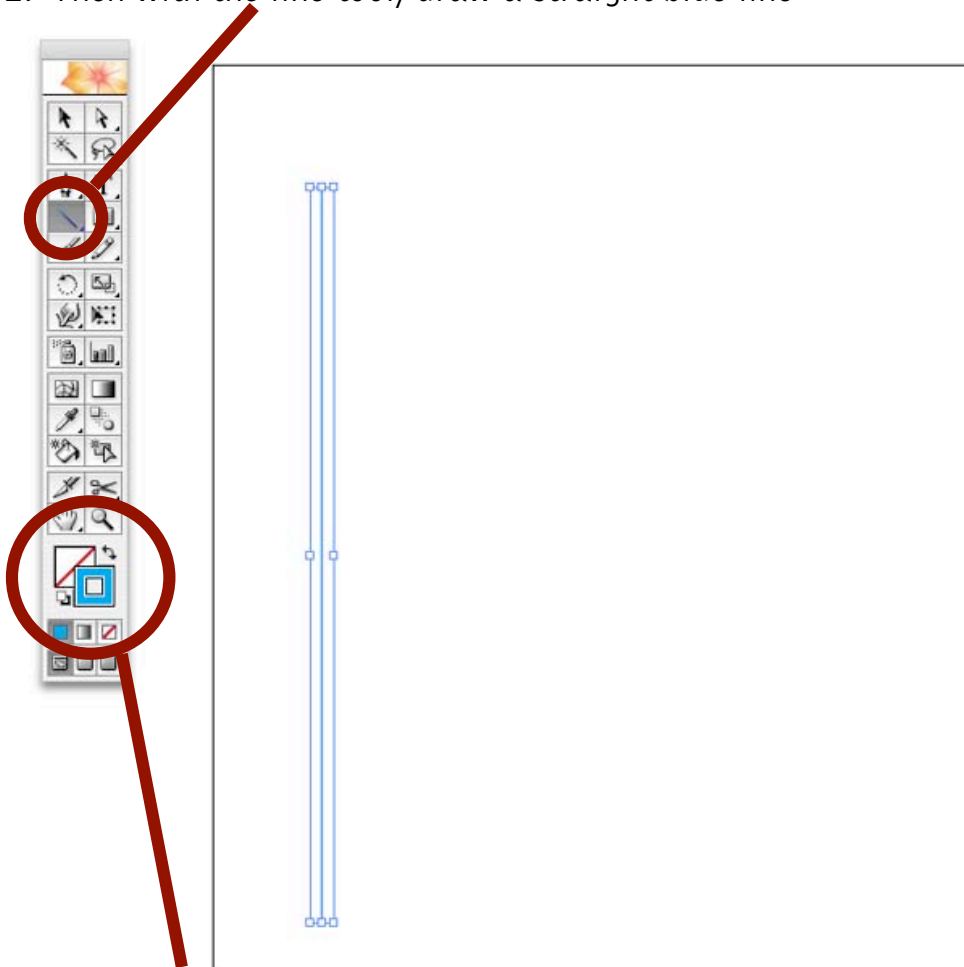
Creating a 3D sphere with a shadow on a plane made from a grid

This is what we are going to make:



The first step is to create the grid that our sphere will sit on

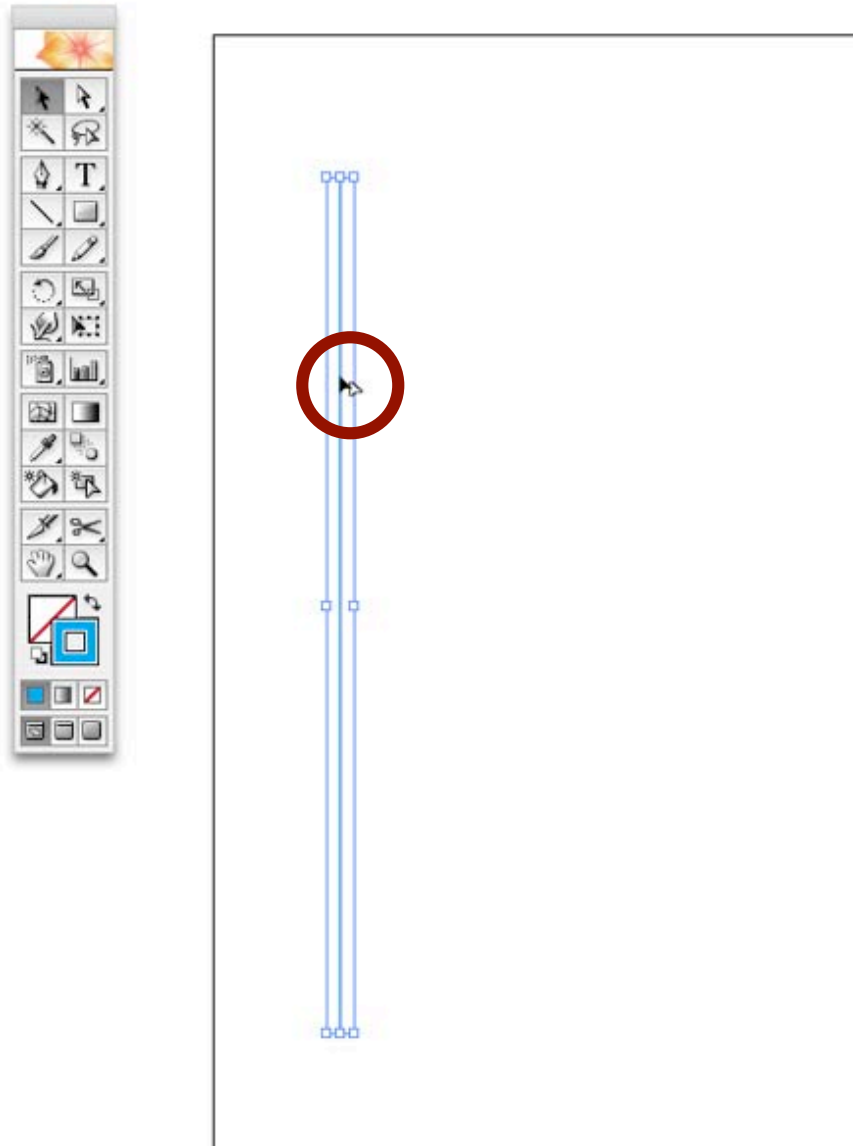
1. Open Illustrator and create a new document (File > New)
2. Then with the line tool, draw a straight blue line



- a. You can change the color by clicking on the color palette underneath the tool bar
- b. Remember whatever square is in front (the stroke or fill) will be the one that gets changed. Make sure the "stroke" is the

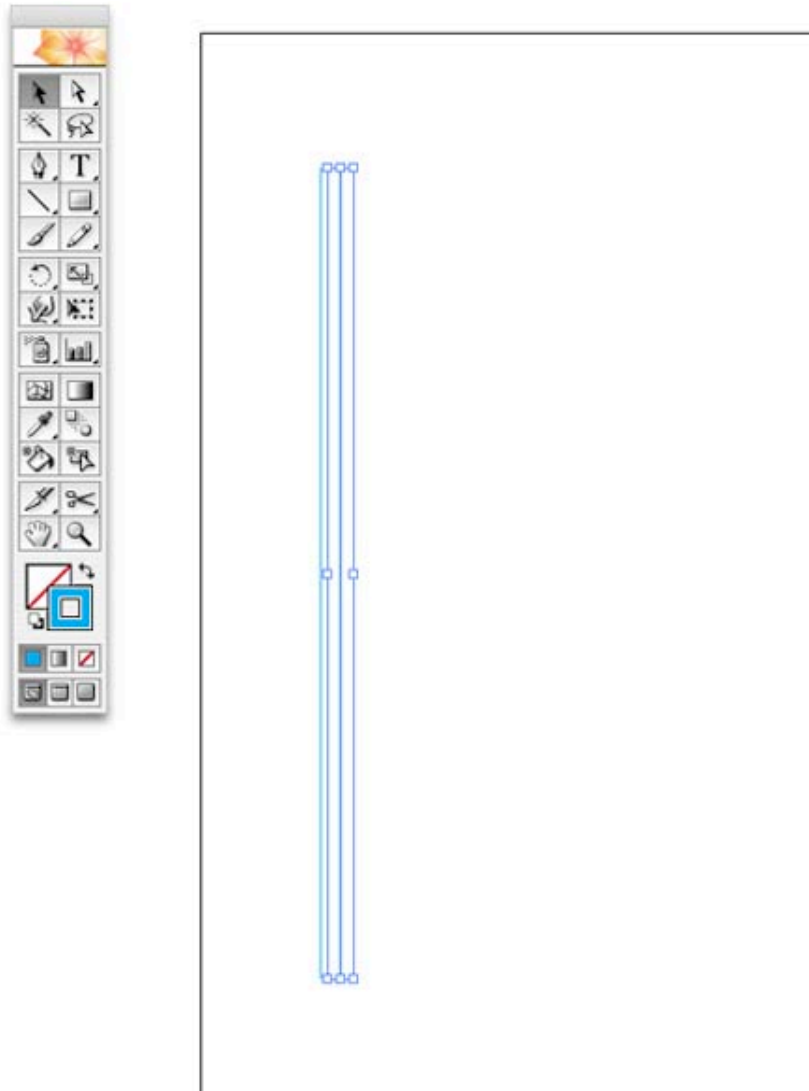
square you make light blue. The fill square should be set to "no fill." (see above illustration)

3. Next we will duplicate our blue line to create the first part of our grid for our plane
 - a. With the black arrow tool, select your blue line
 - b. Drag your cursor over your line till you see the cursor change from a single arrow, to a double black and white one.

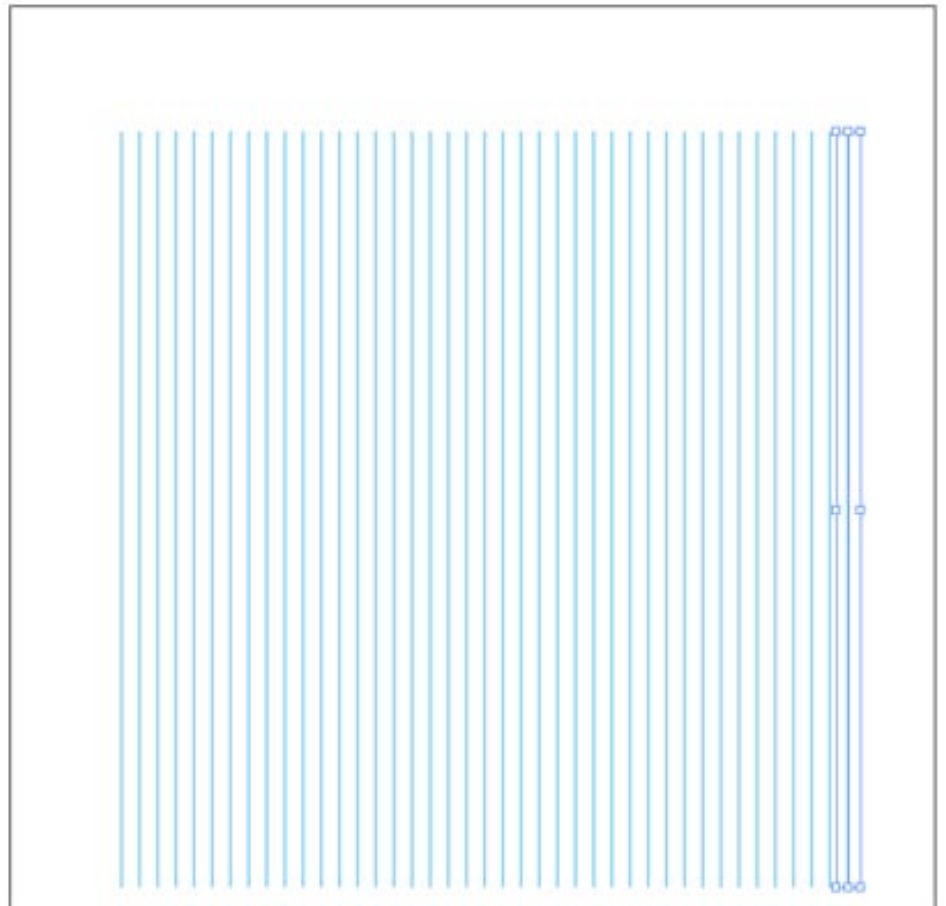
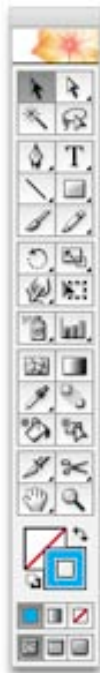


- c. This next part is a two finger work out: hold down the "option" key or "alt" on a PC, click with your mouse, and then press the shift key. Now with your mouse, drag a copy of your line. Make sure you let go with your mouse before you lift your fingers from the "option", "alt", of "shift" keys. The

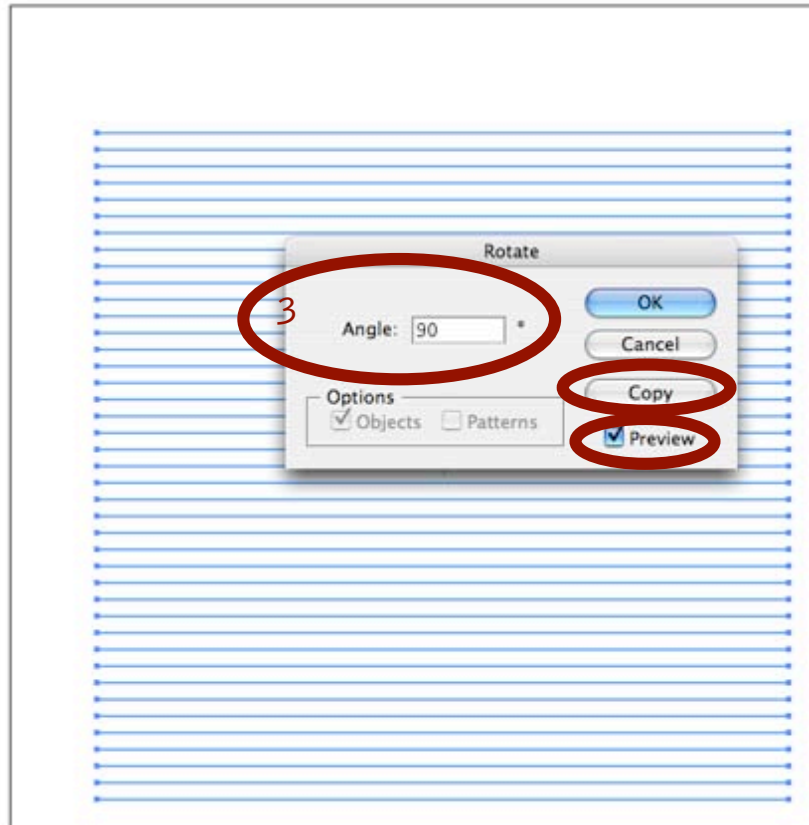
“option” or “alt” key is what allowed us to create a copy of our line, while holding “shift” kept our new line directly parallel with our old one. Your page should now look like this:



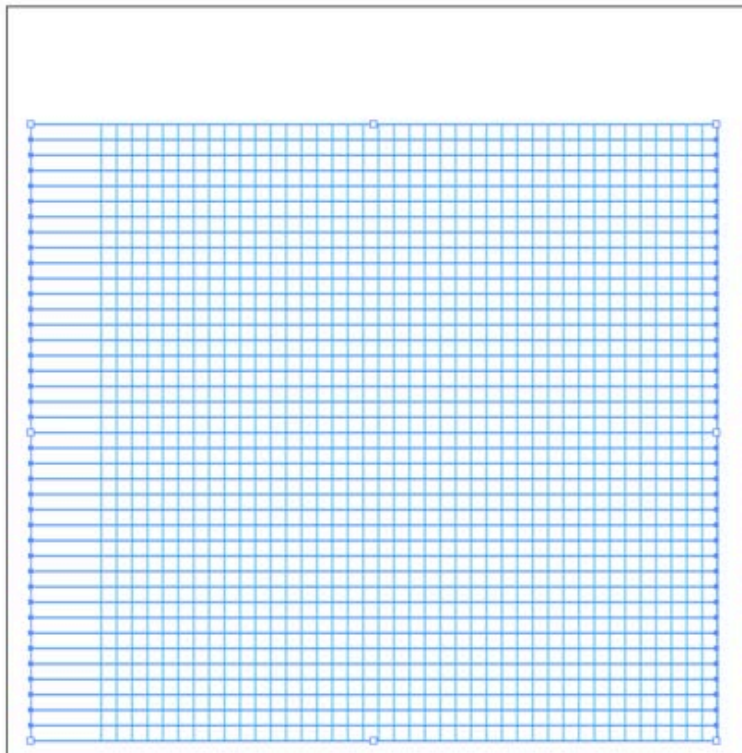
- a. Now simply hold “Command + D” (or “Control + D” on a PC) till you have enough blue lines to create your plane.



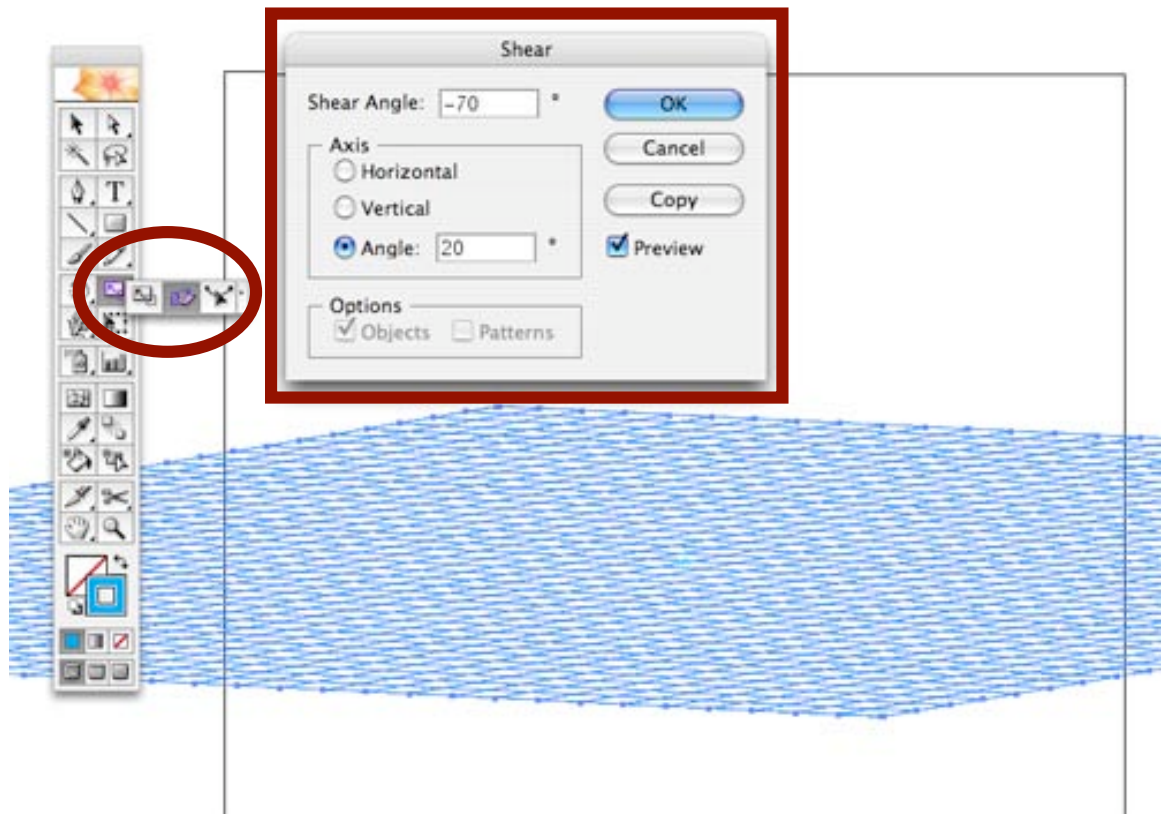
- b. Now select all our lines by using the black arrow tool and drawing a box around all our lines, or by going "Select>All" or "Command + A".
- c. Once all our lines have been selected go "Object +Group" or "Command + G"
- d. Now we are going to rotate and create a copy of our lines to create the rest of our plane
 1. Select the rotate tool
 2. Holding the "Option" or "Alt" key, click in the center of our group of lines
 3. In the dialog box, change the angle to 90°. You can check the "preview" box to see what you have done. Then click "Copy".



4. If your lines don't line up perfectly, you can use your black arrow tool to select the group of lines and make them smaller.

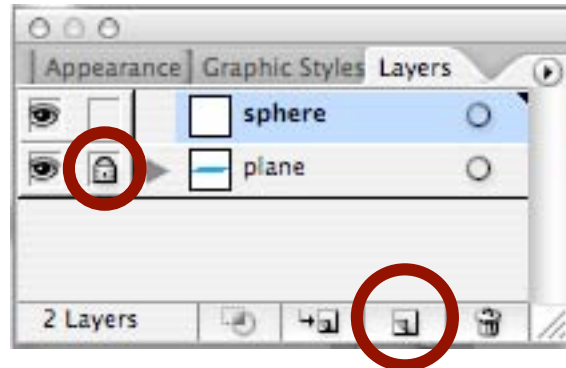


- e. Once you have created a grid you like, our next step will be to skew our plane.
 1. Let's select everything we've created so far by going "Command + A" or "Control + A"
 2. Then we will group our objects (Objects > Group, or "Command + G, or ""Control + G")
 3. Now we'll use our shear tool to give our plane an angle.
 4. Select the Shear tool in the toolbar
 5. Hold down "Option" and click in the center of our plane
 6. In the dialog box, type in an angle of 20° , and a shear angle of -70° . You can click the Preview box to see what you have made.

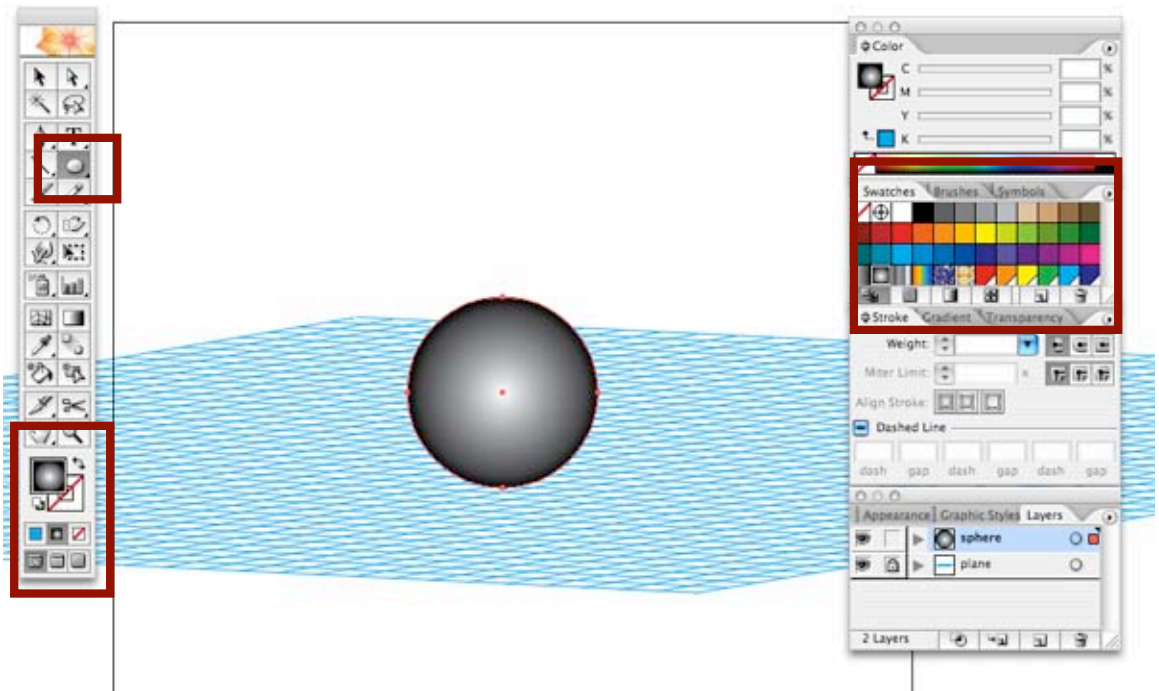


4. Now let's create our sphere to sit on our plane
 - a. First, let's create a new layer for our sphere and lock our layer containing our plane. That way we don't accidentally do something to our plane that we don't want to.
 1. To create a new layer, go to the layers palette and click the "create a new layer" icon. If you cannot see your layers palette, go under the "Window" menu and click "Layers".

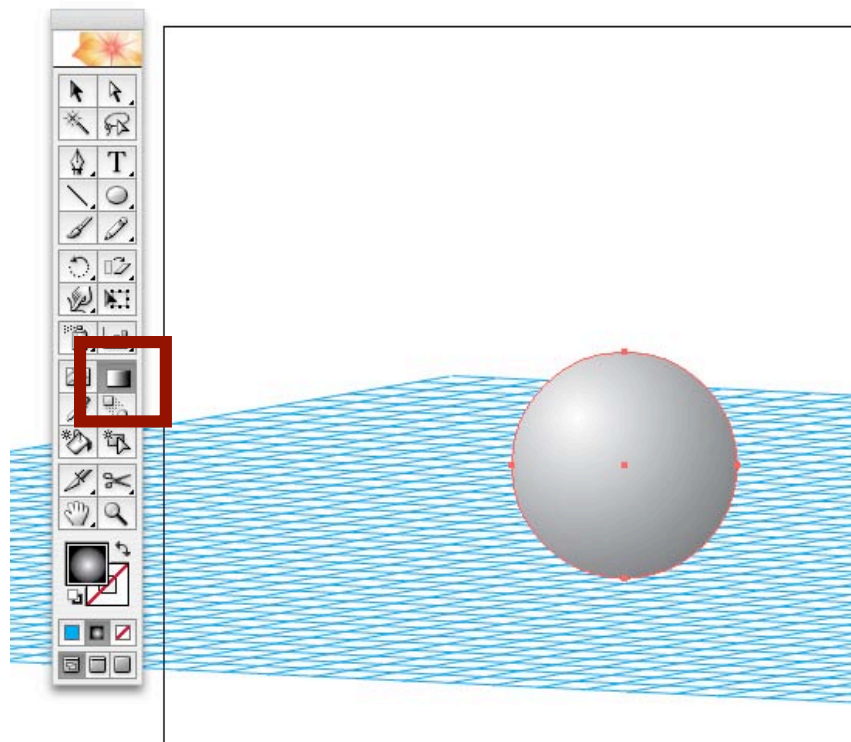
2. Rename your layers by double clicking on the words "Layer 1", or "Layer 2". Rename "Layer 1" – "Plane" and "Layer 2" – "sphere". Lock the "Plane" layer by clicking on the lock icon next to the eyeball in the layers palette.



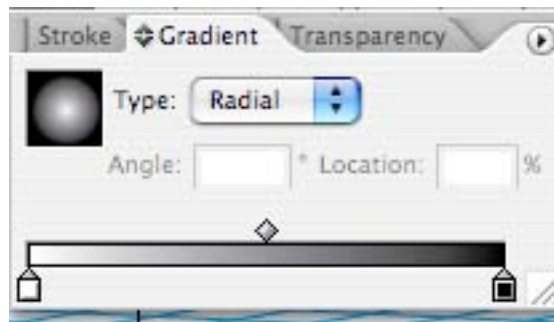
- b. Next, use your elliptical marquee tool to create a sphere on your plane. Remember if you hold "shift", your circle will be a "perfect" circle, holding "option" or "alt" will start your circle from the center as opposed to the upper left hand corner. Holding both together will create a perfect circle that starts from the center. Just remember to let go of your mouse first.
- c. Once your circle is created, give your circle a radial gradient fill by clicking the radial gradient in the swatches palette, and get rid of your circle's stroke. Remember, if you don't see a particular palette, you can always go under the "Window" menu and find it. So far your page should look like the following page.



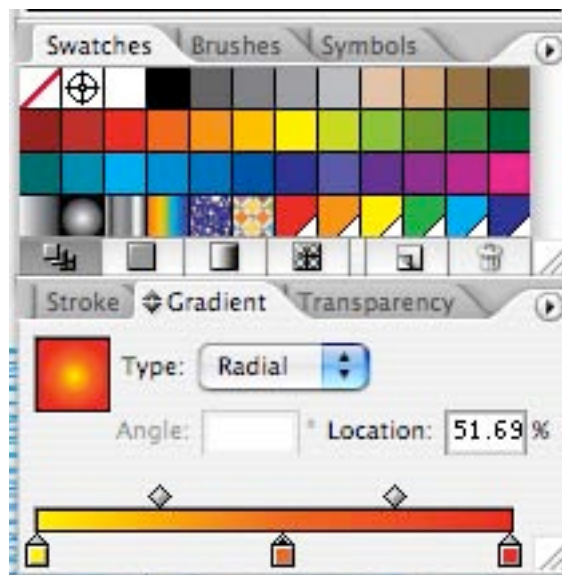
- d. By default, the radial gradient doesn't make our circle look that 3D. To give it a more realistic quality, we can use the gradient tool. Remember, to effectively use the gradient tool, the first spot you click on will be your lightest point, then you drag your cursor to where you want the darkest spot to be. You can drag outside your shape.



- e. We can also make the circle gradient different colors than the default black and white
1. Select the gradient palette, which might be underneath your "stroke" palette, or it will be under the "window" menu.
 2. Then make sure you can see your "gradient" options by clicking on the "fly-out menu" button and selecting "Show Options". Your palette should look like this:



3. Now you can change the color in the gradient by dragging down color swatches from your "swatches" menu onto the gradient palette crayons. You can drag them on top of the existing crayons to change the color, or you can drag them anywhere on the color bar to add additional colors. To delete a gradient color, select that crayon and drag it off the palette.



- f. Lastly, we can create a shadow for our circle so our circle looks a little more anchored on our plane.
1. Select our circle
 2. Hold "Option" and drag a copy
 3. Using our black arrow tool, we can squish down our copy of our circle so it's a shadow shape.
 4. You might also want to change the colors back to black and white by filling our circle copy with the b+w radial gradient in the swatches palette
 5. With the black arrow tool, position the shadow where you want it
 6. Select our original circle with the black arrow tool and go "Object>Arrange>Bring to Front"
 7. With the black arrow tool, select our shadow and reposition it as needed
 8. To give our shadow a more realistic look, you may want to open the "Transparency" palette (behind the "Gradient" palette tab) and change the blend mode from "Normal" to something else such as "Darken".

Congratulations!

Your circle should now look something like this:

