

APPENDIX A

Shapes You Can Make in Merge Drawing Mode

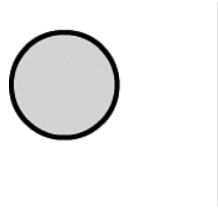
Flash 8 added a drawing mode called Object Drawing that you learned about earlier in the book. This appendix shows you how you can create several shapes by using the *other* draw mode called Merge. These are just a few examples of how you can sharpen your drawing skills. They are not necessarily the only ways to achieve the desired results.

When you're in Merge drawing mode (that is, not Object Drawing mode) Flash has some very unique drawing capabilities including selection (anything you can see, you can select), the Snap to Objects option, grouping, and shapes that eat away at one another because they're all in the same level. These are all discussed in Hour 2, "Drawing and Painting Original Art in Flash," and Hour 6, "Applied Layout Techniques." You'll now explore these capabilities further by using them in practice. Before you get started, be sure to have Snap to Objects turned on (via View, Snapping), Object Drawing turned off (unclick the button in the options area for any draw tool such as the Oval tool), and select a different color for fill than for stroke.

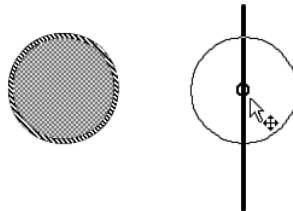
Semicircle

Follow these steps to make a semicircle:

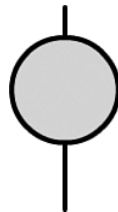
1. Make sure that Snap to Objects is turned on and draw a circle. Also draw a vertical line that is much taller than the circle.



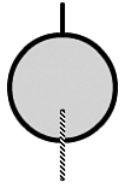
2. Double-click the center of the circle to select the line and the fill and then click and drag from the center of the circle so that you get the solid ring near your cursor. Snap the center of the circle to the line.



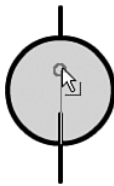
Your drawing should now look like the following figure:



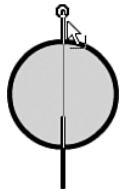
3. Click to select just the vertical line at the bottom. Using the arrow keys, nudge the vertical line up.



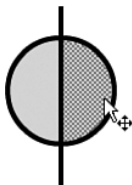
4. Click away from the line to deselect it. With the Selection tool, bring your cursor near the top of the line you just moved until you see the cursor type that indicates you'll be dragging the end point. Click and start dragging.



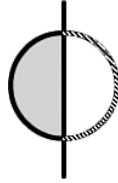
5. Don't snap the end point to the circle. Snap it to the end of the line, on top.



6. Click one semicircle to select it. Then delete the fill.



7. Click and delete the line portion that corresponds to the fill you just deleted.



8. Click and delete the excess portions of the line.



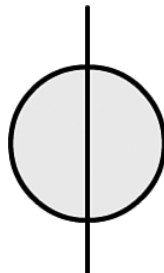
You now have a semicircle!



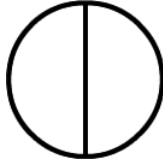
Spokes on a Wheel

Follow these steps to make spokes on a wheel:

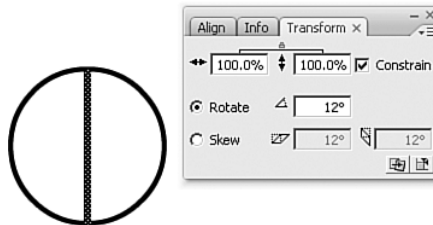
1. Follow the first five steps in the preceding section so you have a shape that looks like the following:



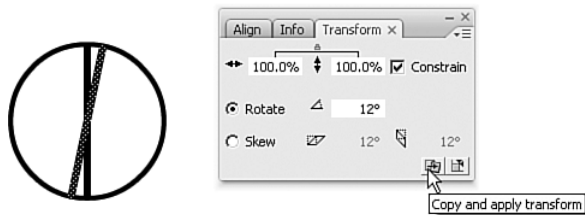
2. Click and delete the fills and the extraneous outside lines.



3. Select just the vertical line.
4. Open the Transform panel (by pressing Ctrl+T) and type **12** into the Rotate field.



5. Click the “Copy and apply transform” button at the bottom right of the panel.



6. Continue to click that button as many times as needed to complete the circle.

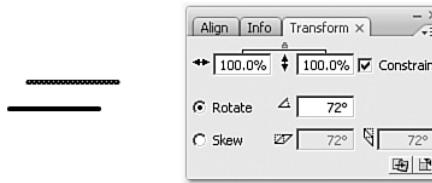
Five-Pointed Star

Follow these steps to make a five-pointed star:

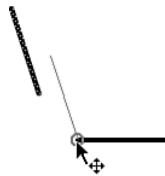
1. Draw a perfectly horizontal line. Then copy and paste it.



2. You'll first make a pentagon (which has five sides). To begin, with the duplicate line selected, use the Transform panel to rotate the line 72 degrees. You can figure the inside angle of any shape by dividing 360 (degrees) by the number of lines in the shape. In the case of a pentagon, each inside angle is 72 degrees because $360/5 = 72$.



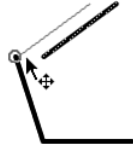
3. Select the line. Then click and drag the end of the line so that it snaps to the end of the first line.



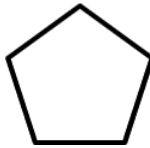
4. Duplicate the new line.



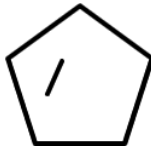
5. Rotate the new duplicate line by 72 degrees and snap it as you did before.



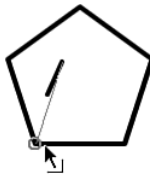
6. Repeat steps 3–5 to make a pentagon.



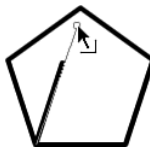
7. Draw a line inside the pentagon that doesn't touch any edges.



8. Grab one end point of the new line and snap it to the bottom-left corner of the pentagon.



9. Grab the other end point and snap it to the top corner of the pentagon.



- 10.** Draw another line in the larger area of the pentagon and connect it to the bottom-right and top corners of the pentagon.



- 11.** After you connect this new line, draw a small line in the space shown in the following figure and snap one end point to the bottom-right corner of the pentagon.



- 12.** In one motion, drag the other end point to the middle-left corner of the pentagon. If you drag this line partway and stop, it will break where it crosses the other line.



- 13.** Draw another line in the space shown in the following figure.



- 14.** Snap the ends of the new line to the middle-left and middle-right corners of the pentagon. As in step 12, if you drag the line partway and stop before snapping it to the corner, the line will break.



- 15.** Draw the last line in the space shown in the following figure:



- 16.** Snap this new line to the middle-right and bottom-left corners of the pentagon.



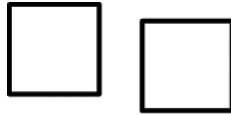
- 17.** Remove excess lines.



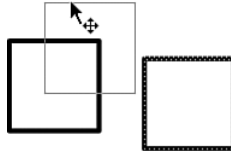
Oblique Cube

Follow these steps to make an oblique cube:

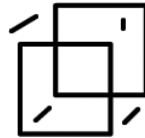
1. Draw a square. Then delete the fill and duplicate the square.



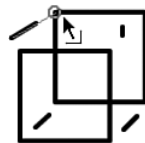
2. Move one box on top of the other, positioning it above and to the right of the other box.



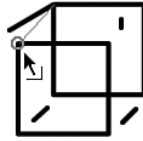
3. Draw four short lines that don't touch either box. If you find that Snap to Objects is making this step difficult, feel free to temporarily turn off this option. The lines are shown in the following figure:



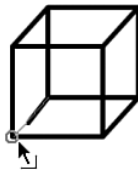
4. Connect one end of one line to a corner of the rear square.



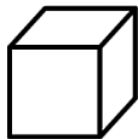
5. Connect the other end of that line to the corresponding corner of the front square.



6. Repeat steps 4–5 with the second, third, and fourth lines.



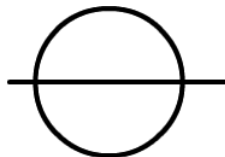
7. You can fill the panes of the cube with a gradient and use the Gradient Transform tool to fine-tune the look.



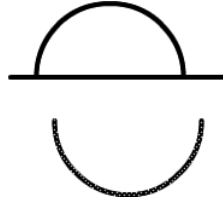
Sine Waves

Follow these steps to make a sine wave:

1. Follow the first five steps in the semicircle exercise to create a circle with a line through it. This time, though, make it horizontal.



2. Click once to select the bottom half of the circle; then click and drag it away from the line.



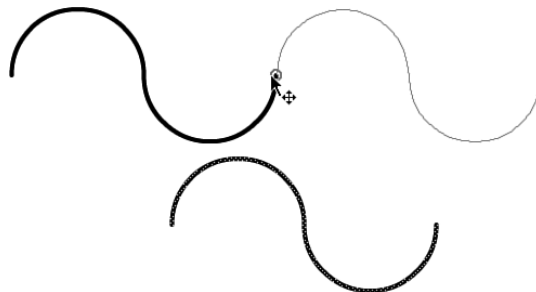
3. Remove the horizontal line.



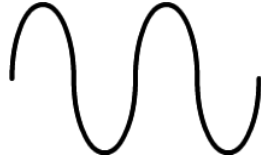
4. Click once to select the bottom image. Then click and drag from its left end point and snap it to the right end point of the top image.



5. Copy and paste everything. Then select and drag to extend the cycle. Repeat this process to add as many waves as desired.



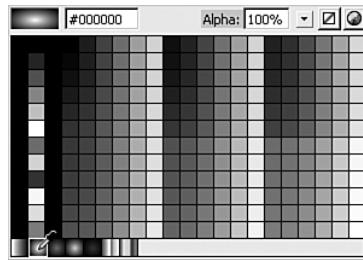
6. When you're finished, you can scale the width or height of each wave however you want.



3D Sphere

Follow these steps to make a 3D sphere:

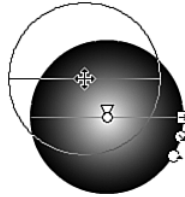
1. This exercise is really easy—but the result looks cool. First, select the Oval tool (no line) and the built-in radial gradient.



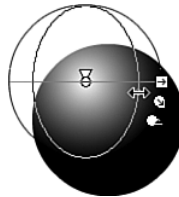
2. Draw a circle.



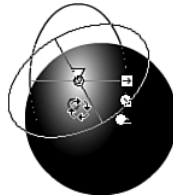
3. Select the Gradient Transform tool. If you pick up the circle handle in the center of the fill, you can move the center point of the fill up and to the left (where the imaginary light source is on your computer screen).



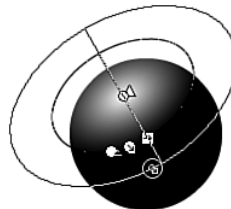
4. Grab the square handle and move it to the left to change the shape of the radial gradient.



5. Grab the bottom circle handle to rotate the shape of the gradient.



6. Grab the circle handle that's between the rotating and shape handles to adjust the fall-off.



7. Keep tweaking your image until you've turned the circle into a sphere. Notice that because of the arc in the fall-off, the circle has an equator.



Color Wheel

Follow these steps to make a color wheel:

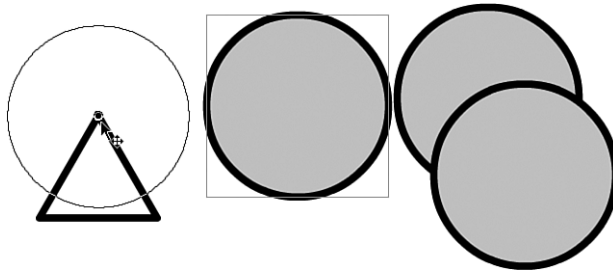
1. You'll first draw a triangle. To do this, draw a line and then duplicate it. Rotate the new line exactly 60 degrees and snap the ends of the two lines together. Now repeat this process with a third line to complete the triangle.



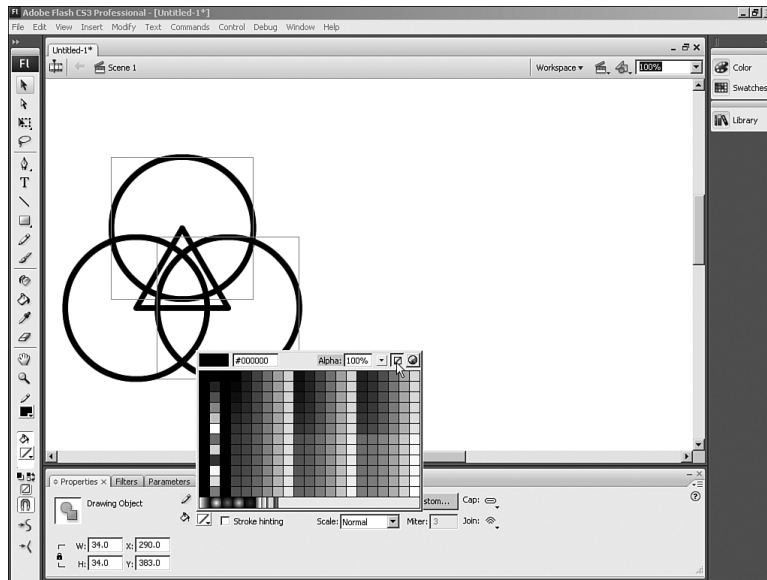
2. Select the entire triangle and choose Modify, Group so that it doesn't cut away from other shapes when you stack them.
3. Now, because I don't want the circles to eat away at each other yet, select the Oval tool and turn on Object Drawing. Draw a circle that's noticeably larger than the triangle.



4. Use the Selection tool and select the circle; then make two copies.
5. Drag each circle by their centers and snap them to the three corners of the triangle.

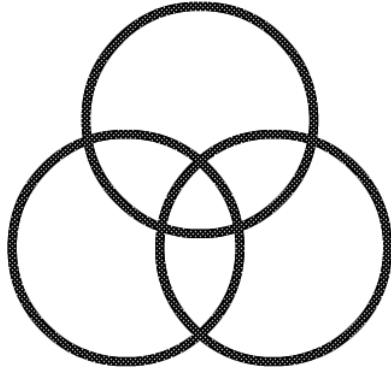


6. Select all three circles and via the Properties panel, change the fill to “no fill” (the diagonal red line).

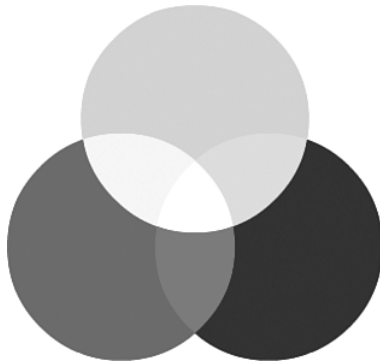


7. Next, delete the triangle. There are several ways to select the triangle so it's easy to delete: Carefully click just the triangle; send all the circles to the back (Modify, Arrange, Send to Back); select all three circles and cut then paste them back after you delete the triangle; or, use the marquee technique to select just the triangle (though you may need to make sure Edit, Preferences, General “Contact-sensitive Selection and Lasso tools” is unchecked).

8. With the three circle outlines we need to turn them back into a shape to fill each segment. I prefer to just select all three and choose Modify, Break Apart. (Using Modify, Combine Shapes, Union is fine but then you'll need to enter the Drawing Object to fill each part with a unique color.)



9. Now simply use the paint bucket tool and fill in the colors (Red, Green, Blue for the large parts; Cyan, Magenta, Yellow for the overlapping parts—or vice versa).



versa).

