3 CREATING AND EDITING SHAPES

Lesson overview

In this lesson, you'll learn how to do the following:

- Create a document with multiple artboards.
- Use tools and commands to create basic shapes.
- Work with drawing modes.
- Use rulers and Smart Guides as drawing aids.
- Scale and duplicate objects.
- Join and outline objects.
- Edit strokes with the Width tool.
- Work with the Shape Builder tool.
- Work with Pathfinder commands to create shapes.
- Use Image Trace to create shapes.

This lesson takes approximately an hour and a half to complete. If needed, remove the previous lesson folder from your hard disk and copy the Lesson03 folder onto it.

You can create documents with multiple artboards and many kinds of objects by starting with a basic shape and then editing it to create new shapes. In this lesson, you'll create a new document, and then create and edit some basic shapes for an illustration.

Getting started

In this lesson, you'll create an illustration for a brochure.

1 To ensure that the tools and panels function as described in this lesson, delete or deactivate (by renaming) the Adobe Illustrator CS6 preferences file. See "Restoring default preferences" on page 3.

2 Start Adobe Illustrator CS6.

● **Note:** If you have not already done so, copy the Lesson03 folder from the Lessons folder on the *Adobe Illustrator CS6 Classroom in a Book* CD onto your hard disk. See "Copying the Classroom in a Book files" on page 2.

● **Note:** In Mac OS, when opening lesson files, you may need to click the round, green button in the upper-left corner of the Document window to maximize the window's size.

3 Choose File > Open. Locate the file named L3end.ai, which is in the Lesson03 folder in the Lessons folder that you copied onto your hard disk. These are the finished illustrations that you will create throughout this lesson. Choose View > Fit All In Window and leave the file open for reference, or choose File > Close.
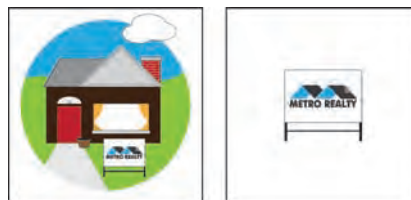
Creating a new document

You will now create a document that will have two artboards, each with an illustration that you will later combine.

1 Choose File > New to open a new, untitled document. In the New Document dialog box, change the Name to **homesale**, choose Print from the New Document Profile menu (if it isn't already selected), and change the Units to Inches. When you change the units, the New Document Profile automatically changes to [Custom]. Keep the dialog box open for the next step.

Using document profiles, you can set up a document for different kinds of output, such as print, web, video, and more. For example, if you are designing a web page mockup, you can use a web document profile, which automatically displays the page size and units in pixels, changes the color mode to RGB, and changes the raster effects to Screen (72 ppi).

● **Note:** The spacing value is the distance between each artboard.

2 Change the Number Of Artboards option to **2** to create two artboards. Click the Arrange By Row button (⇥), and make sure that the Left To Right Layout arrow (⇥) is showing. In the Spacing field, type **1**. Click the word "Width," and type **8** in the Width field. Type **8** in the Height field. You don't need to type the **in** for inches, since the units are set to inches (it's assumed). Click OK.
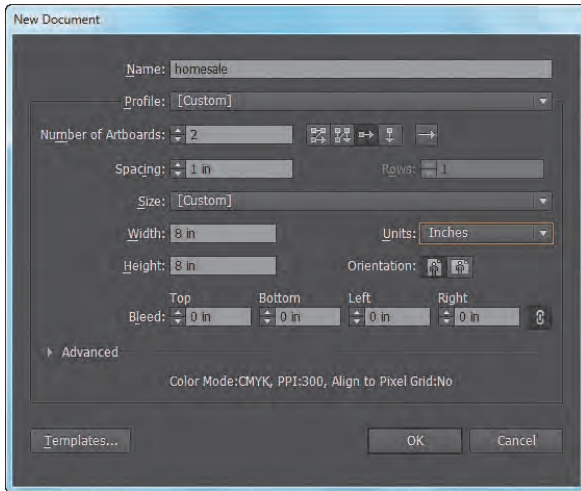
3 Choose File > Save As. In the Save As dialog box, ensure that the name of the file is **homesale** (Windows) or **homesale.ai** (Mac OS), and choose the Lesson03 folder. Leave the Save As Type option set to Adobe Illustrator (*.AI) (Windows) or the Format option set to Adobe Illustrator (ai) (Mac OS), and click Save. In the Illustrator Options dialog box, leave the Illustrator options at their default settings, and click OK.

Set up multiple artboards

Illustrator allows you to create multiple artboards. Setting up the artboards requires an understanding of the initial artboard settings in the New Document dialog box. After specifying the number of artboards for your document, you can set the order you'd like them laid out on screen. They are defined as follows:

- **Grid By Row:** Arranges multiple artboards in the specified number of rows. Choose the number of rows from the Rows menu. The default value creates the most square appearance possible with the specified number of artboards.

- **Grid By Column:** Arranges multiple artboards in the specified number of columns. Choose the number of columns from the Columns menu. The default value creates the most square appearance possible with the specified number of artboards.

- **Arrange By Row:** Arranges artboards in one straight row.

- **Arrange By Column:** Arranges artboards in one straight column.

- **Change To Right-To-Left Layout:** Arranges multiple artboards in the specified row or column format, but displays them from right to left.

—From Illustrator Help

4 Click the Document Setup button in the Control panel.

This button opens the Document Setup dialog box, where you can change the artboard size, units, bleeds, and more, after a document is created.

● **Note:** If the Document Setup button does not appear in the Control panel, it may mean that content in the document is selected. You can also choose File > Document Setup.

5 In the Bleed section of the Document Setup dialog box, change the value in the Top field to **.125** in, either by clicking the up arrow to the left of the field once or by typing the value, and all four fields change. Click OK.
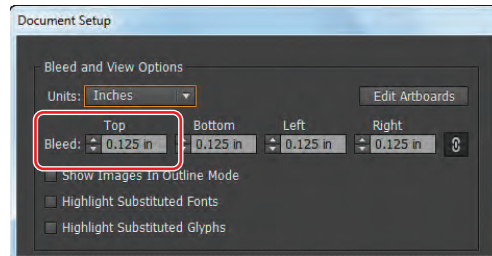
Notice the red line that appears around both artboards. The red line indicates the bleed area. Typical bleeds for printing are about 1/8 of an inch.

What is a bleed?

Bleed is the amount of artwork that falls outside of the printing bounding box, or outside the artboard. You can include bleed in your artwork as a margin of error—to ensure that the ink is still printed to the edge of the page after the page is trimmed or that an image can be stripped into a keyline in a document.

—From Illustrator Help

Working with basic shapes

In the first part of this lesson, you'll create a house using basic shapes, like rectangles, ellipses, rounded rectangles, and polygons. You'll begin this exercise by setting up the workspace.

▶ **Tip:** You can change the units for the current document by right-clicking (Windows) or Ctrl-clicking (Mac OS) the horizontal or vertical ruler and choosing a new unit from the context menu.

1 Choose Window > Workspace > Essentials (if it's not already selected), and then choose Window > Workspace > Reset Essentials.

2 Choose View > Rulers > Show Rulers, or press Ctrl+R (Windows) or Command+R (Mac OS), to display rulers along the top and left side of the Document window, if they are not already showing.

The ruler units are inches because you specified Units as inches in the New Document dialog box. You can change the ruler units for all documents or for

the current document only. The ruler unit applies to measuring objects, moving and transforming objects, setting grid and guide spacing, and creating shapes. It does not affect the units used in the Character, Paragraph, and Stroke panels. The units used in these panels are specified in the Units category in the program preferences (Edit > Preferences [Windows] or Illustrator > Preferences [Mac OS]).

Understanding drawing modes

Before starting to draw shapes in Illustrator, notice the three drawing modes found at the bottom of the Tools panel: Draw Normal, Draw Behind, and Draw Inside.

Each drawing mode allows you to draw shapes in a different way.

Draw Normal — Draw Inside
Draw Behind

● **Note:** If the Tools panel you see is a single column, select a drawing mode by clicking the Drawing Modes button (🔲) at the bottom of the Tools panel and choosing a drawing mode from the menu that appears.

• **Draw Normal mode:** You start every document by drawing shapes in Normal mode, which stacks shapes on top of each other.

• **Draw Behind mode:** This mode allows you to draw objects behind other objects without choosing layers or paying attention to the stacking order.

• **Draw Inside mode:** This mode lets you draw objects or place images inside other objects, including live text, automatically creating a clipping mask of the selected object.

● **Note:** To learn more about clipping masks, see Lesson 15, "Combining Illustrator CS6 Graphics with Other Adobe Applications."

As you create shapes in the following sections, you will be using the different drawing modes and learning how they affect your shapes.

Creating rectangles

First, you'll create a series of rectangles.

1 Choose View > Fit Artboard In Window. Make sure that 1 is showing in the Artboard Navigation area in the lower-left corner of the Document window, which indicates that the first artboard is showing.

2 Choose Window > Transform to open the Transform panel.

The Transform panel is useful for editing properties, such as the width and height of an existing shape.

3 Select the Rectangle tool (⬛) in the Tools panel, and start dragging from just to the left of the center on the artboard, down and to the right. See the figure for placement on the artboard. As you drag, notice the tool tip that appears as a gray box next to the cursor, indicating the width and height of the shape as you draw. This is called the measurement label and is a part of the Smart Guides, which will be discussed further in this lesson. Drag down and to the right until the rectangle is approximately 4.7 in wide and has a height of 2.3 in.
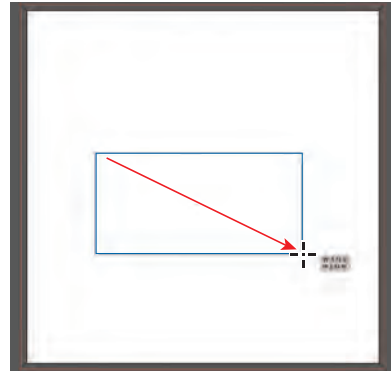
When you release the mouse button, the rectangle is selected, and its center point appears. The center point lets you drag to align the object with other elements in your artwork. Also, by default, shapes are filled with a white color and have a black stroke (border). A shape with a fill can be selected and moved by first positioning the pointer anywhere inside the shape.

▶ **Tip:** Holding down the Alt (Windows) or Option (Mac OS) key as you drag with the Rectangle, Rounded Rectangle, or Ellipse tools draws a shape from its center point rather than from its upper-left corner. Holding down the Shift key as you draw with the Rectangle, Rounded Rectangle, or Ellipse tools selected draws a shape in perfect proportion (a square, rounded corner square, or circle).

4 In the Transform panel, if necessary, change the size of the selected object by typing **4.7** for the width (W:) and **2.3** for the height (H:). Typing the **in** for inches isn't necessary and will be added automatically.

5 Close the Transform panel group by clicking the Close button (X) in the upper-right corner of the group title bar (Windows) or in the upper-left corner (Mac OS).

6 With the new rectangle still selected, click the Fill color (⬜▾) in the Control panel and change the fill color to a dark brown. When you position the pointer over the swatches in the panel that appears, a tooltip showing "C=50 M=70 Y=80 K=70" appears over the correct swatch. Press the Escape key to hide the Swatches panel.

● **Note:** You will learn more about working with color in Lesson 6, "Color and Painting."

Next, you will create another rectangle using a different method.

7 With the Rectangle tool still selected, position the pointer over the rectangle on the artboard and click. The Rectangle dialog box appears.

8 In the Rectangle dialog box, change the Width to **1 in**, press the Tab key, and type **1.6** in the Height field. Click OK.
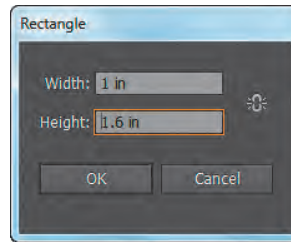
9 With the new rectangle still selected, click the Fill color (▣▾) in the Control panel and change the fill color to red (position the pointer over a red swatch until the tooltip displays as "C=15 M=100 Y=90 K=10"). Press the Escape key to hide the Swatches panel.
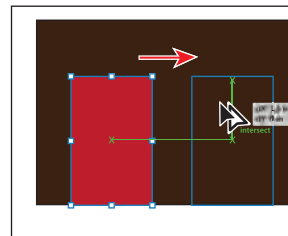
10 Select the Selection tool (▸), and drag the new rectangle for the door so that the bottom edge snaps to the bottom edge of the brown rectangle and is closer to the left edge of the brown rectangle.
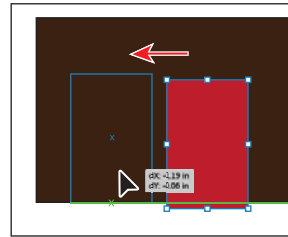
The snapping of the two shapes is caused by the Smart Guides being turned on. Also, the values you see in the measurement label may not be the same as you see in the figure, and that's okay.

Another way to make a shape is to make a copy of that shape. Next, you'll copy the door shape and create shapes for a window and the chimney.

1 With the Selection tool selected, position the pointer over the red filled rectangle. Press the Alt (Windows) or Option (Mac OS) key, and drag directly to the right. When a green line appears indicating that you are snapping to the horizontal center of the brown rectangle and the vertical center of the red rectangle, release the mouse button and then the Alt or Option key. The measurements you see may be different than the figure and that's okay.

2 With the new rectangle still selected, click the Fill color in the Control panel and change the color to white to fill the new shape.

3 Drag the lower-right bounding point of the white rectangle to the right to change the width of the shape to approximately 2.3 in with a height of 1.1 in, as seen in the measurement label.
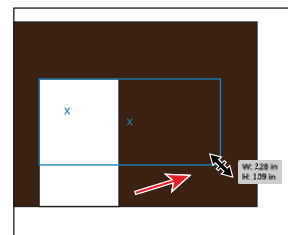
▶ **Tip:** You can always zoom in closer to the artwork for more precision or enter the values in the Transform panel after you draw the shape.

4 With the Selection tool, press the Alt (Windows) or Option (Mac OS) key, and drag the white rectangle from its center straight up so that the bottom edge snaps to the top edge of the brown rectangle.
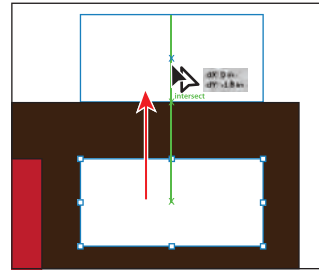
5 Drag the left, middle bounding point of the rectangle to the right until a width of approximately .75 in shows in the measurement label.
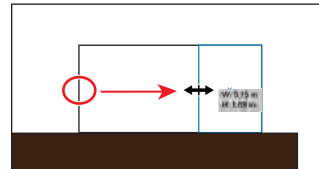
6 Drag the new rectangle to the right until the right edge snaps to the right edge of the brown rectangle.

7 Choose Select > Deselect and then File > Save.
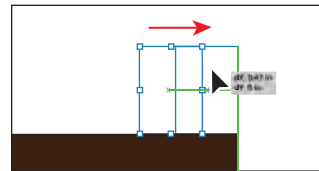
Working with the document grid

The grid allows you to work more precisely by creating a grid behind your artwork in the Document window that objects can snap to, and it does not print. To turn the grid on and use its features, do the following:

- To use the grid, choose View > Show Grid.

- To hide the grid, choose View > Hide Grid.

- To snap objects to the gridlines, choose View > Snap To Grid, select the object you want to move, and drag it to the desired location. When the object's boundaries come within 2 pixels of a gridline, it snaps to the point.

- To specify the spacing between gridlines, grid style (lines or dots), grid color, or whether grids appear in the front or back of artwork, choose Edit > Preferences > Guides & Grid (Windows) or Illustrator > Preferences > Guides & Grid (Mac OS).
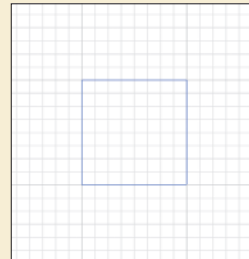
Note: When Snap To Grid is turned on, you cannot use Smart Guides (even if the menu command is selected).

—From Illustrator Help

Creating rounded rectangles

Next, you'll create a rounded rectangle for another part of the illustration.

1 Select the Zoom tool (🔍) in the Tools panel, and click twice on the last white rectangle you created, which will become the chimney of the house.

2 Click and hold down the mouse button on the Rectangle tool (▢), and select the Rounded Rectangle tool (▢) in the Tools panel.

3 Position the pointer on the left edge of the small white rectangle, below the top edge, until you see the word "path." Click and drag down and to the right to the right edge of the white rectangle. Do not release the mouse button yet.

4 Press the Down Arrow key several times to decrease the corner radius (make the corners less rounded). If you've gone too far, you can press the Up Arrow key several times until you achieve the desired roundness. The corner radius of your shape does not have to match the figure exactly. Release the mouse button when the height is approximately .14 in.
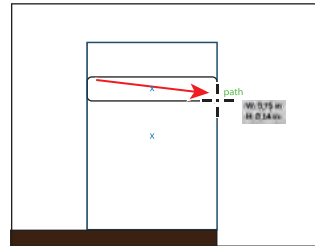
▶ **Tip:** You can also press and hold the Down Arrow or Up Arrow key to change the corner radius faster.

Next, you'll use Smart Guides to help you align the shape you created to the existing shapes.

5 Select the Selection tool (▶) in the Tools panel. Click anywhere inside the rounded rectangle, and drag it up so that it's centered horizontally with the larger white rectangle and so that its bottom snaps to the top of the larger white rectangle, as shown in the figure. When the word "intersect" and the green line(s) appear, release the mouse button.
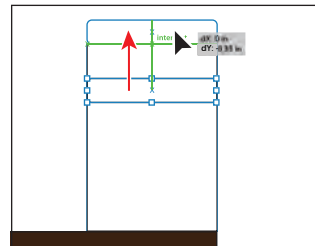
▶ **Tip:** The color of the Smart Guides can be changed from green to another color by choosing Edit > Preferences > Smart Guides (Windows) or Illustrator > Preferences > Smart Guides (Mac OS).

● **Note:** The gray tool tip that appears as you drag the shape indicates the x and y distance that the pointer has moved.

6 With the rounded rectangle selected, click and drag the right, middle bounding point to the right. As you drag, press the Alt (Windows) or Option (Mac OS) key. This allows you to resize from the center of the shape. Drag until the width is approximately .9 in, and release the mouse button and then the modifier key.
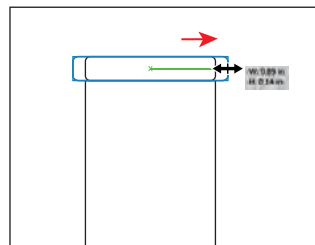
7 With the rounded rectangle still selected, click the Fill color in the Control panel and change the color to a light gray (the tool tip will show "C=0 M=0 Y=0 K=20") to fill the new shape.

8 Choose Select > Deselect.

9 Choose View > Fit Artboard In Window.

10 Select the Rounded Rectangle tool (⬜) in the Tools panel. Position the pointer on the larger white window rectangle, and click.

11 In the Rounded Rectangle dialog box, change the Width to **2.4 in** and click OK.
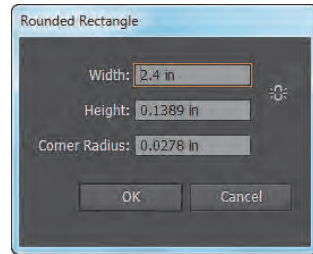
Creating a rounded rectangle this way allows you to enter a width, height, and corner radius. By clicking the artboard with the Rounded Rectangle tool selected, the measurements of the last created rounded rectangle appear by default in the dialog box.

▶ **Tip:** Drawing with the Smart Guides turned on can be very helpful, especially when precision is necessary. If you don't find them useful, you could turn the Smart Guides off by choosing View > Smart Guides.

12 With the Selection tool (▶), drag the rounded rectangle from its center down under the window shape until it's centered horizontally and its top edge snaps to the bottom edge of the window. The green alignment guides will help to snap it into place.

13 Choose File > Save.
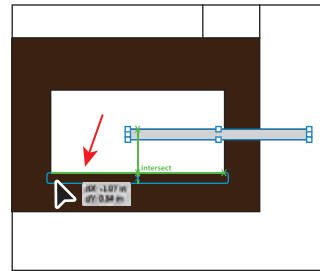
Creating ellipses

You can control the shape of polygons, stars, and ellipses by pressing certain modifying keys as you draw. You'll draw an ellipse next, to represent the top of the door.

1 Select the Zoom tool (🔍) in the Tools panel, and click twice on the red rectangle.

2 Click and hold down the mouse button on the Rounded Rectangle tool (⬜), and select the Ellipse tool (⬭). Position the pointer over the upper-left corner of the red rectangle. Notice that the word "anchor" appears. Begin dragging down and to the right, snapping to the right edge of the red rectangle when the word "path" appears. Without releasing the mouse button, drag up or down slightly until

the measurement label shows a height of approximately 0.7 in, and then release the mouse button.
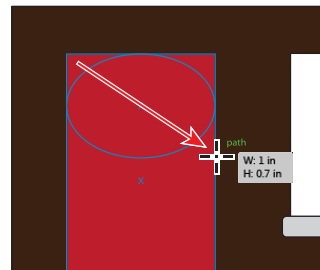
3 Choose View > Hide Bounding Box.

The bounding box, as you saw in previous lessons, allows you to transform the shape. If you turn the bounding box off, you can drag the shape by an edge or an anchor point without transforming it.

4 Select the Selection tool. Click and drag the ellipse up by the right, middle point. Release the mouse button when the center of the ellipse snaps to the top of the red rectangle.
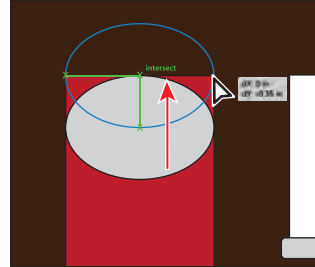
5 Choose View > Show Bounding Box.

6 Choose Window > Transform to open the Transform panel. Click the red rectangle to select it, and note the width in the Transform panel. Click the ellipse again, and see if the widths are the same in the Transform panel. If not, correct the ellipse by typing the same width value as the red rectangle and pressing Enter or Return. Close the Transform panel group.

7 Choose Select > Deselect and then File > Save.

Creating polygons

Now, you'll create two triangles for the roof of the house, using the Polygon tool. Polygons are drawn from the center by default, which is different than the other tools you've worked with so far.

1 Choose View > Fit Artboard In Window.

2 Click and hold down the mouse button on the Ellipse tool (⬭), and select the Polygon tool (⬠). Position the pointer just above the brown rectangle. Drag to begin drawing a polygon, but don't release the mouse button. Press the Down Arrow key three times to reduce the number of sides on the polygon to three (a triangle). Hold down the Shift key to straighten the triangle. Without releasing the Shift key, drag down and to the right until the Smart Guides measurement label displays a width of approximately 3.5 in. Release the mouse and then the modifier key.
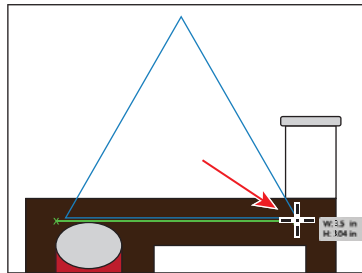
3 Select the Selection tool (![selection tool icon]) in the Tools panel, and drag the triangle from its center until the bottom of the triangle snaps to the top and right of the larger brown rectangle. The word "intersect" appears when it is snapped. Drag the triangle a little further to the right to hang it over the brown rectangle. See the figure for placement help.
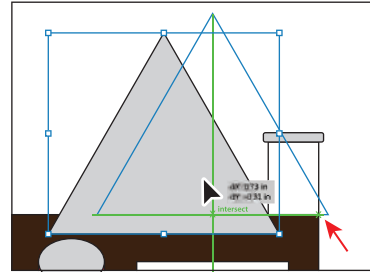
4 With the Selection tool, drag the top, middle bounding point down until the measurement label shows a height of approximately 1.7 in. You may need to zoom out or scroll in the Document window to see the top of the triangle.
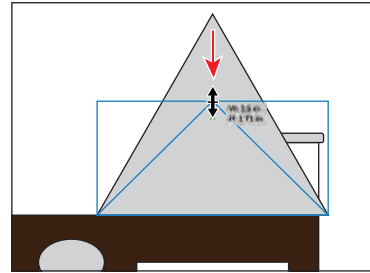
Working with Draw Behind mode

Next, you'll create another triangle behind the one you just drew, using the Draw Behind mode.

1 Click the Draw Behind button (![icon]) at the bottom of the Tools panel.

As long as this drawing mode is selected, every shape you create, using the different methods you've learned, will be created behind the other shapes on the page.
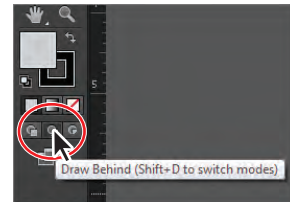
2 Select the Polygon tool (![polygon icon]) in the Tools panel. Position the pointer just to the left of the triangle you created. Click to open the Polygon dialog box. Click OK, and notice that the new triangle is behind the existing triangle on the artboard.

The values in the Polygon dialog box match the radius and number of sides of the last drawn polygon (before you modified it).

3 Select the Selection tool, and drag the new triangle so that the bottom edge snaps to the top of the brown rectangle, as shown in the figure (the blue outline). With the triangle selected and in place, you can move it to the left, if needed, by pressing the Left Arrow key so that it hangs off the left edge of the brown rectangle a little.
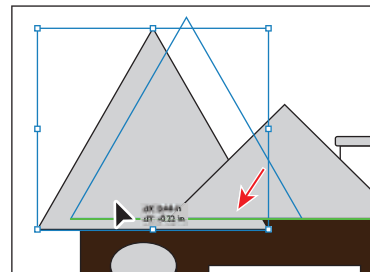
4 With the new triangle still selected, click the Fill color in the Control panel, and change the fill color to a darker gray than the smaller triangle. We chose a swatch with the tool tip values C=0 M=0 Y=0 K=50.

5 Click the Draw Normal button (▣) at the bottom of the Tools panel.

Creating stars

Next, you'll create a star for the window above the door, using the Star tool.

1 Select the Zoom tool (🔍) in the Tools panel, and click twice on the ellipse at the top of the red door rectangle.

2 Click and hold down the mouse button on the Polygon tool (⬡), and select the Star tool (★) in the Tools panel. Position the pointer in the center of the gray ellipse shape. Notice that the word "center" appears.
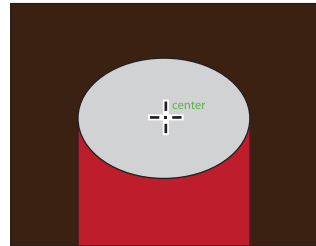
▶ **Tip:** The next step uses several keyboard commands for working with stars, so *take it slowly* and reference the figure as you draw. Only release the mouse button when indicated.

3 Click and drag slowly to the right to create a star shape. Without releasing the mouse button, press the Up Arrow key five times to increase the number of points on the star to ten. Drag the mouse until you see a width of approximately .28 in and stop dragging, but don't release the mouse button yet.

Hold down the Control (Windows) or Command (Mac OS) key, and continue dragging to the right. This keeps the inner radius constant. Drag until you see a width of approximately 1.3 in and stop dragging, *without releasing the mouse button*. Release the Control or Command key, but not the mouse. Hold down the Shift key, and drag until the star has a width of about 1.3 in. Release the mouse button and then the Shift key.
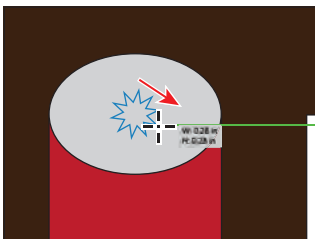
Change the number of points.   Resize the star.   Constrain the star.
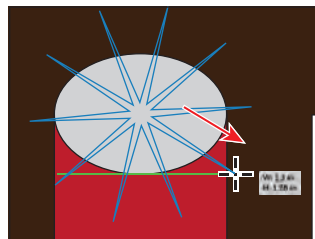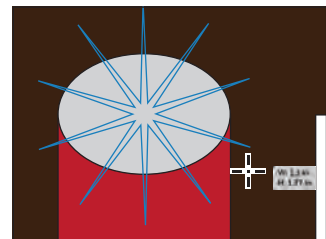
4 Change the Stroke weight, to the right of the word "Stroke" in the Control panel, to **0**. Later in the lesson, you will use the ellipse and the star shape to create the window above the door.

5 Choose Select > Deselect and then File > Save.

Changing stroke width and alignment

Every shape, by default, is created with a 1 point stroke. You can easily change the stroke weight of an object to make it thinner or thicker. Strokes are also aligned to the center of a path edge, by default, but you can easily change the alignment as well, using the Stroke panel.

1 Choose View > Fit Artboard In Window.

2 With the Selection tool (▶), click to select the smaller light gray triangle that makes up part of the roof.

3 Select the Zoom tool (🔍) in the Tools panel, and click that triangle once to zoom in.

● **Note:** You can also open the Stroke panel by choosing Window > Stroke.

4 Click the word "Stroke" in the Control panel to open the Stroke panel. In the Stroke panel, change the Stroke weight to **10 pt**. Notice that the stroke of the triangle is centered on the edge of the shape, by default.

5 Click the Align Stroke To Inside button (▣) in the Stroke panel. This aligns the stroke to the inside edge of the triangle.
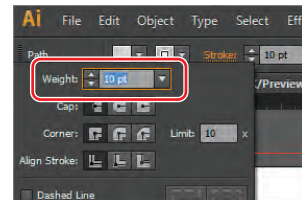
You set the stroke to the inside of the triangle so that the bottom edge still visually aligns with the bottom of the other triangle.

6 With the triangle still selected, click the Stroke color in the Control panel (to the left of the word Stroke), and change the stroke color to a darker gray than the fill of that same triangle.
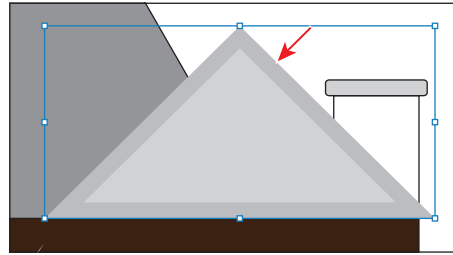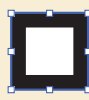
7 Choose File > Save.
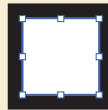

About aligning strokes

If an object is a closed path (such as a square), you can select an option in the Stroke panel to align the stroke along the path to the center (default), inside, or outside:
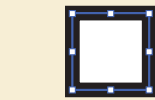
Align Stroke To Center

Align Stroke To Inside

Align Stroke To Outside

Working with line segments

Next, you'll work with straight lines and line segments, known as open paths, to create a flower pot. Shapes can be created in many ways in Illustrator, and the simpler way is usually better.

1 Select the Zoom tool (🔍) in the Tools panel, and click four times below the red door to zoom in on the empty artboard space below it.

2 Choose Reset Essentials from the workspace switcher in the Application bar.

You've been working in the default Preview mode, which lets you see how objects are painted with fill and stroke colors. If paint attributes seem distracting, you can work in Outline mode, which you'll do next.

3 Choose View > Outline to switch from Preview to Outline mode.

● **Note:** Outline mode removes all paint attributes, such as colored fills and strokes, to speed up selecting and redrawing artwork. You can't select or drag shapes by clicking in the middle of a shape, because the fill temporarily disappears.

4 Select the Ellipse tool (⬭) in the Tools panel. Below the house shapes, draw an ellipse that has a width of 0.6 in and a height of 0.1 in, as shown in the measurement label that appears.
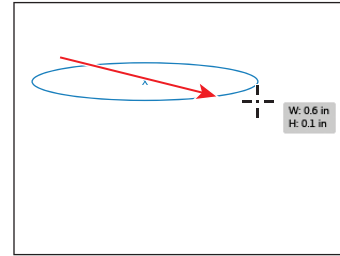
5 Select the Direct Selection tool (▷) in the Tools panel. Drag across the lower part of the ellipse to select the bottom half.
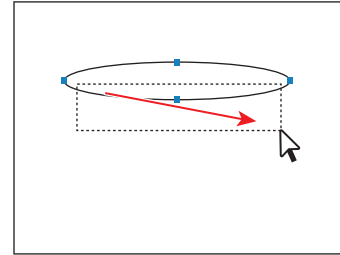
6 Choose Edit > Copy and then Edit > Paste In Front to create a new path that is directly on top of the original.

This copies and pastes only the bottom half of the ellipse as a single path, because that is what you selected with the Direct Selection tool.

7 Select the Selection tool (▶), and press the Down Arrow key about five times to move the new line down.
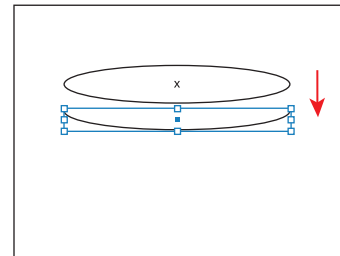
8 Click and drag the line straight down until you see, in the measurement label, a dY of approximately .25 in.
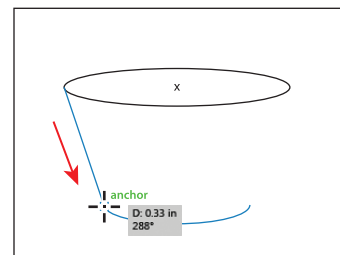
Make sure that you position the pointer directly on the line to select and drag it.

9 Click the word "Transform" in the Control panel to show the Transform panel. Change the Width of the selected line to **.4 in**.

You could also open the Transform panel by choosing Window > Transform.
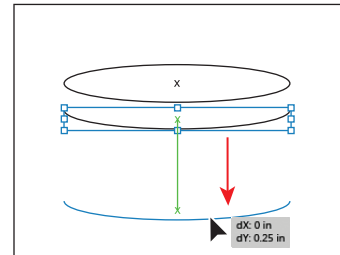
10 Select the Line Segment tool (╱) in the Tools panel. Draw a line by clicking on the left anchor point of the ellipse and dragging to the left anchor point of the new path. The anchor points are highlighted when the line snaps to them. Repeat this on the right side of the ellipse.

11 Choose Select > Deselect.

12 Choose File > Save.

Next, you will take the three line segments that make up part of the flower pot and join them together as one path.

Joining paths

When more than one open path is selected, you can join them together to create a closed path (like a circle). You can also join the end points of two separate paths.

Next, you will join the three paths to create a single closed path.

1 Select the Selection tool (▶) in the Tools panel. Drag a selection marquee across each of the three paths that you just created, to select them all (not the top ellipse).
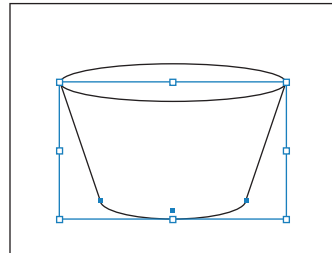
2 Choose Object > Path > Join.

The three paths are converted to a single path. Illustrator identifies the anchor points on the ends of each path and joins the closest points together.

▶ **Tip:** After the paths are selected, you can also join paths by pressing Ctrl+J (Windows) or Command+J (Mac OS).

3 With the path still selected, choose Object > Path > Join once more. Choose Select > Deselect to see the joined path.

This creates a closed path, connecting the two endpoints of the path. If you select a single open path and choose Object > Path > Join, Illustrator creates a path segment between the endpoints of the open path, creating a closed path.
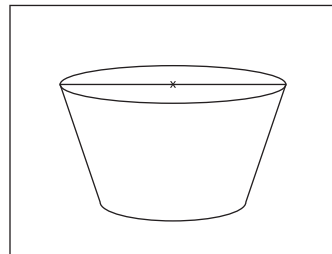
● **Note:** If you only want to fill the shape with a color, it is not necessary to join the path to make a closed path. An open path can have a color fill. It is, however, necessary to do this if you want a stroke to appear around the entire fill area.

4 Choose View > Preview.

5 With the Selection tool, drag a marquee across the two flower pot shapes to select them both. Change the Stroke weight in the Control panel to **1 pt**. Change the Stroke color to black. Change the Fill color to black.

6 Choose Select > Deselect. Click to select the bottom flower pot shape, and choose Object > Arrange > Send To Back.

7 In the Control panel, change the Fill color to a brown (C=35 M=60 Y=80 K=25).

● **Note:** To select a path without a fill, click the stroke or drag across the path.

8 Hold down the Shift key, and click the ellipse with the Selection tool to select both flower pot shapes. Choose Object > Group.
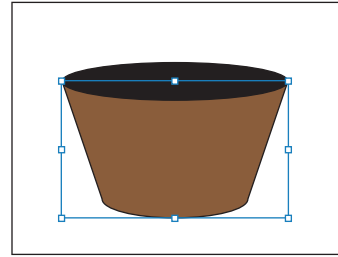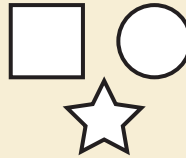

Open path vs. closed path

As you draw, you create a line called a path. A path is made up of one or more straight or curved segments. The beginning and end of each segment are marked by anchor points, which work like pins holding a wire in place. A path can be closed (for example, a circle), or open, with distinct endpoints (for example, a wavy line).
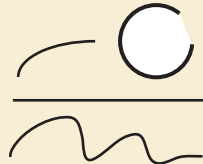
Open Paths   Closed Paths

Both open and closed paths can have fills applied to them.

—From Illustrator Help

Using the Width tool

Not only can you adjust the stroke weight and the alignment of the stroke, but you can also alter regular stroke widths either by using the Width tool (🐍) or by applying width profiles to the stroke. This allows you to create variations along the stroke of a path. Next, you will use the Width tool to create some curtains.

**1** Choose View > Fit Artboard In Window. Select the Zoom tool (🔍) in the Tools panel, and then click the white window rectangle three times to zoom in.

2 With the Selection tool, press the Shift key and click the white rectangle, the gray rounded rectangle beneath it, and the brown rectangle, to select them all. Choose Object > Lock > Selection to temporarily lock them.

3 Select the Line Segment tool (╱) in the Tools panel, and position the pointer at the top of the white rectangle, away from the left edge. Hold down the Shift key, and drag straight down, snapping the end of the line to the bottom of the white rectangle. Release the mouse button and then the modifier key.
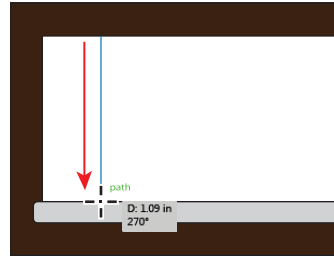
4 Make sure that in the Control panel the Stroke color of the line is black, and that the Stroke weight is **1 pt**.
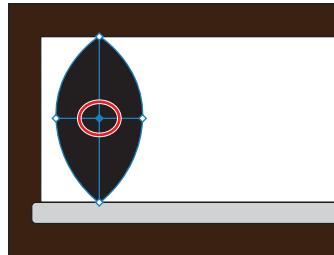
5 Select the Width tool (🪱) in the Tools panel. Position the pointer over the middle of the line, and notice the pointer has a plus symbol next to it (▶₊). Drag to the right, away from the line. Notice that as you drag, you are stretching the stroke to the left and right equally. Release the mouse when the measurement label shows Side 1 and Side 2 at approximately .25 in.
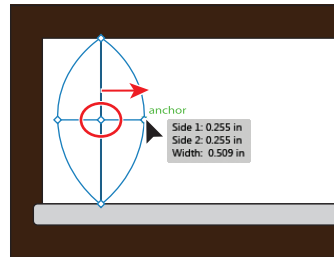
The new point on the stroke of the original line is called the width point. The lines extending from the width point are the handles. Width points created at a corner or at a direct-selected anchor point stick to the anchor point during basic editing of the path.

6 The width point on the stroke (circled in the figure) should still be selected. You can tell it's selected, because it's not hollow like the points at the ends of the handles. Press Delete to remove it.

Because you only created one width point on the stroke, removing that one removed the width completely.

● **Note:** If you need to reselect the point, make sure that the Width tool is selected, position the pointer over the point, and then click it.
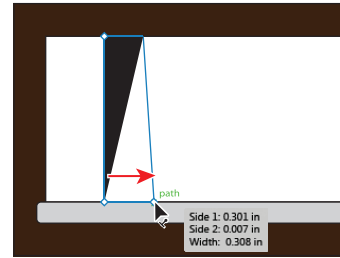
7 Position the pointer over the top anchor point of the line, and notice the pointer has a curve next to it (▶). Press the Alt (Windows) or Option (Mac OS) key, and drag to the right until you see that Side 1 is approximately 0.25 in. Release the mouse button and then the modifier key.
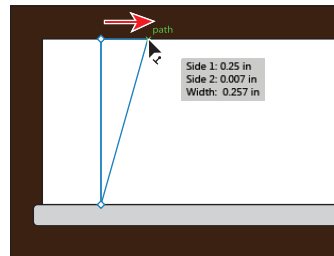
● **Note:** When you edit with the Width tool, you are only editing the stroke of the object.

The modifier key allows you to drag one side of the stroke rather than both sides, as you did previously.

8 Position the pointer over the bottom anchor point of the line. Press the Alt (Windows) or Option (Mac OS) key, and drag to the right until you see that Side 1 is approximately 0.3 in. Release the mouse button and then the modifier key.

9 With the Width tool still selected, position the pointer over the top width point or handle of the line and double-click to open the Width Point Edit dialog box. Change the Side 1 width to **.3 in**. Make sure that Side 2 is set to **0,** and click OK.
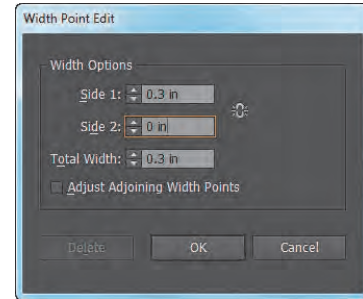
The Width Point Edit dialog box allows you to adjust the sides together or separately, using more precision. Clicking the Adjust Widths Proportionately button (⬚) would link Side 1 with Side 2 so that they adjust together, in proportion. Also, if you select the Adjust Adjoining Width Points option, changes to the selected width point affect neighboring width points as well.

10 Position the pointer over the bottom width point or handle of the line and double-click to open the Width Point Edit dialog box. Change the Side 1 width to **.3** in. Make sure that Side 2 is set to **0**, and click OK.

11 Position the pointer over the middle of the line (indicated by the X in the figure). Click and drag to the right until you see a Side 1 width of approximately .06 in.

● **Note:** You don't have to position the pointer over the center of the line and drag to create another width point. You can also drag from anywhere in the stroke area.
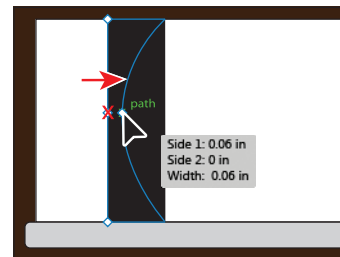
12 Position the pointer over the new width point you just created (circled in the figure) and, pressing the Alt (Windows) or Option (Mac OS) key, drag the new width point down to create a copy. Release the mouse button and then the key.

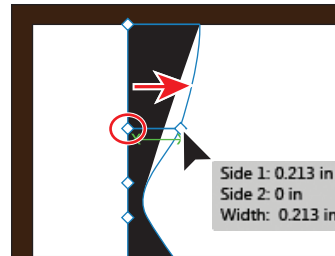**13** Click the new width point to select it.
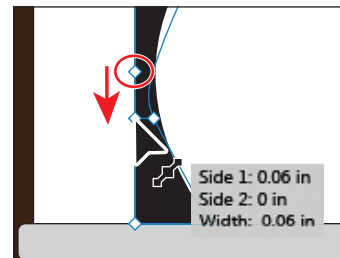
Next, you will select another width point and move them both. You may want to zoom in to the line.

14 With the Width tool, press the Shift key and click the width point above the selected width point to select both. Release the Shift key. Drag the point you just selected down just a bit. Notice that the two width points move together proportionately.
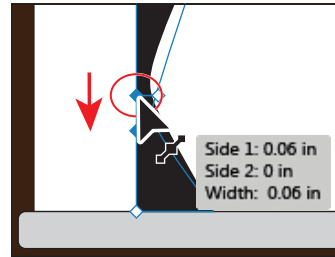
15 Position the pointer between the top width point and the second width point from the top. See the figure for help. Click and drag to the right until you see a Side 1 width of approximately .2 in.

16 Choose File > Save.

Saving width profiles

After defining the stroke width, you can save the variable width profile from the Stroke panel or the Control panel.

Width profiles can be applied to selected paths by choosing them from the Width Profile drop-down list in the Control panel or Stroke panel. When a stroke with no variable width is selected, the list displays the Uniform option. You can also select the Uniform option to remove a variable width profile from an object. To restore the default width profile set, click the Reset Profiles button at the bottom of the Profile drop-down list.
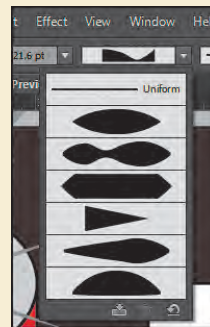
If you apply a variable width profile to a stroke, it is indicated with an asterisk (*) in the Appearance panel.

—From Illustrator Help

Outlining strokes

Paths, such as a line, can show a stroke color but not a fill color, by default. If you create a line in Illustrator and you want to apply both a stroke and a fill, you can outline the stroke, which converts the line into a closed shape (or compound path).

Next, you will outline the stroke of the curtain you just created.

1 With the line still selected, choose None from the Fill color in the Control panel, if it is not already selected.

● **Note:** If the line initially has a color fill, a more complex group is created when you choose Outline Stroke.

2 Choose Object > Path > Outline Stroke. This creates a filled shape that is a closed path.

3 With the new shape selected, click the Fill color in the Control panel and change the color to a light orange that shows "C=0 M=35 Y=85 K=0" in the tool tip. Click the Stroke color, and make sure that the color is None (⬜).

4 Select the Selection tool (➤) and begin dragging the left edge of the curtain shape to the left. As you drag, press the Shift key. When it snaps to the left edge of the white window rectangle, release the mouse button and then the key.

5 Drag the right, middle bounding point of the curtain shape to the right to make the curtain a bit wider.
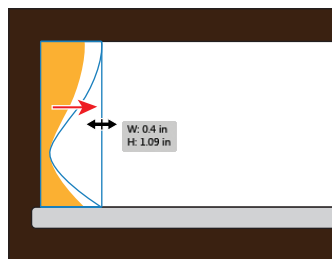
6 Press the Alt (Windows) or Option (Mac OS) key, and drag the curtain shape to the right until its right edge aligns to the right edge of the white rectangle.

7 In the Control panel, click the word "Transform" to open the Transform panel (Window > Transform). Making sure that the center point of the Reference Point Indicator (⊞) is selected (to flip the curtain shape around its center), choose Flip Horizontal from the Transform panel menu (▾≡).
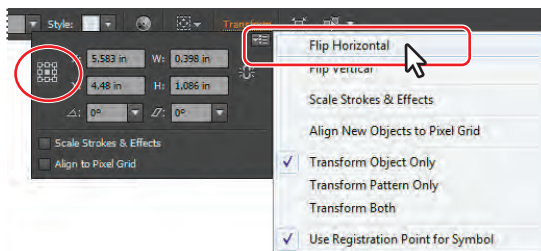
8 Choose Object > Unlock All, and then choose Select > Deselect.

9 With the Selection tool, click to select the white window rectangle. Click the word "Stroke" in the Control panel to open the Stroke panel. Click the Align Stroke To Outside button (⬛).

10 Click to select the gray rounded rectangle beneath the white window rectangle and curtain shapes. Choose Object > Arrange > Bring To Front.

**11** Choose Select > Deselect and then File > Save.

Combining and editing shapes

In Illustrator, you can combine vector objects to create shapes in a variety of ways. The resulting paths or shapes differ depending on the method you use to combine the paths. The first method you will learn for combining shapes involves working with the Shape Builder tool. This tool allows you to visually and intuitively merge, delete, fill, and edit overlapping shapes and paths directly in the artwork.
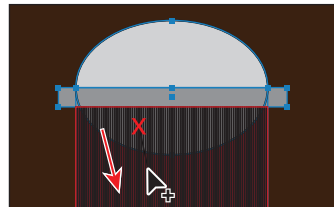
Working with the Shape Builder tool

Using the Shape Builder tool, you'll change the appearance of the red door and create the window above it. Then, you'll make a cloud.

1   Choose View > Fit Artboard In Window.

2   Select the Selection tool (▶) in the Tools panel, and click to select the star shape. Choose Object > Hide > Selection to temporarily hide it.

3   Select the Zoom tool (🔍) in the Tools panel, and click three times on the top of the red door to zoom in.

4   Choose View > Outline.

5   Select the Rectangle tool (▢) in the Tools panel. Position the pointer off the left edge of the top of the door. When the green alignment guide appears, click and drag down and to the right to create a rectangle with an approximate width of 1.2 in and a height of .1 in.

6   Choose View > Preview.

7   With the Selection tool, Shift-click the gray ellipse and the red rectangle to select all three shapes. With the shapes selected, select the Shape Builder tool (🖱) in the Tools panel.
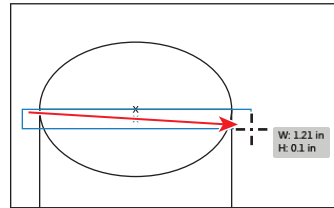
Using the Shape Builder tool, you will now combine, delete, and paint these shapes.

8   Position the pointer over the bottom of the ellipse, indicated by the red x in the figure. Drag the pointer down into the red rectangle. See the figure at right. Release the mouse button to combine the shapes.

In order to edit shapes with the Shape Builder tool, they need to be selected.
When you select the Shape Builder tool, the overlapping shapes are divided into separate objects temporarily. As you drag from one part to another, a red outline appears, showing you what the final shape outline will look like when it merges the shapes together.

▶ **Tip:** Zooming in can help you see what shapes you are going to combine.

9 With the shapes still selected, hold down the Alt (Windows) or Option (Mac OS) key and click the left end of the rectangle to delete it.

Notice that, with the modifier key held down, the pointer shows a minus sign (▶_).
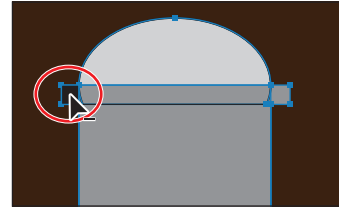
Next, you will delete a series of shapes using the Shape Builder tool.

10 With the Shape Builder tool still selected, position the pointer off the left edge of the small rectangle below the ellipse, indicated by the red x in the figure. Hold down the Alt (Windows) or Option (Mac OS) key, and drag to the right to delete all of the shapes. Release the mouse button and then the modifier key.
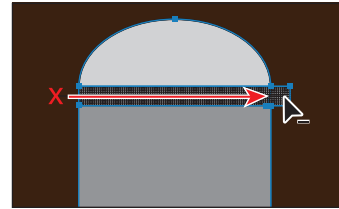
Notice that all of the shapes that will be deleted are highlighted as you drag.

11 With the shapes still selected, change the Fill color in the Control panel to red, with the tool tip showing "C=15 M=100 Y=90 K=10." This won't change anything on the artboard. Position the pointer over the larger rectangle that is the door, and click to apply the red color fill.
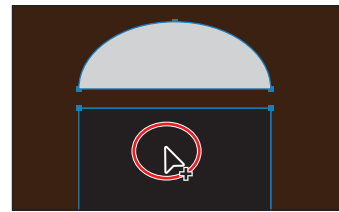
You can apply fills to any of the selected shapes by selecting the fill color first and then clicking the shape.

12 Choose Select > Deselect, and then choose View > Fit Artboard In Window.

13 Choose Object > Show All to show the star shape.

Lastly, with the Shape Builder, you will build a simple cloud.

1 Select the Ellipse tool (⬭) in the Tools panel, and draw an ellipse that has an approximate width of 1.4 in and an approximate height of .8 in above the chimney on the house.

2 Select the Selection tool and, pressing the Alt (Windows) or Option (Mac OS) key, drag the ellipse twice to create two copies.

3 With the Selection tool, position the shapes like you see in the figure and select them all.

4 Select the Shape Builder tool (⬭) in the Tools panel.
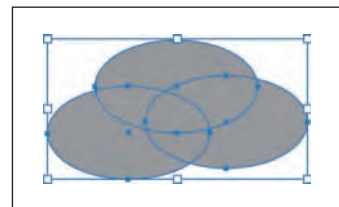
5 Press the Shift key and, starting off the upper-left edge of the shapes, drag a marquee across them all. Release the mouse button and then the key.
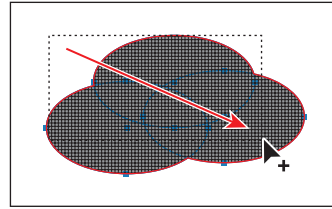
▶ **Tip:** Pressing Shift+Alt (Windows) or Shift+Option (Mac OS) and dragging a marquee across selected shapes with the Shape Builder tool selected allows you to delete a series of shapes within the marquee.

6 Select the Selection tool and, with the shape selected, change the Fill color in the Control panel to white and the Stroke color to black.

7 Choose Select > Deselect and then File > Save.

Shape Builder tool options

You can set up and customize various options such as gap detection, coloring source, and highlighting to get the required merging capability and better visual feedback.

Double-click the Shape Builder Tool icon in the Tools panel to set these options in the Shape Builder Tool Options dialog box.

—From Illustrator Help
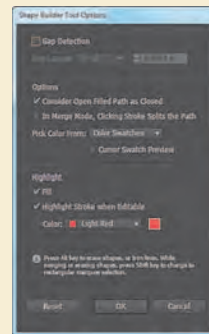
Working with Pathfinder effects

Pathfinder effects in the Pathfinder panel let you combine shapes in many different ways to create paths or compound paths, by default. When a Pathfinder effect is applied (such as Merge), the original objects selected are permanently transformed. If the effect results in more than one shape, they are grouped automatically.

Next, you will finish the roof of the house by removing a portion of one of the gray triangles.
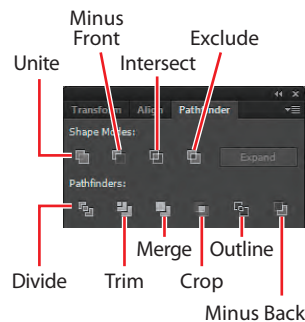
1 Choose View > Fit Artboard In Window. Press and hold the spacebar to access the Hand tool. Drag the artboard down a bit so that you can see the gray area above the artboard.

2 Choose Window > Pathfinder to open the Pathfinder panel group.

3 Select the Rectangle tool (■) in the Tools panel. Position the pointer above the artboard on the left edge. Click and draw a rectangle that covers the top part of the larger triangle. See the figure for guidance.
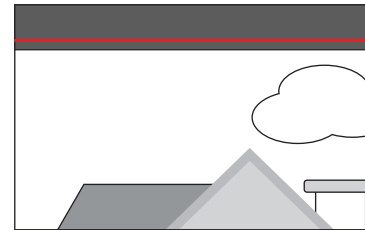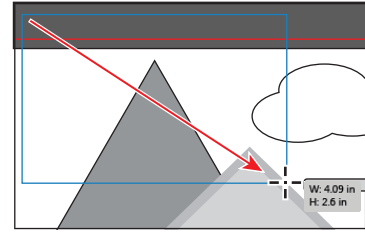
4 With the Selection tool (▸), hold down the Shift key and click the larger triangle to select it as well.

5 With the shapes selected, in the Pathfinder panel, click the Minus Front button (⬚).

With the new shape selected, notice the word "Path" on the left side of the Control panel.

6 Choose Object > Arrange > Send To Back.

7 Choose Select > Deselect, and then choose File > Save.

Working with shape modes

Shape modes create paths like Pathfinder effects, but they can also be used to create compound shapes. When several shapes are selected, clicking a shape mode while pressing the Alt (Windows) or Option (Mac OS) key creates a compound shape rather than a path. The original underlying objects of compound shapes are preserved. As a result, you can still select each object within a compound shape.

Next, you will use shape modes to finish the window above the door.

1 Choose View > Fit Artboard In Window.

2 Select the Zoom tool (🔍), and click several times on the star above the red rectangle.

● **Note:** If the star is not showing, you can choose Object > Show All to show the star shape.

3 With the Selection tool, click to select the star, hold down the Shift key, and then click the gray ellipse behind it to select both shapes. Release the Shift key, and then click the ellipse once more to make it the key object.

4 Click the Horizontal Align Center button (⬒) in the Control panel.

● **Note:** The Align options may not appear in the Control panel. If you don't see the Align options, click the word "Align" in the Control panel to open the Align panel. The number of options displayed in the Control panel depends on your screen resolution.

5 With the objects selected, hold down the Alt (Windows) or Option (Mac OS) key and click the Minus Front button (⬚) in the Pathfinder panel.

This creates a compound shape that traces the outline of the overlapping area of both objects. You will still be able to edit the star and the ellipse shape separately.
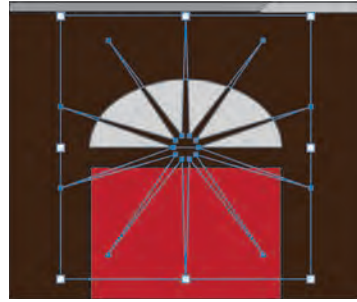
6 Choose Select > Deselect to see the final shape.

The star was removed from the ellipse shape, and the stroke is around the final window shape.
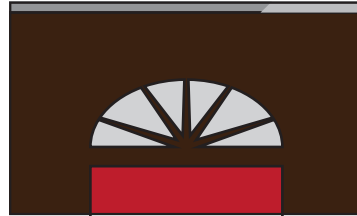
7 With the Selection tool, double-click the window shape above the door to enter Isolation mode.

8 Choose View > Outline so that you can see the two shapes (the ellipse and the star). Click the edge of the ellipse to select it, if it isn't already selected. In the Control panel, change the Fill color to white.
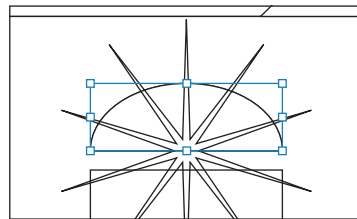
9 Drag the top, middle bounding point of the ellipse bounding box down to make it shorter. Drag until the measurement tool tip shows a height of approximately 0.3 in. Leave the ellipse selected.

W: 1 in
H: 0.3 in
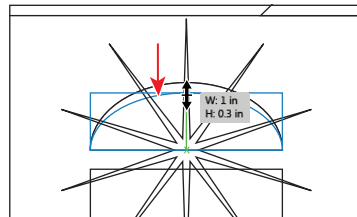
10 Choose View > Preview.

11 Choose Edit > Copy to copy the ellipse shape. Choose Select > Deselect.

12 Press the Escape key to exit Isolation mode.

13 With the Selection tool, click to select the window shape again. Choose Edit > Paste In Back. In the Control panel, change the Fill color of the ellipse copy to a darker gray (C=0 M=0 Y=0 K=40) and make sure that the Stroke color is None.

14 Choose Select > Deselect. Click to select the window shape again (the compound shape on top). Click the Stroke panel icon (▤) on the right side of the workspace to expand the Stroke panel. Change the Stroke weight to **0** by clicking the down arrow to the left of the field or typing in the value and pressing Enter or Return. Click the Stroke panel tab to collapse the panel. Leave the window compound shape selected.
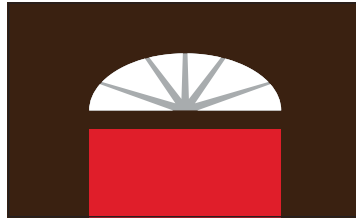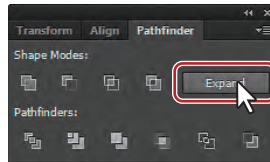
You will now expand the window shape. Expanding a compound shape maintains the shape of the compound object, but you can no longer select or edit the original objects.

15 Click the Expand button in the Pathfinder panel. Close the Pathfinder panel group. Choose Select > Deselect.


**16** Choose View > Fit Artboard In Window, and then File > Save.

Using Draw Inside mode

Next, you will learn how to draw a shape inside of another using the Draw Inside drawing mode.

1 Select the Ellipse tool (⬭) in the Tools panel. Position the pointer over the upper-left corner of the artboard, and click. In the Ellipse dialog box, enter **7 in** for the Width and **7** for the Height. Click OK.

2 With the ellipse selected, choose Align To Artboard from the Align To (▦▾) menu in the Control panel. Click the Horizontal Align Center button (▤) and the Vertical Align Center button (▯).

3 Change the Fill color to blue (C=70 M=15 Y=0 K=0) in the Control panel.

4 Click the Draw Inside button, located near the bottom of the Tools panel.
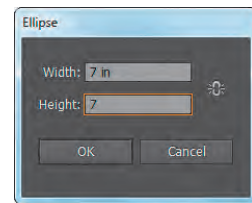
This button is active when a single object is selected (path, compound path, or text), and it allows you to draw within the selected object only. Every shape you create will now be drawn inside of the selected shape (the circle). Also, notice that the blue circle has a dotted open rectangle around it, indicating that, if you draw, paste, or place content, it will be inside of the circle.
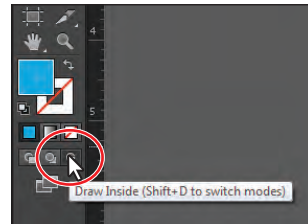
Note: If the Tools panel is a single column, to access the drawing modes, click and hold down the Drawing Modes button (▣) at the bottom of the Tools panel and choose Draw Inside from the menu that appears.

5 Choose Select > Deselect.

6 Choose View > Outline to see the rest of the shape outlines.

7 Select the Rectangle tool (▢), and draw a rectangle that starts halfway down the roof, vertically, and just off the left edge of the large circle you are drawing inside of. Make it large enough to cover the bottom part of the circle. This will become grass.

W: 7.57 in
H: 5.13 in
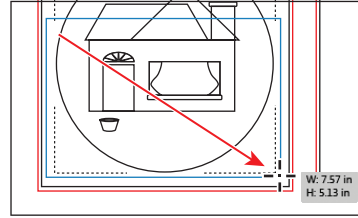
8 Choose View > Preview to see that the rectangle is inside of the circle.

9 With the rectangle selected, change the Fill color in the Control panel to a green (C=50 M=0 Y=100 K=0).

Notice that the circle still has the dotted open rectangle around it, indicating that Draw Inside mode is still active.

10 Select the Polygon tool (⬡) in the Tools panel. Position the pointer in the lower half of the circle, and click. In the Polygon dialog box, change the Radius to **2.6 in** and the Sides to **3**. Click OK.

● **Note:** If you draw a shape outside of the circle shape, it will seem to disappear. That is because the circle is masking all shapes drawn inside of it, so only shapes positioned inside of the circle bounds will appear.

11 In the Control panel, change the Fill color of the shape to a light gray (C=0 M=0 Y=0 K=10).

When you are finished drawing content inside of a shape, you can click the Draw Normal button so that any new content you create will be drawn normally. Right

now, if you were to attempt to select the triangle or the rectangle, you would select the circle instead. If you move the circle, the shapes inside go with it. If you resize or reshape the circle, the shapes inside also resize or reshape.

**12** Choose Select > Deselect. Click the Draw Normal button (▣) at the bottom of the Tools panel.

Editing content drawn inside

Next, you will edit the shapes inside of the circle.

1 Select the Selection tool (▸), and click to select the gray triangle. Notice that it selects the blue circle instead. Double-click the gray triangle to enter Isolation mode. Click once more on the gray triangle to select it.
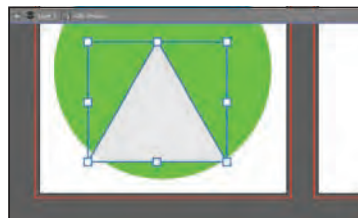
With the gray triangle selected, notice that the Edit Contents button (![icon]) on the left end of the Control panel is selected. Also notice the gray bar along the top of the Document window, indicating that this content is a clip group.

2 Choose View > Outline to see the rest of the shapes. With the Selection tool still selected, drag the triangle from its edge down and to the left until it looks approximately like the figure. This will be a sidewalk that starts at the front door. The dX and dY you see in the measurement label will most likely be different than what you see in the figure, and that's okay.
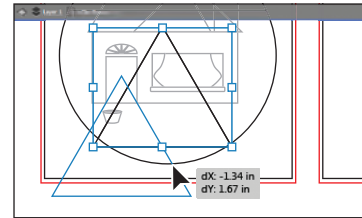
3 Choose View > Preview to see the fill of the shapes again. Choose View > Fit Artboard In Window.

4 Press the Escape key to exit Isolation mode.

5 Choose Select > Deselect.

● **Note:** Your sidewalk (gray triangle) may not look exactly the same as in the figure and that's okay.

6 With the Selection tool, click to select the green grass shape. Choose Object > Arrange > Send To Back.

7 Choose File > Save.
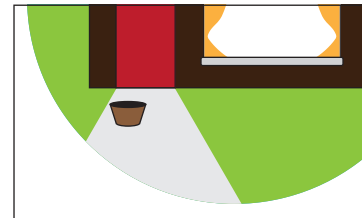
Another way to work with the Draw Inside mode is to paste or place content into a path, compound path, or text.

8 Choose File > Open, and open the pieces.ai file in the Lesson03 folder, located in the Lessons folder on your hard disk.

9 Navigate to the first artboard, with the red brick shapes on it. Select the Selection tool, and click to select the brick group. Choose Edit > Copy. Leave the pieces.ai file open.

10 Click the homesale.ai tab to return to that document.

11 With the Selection tool, click to select the larger chimney rectangle. Click the Draw Inside button, located near the bottom of the Tools panel.

12 Choose Edit > Paste.

The brick group will be pasted into the chimney rectangle and will be selected.

13 Press the Shift+Alt (Windows) or Shift+Option (Mac OS) keys and, with the Selection tool, click and drag the upper, middle bounding down to make the brick pattern smaller. When the pattern fits better, release the mouse button and then the keys.
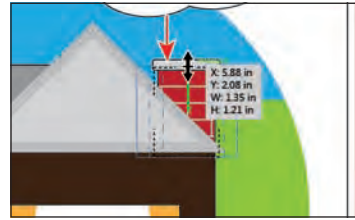
14 Click the Draw Normal button () at the bottom of the Tools panel, and choose Select > Deselect. Choose File > Save.

Using the Eraser tool

The Eraser tool lets you erase any area of your artwork, regardless of the structure. You can use the Eraser tool on paths, compound paths, paths inside Live Paint groups, and clipping paths.

1 Choose View > Fit Artboard In Window.

2 With the Selection tool (), double-click the green rectangle behind the house. This enters Isolation mode and lets you edit the shapes in the circle. Click once more on the green rectangle to select it.

By selecting the green rectangle, you'll erase only that shape and nothing else. If you leave all objects deselected, you can erase any object that the tool touches across all layers.

3 Select the Eraser tool () in the Tools panel. With the pointer on the artboard, press and hold the Right Bracket key (]) for a second or two to make the size of the eraser diameter larger. If you make it too large, you can press the Left Bracket key ([) to make it smaller.

4 Position the pointer in the upper-left corner of the green rectangle—beyond the left edge of the circle. Click and drag from left to right, along the top edge of the rectangle, moving the pointer up and down to create hills. When you release the mouse button, the path remains closed (the erased ends are joined).
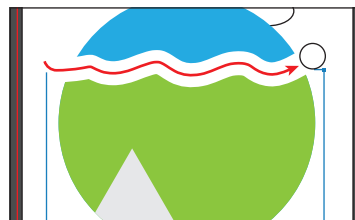
▶ **Tip:** To create a marquee around an area and erase everything inside the area, Alt-drag (Windows) or Option-drag (Mac OS). To constrain the marquee to a square, Alt-Shift-drag (Windows) or Option-Shift-drag (Mac OS).

▶ **Tip:** If you press the Shift key and drag across content, you will constrain the Eraser tool to a vertical, horizontal, or diagonal line.

5 Press the Escape key to exit Isolation mode. Choose Select > Deselect and then File > Save.

Using Image Trace to create shapes

In this part of the lesson, you will learn how to work with the Image Trace command. Image Trace traces existing artwork, like a raster picture from Adobe Photoshop. You can then convert the drawing to vector paths or a Live Paint object. This can be useful for turning a drawing into vector art, tracing raster logos, and much more.

1 Click the Next button (▶) in the status bar in the lower-left corner of the Document window to navigate to the second artboard.

2 Click the pieces.ai tab to show the artwork in the Document window. Click the Next button (▶) in the status bar to navigate to the second artboard. Choose Select > All On Active Artboard to select the realty sign frame. Choose Edit > Copy and then File > Close to close the pieces.ai file without saving.

3 Back in the homesale.ai file, on the second artboard, choose Edit > Paste. With the content selected, choose Object > Hide > Selection to hide the sign frame.

4 Choose File > Place. Select the logo.png file in the Lesson03 folder, located in the Lessons folder on your hard disk, and click Place.

With the placed image selected, the Control panel options change. You will see "Linked File" on the left side of the Control panel, and you can see the name "logo.png" and the resolution (PPI: 72), as well as other information.
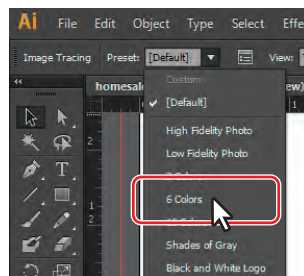
5 Click the Image Trace button in the Control panel. The tracing results you see may differ slightly from the figure, and that's okay.

This converts the image into an image tracing object using the default tracing options. That means that you can't edit the vector content yet, but you can change the tracing settings or even the original placed image and then see the updates immediately.
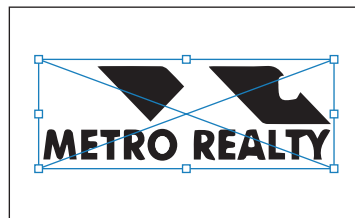
● **Note:** You can also choose Object > Image Trace > Make with raster content selected.

6 Press Ctrl++ (Windows) or Command++ (Mac OS) a few times to zoom in.

7 Select the Selection tool in the Tools panel.

8 Choose 6 Colors from the Preset menu on the left end of the Control panel.

Illustrator comes with preset tracing options that you can apply to your image tracing object. You can then make changes to the tracing settings, if need be, using the default preset as a starting point.

9 Choose Outlines With Source Image from the View menu in the Control panel, and take a look at the image. Choose Tracing Result from that same menu.
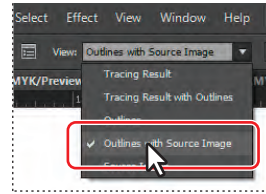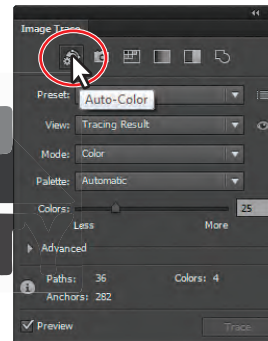
An image tracing object is made up of the original source image and the tracing result (which is the vector artwork). By default, only the tracing result is visible. However, you can change the display of both the original image and the tracing result to best suit your needs.

10 Click the Image Trace Panel button (▦) in the Control panel to open the panel. In the panel, click the Auto-Color button (▦) at the top of the panel. The tracing results you see may differ from the figure, and that's okay.

The buttons along the top of the panel are saved settings for converting the image to grayscale, black and white, and more.

11 Press and hold the eye icon (◉) to the right of the View menu in the Image Trace panel to see the source image on the artboard. Release the mouse button.
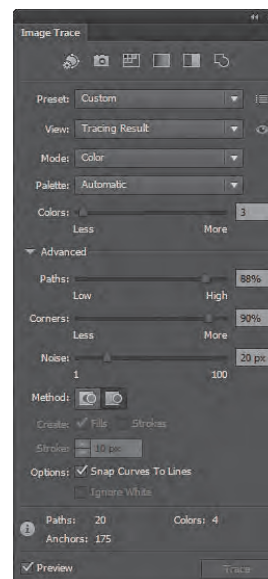
12 In the Image Trace panel, drag the Colors slider to the left until you see **3** in the field to the right of the slider.

● **Note:** Below the buttons at the top of the Image Trace panel, you will see the options Preset and View. These are the same as those in the Control panel. The Mode option allows you to change the color mode of resulting artwork (color, grayscale, or black and white). The Palette option is useful for limiting the color palette or assigning colors from a color group.

13 Toggle the arrow to the left of the Advanced option, and change the Advanced options as follows:

- Paths: **88%**
- Corners: **90%**
- Noise: **20 px**
- Method: Click the Overlapping button (▦).
- Select the Snap Curves To Lines option.

▶ **Tip:** The Image Trace panel can be opened at any time by choosing Window > Image Trace or by choosing the Tracing workspace (Window > Workspace > Tracing).

▶ **Tip:** To the right of the Preset menu in the Image Trace panel, you can click the panel options and choose to save your settings as a preset, delete a preset, or rename a preset.

14 With the logo image tracing object still selected, click the Expand button in the Control panel. Notice that the logo is no longer an image tracing object but is composed of shapes and paths that are grouped together.

15 Close the Image Trace panel.

Cleaning up traced artwork

After tracing, you may need to clean up the resulting vector content.

1 Select the Selection tool, and double-click the logo group to enter Isolation mode. Click the blue shape on the left, above the "M," and choose Object > Path > Simplify.

2 In the Simplify dialog box, select Straight Lines and make sure that the Angle Threshold is **30** degrees. Select Preview, if not already selected, to see the effect. Click OK.
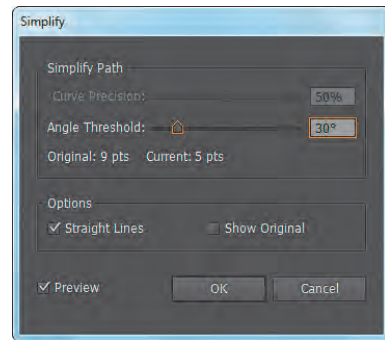
You can apply the Simplify command to other parts of the logo as well. By aligning points and using other methods, you can turn the raster logo into a viable vector logo.

3 Press the Escape key to exit Isolation mode, and choose View > Fit Artboard In Window.

4 Choose Object > Show All to show the realty sign frame. With the Selection tool, click to select the logo and, pressing the Shift key, drag the top, middle bounding point down until the sign fits into the sign frame.

5 With the Selection tool, move the logo into the sign frame and visually center it. See the figure for placement help.

6 Choose Select > All On Active Artboard, and then choose Object > Group. With the group selected, choose Edit > Copy.

7 Click the Previous button (◀) in the status bar to show the first artboard in the Document window, and choose Edit > Paste.

8 Using the Selection tool, drag the sign and resize it, making it smaller, positioning it like you see in the figure. Drag the flower pot into position next to the right side of the door.

9 Choose File > Save and then File > Close.