9 Editing Objects, Rearranging Paths, and Using Boolean Ops

Let's say you've drawn an object and you're fairly pleased with it, *except* for that little corner that you couldn't draw *just* right. This chapter shows you various techniques to massage that almost-perfect shape into *exactly* the shape you envisioned. Because every object you draw on a page can be broken down into rectangles, ovals, path segments, and so on, this chapter covers the tools and features for doing exactly this: breaking down shapes, combining them, subtracting a little of this, adding a little of that. Often, arriving at a design of your dreams can be realized by creating an approximation of the shapes you seek. Then, with a pull and a tug here and there, erasing a tiny area perhaps, you'll get your desired results faster than by creating the drawing from scratch. You'll also see in this chapter that you can add visual complexity and embellishments through editing that would be hard to achieve using other methods.

Note Download and extract all the files from the Chapter9.zip archive to follow the tutorials in this chapter.

Shaping and Reshaping Object Shapes

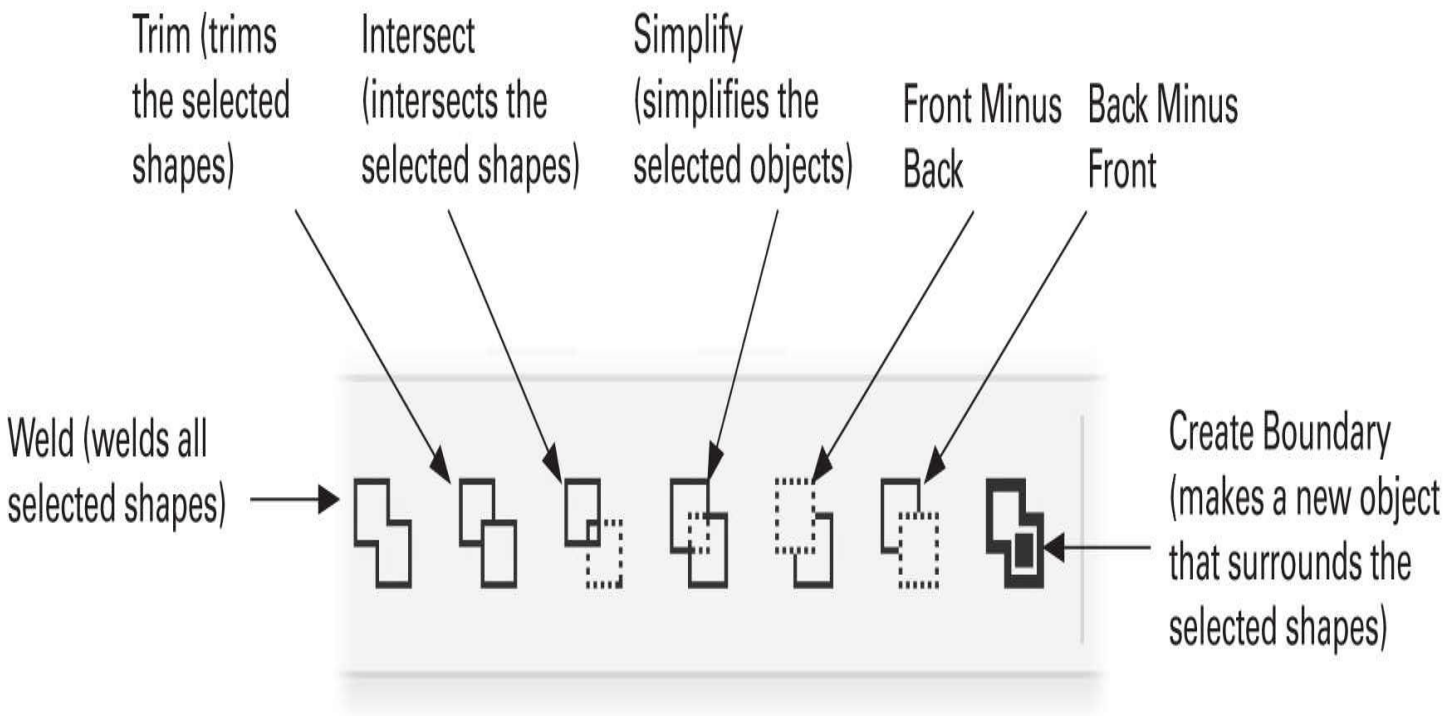
You have a choice of two places to begin when you want to edit an object: you can use operations (commands you make with the click of a Property Bar button) or the hands-on approach. Both approaches are covered in this chapter and will serve you well; your choice largely depends on what you need to edit and then what type of operation is required.

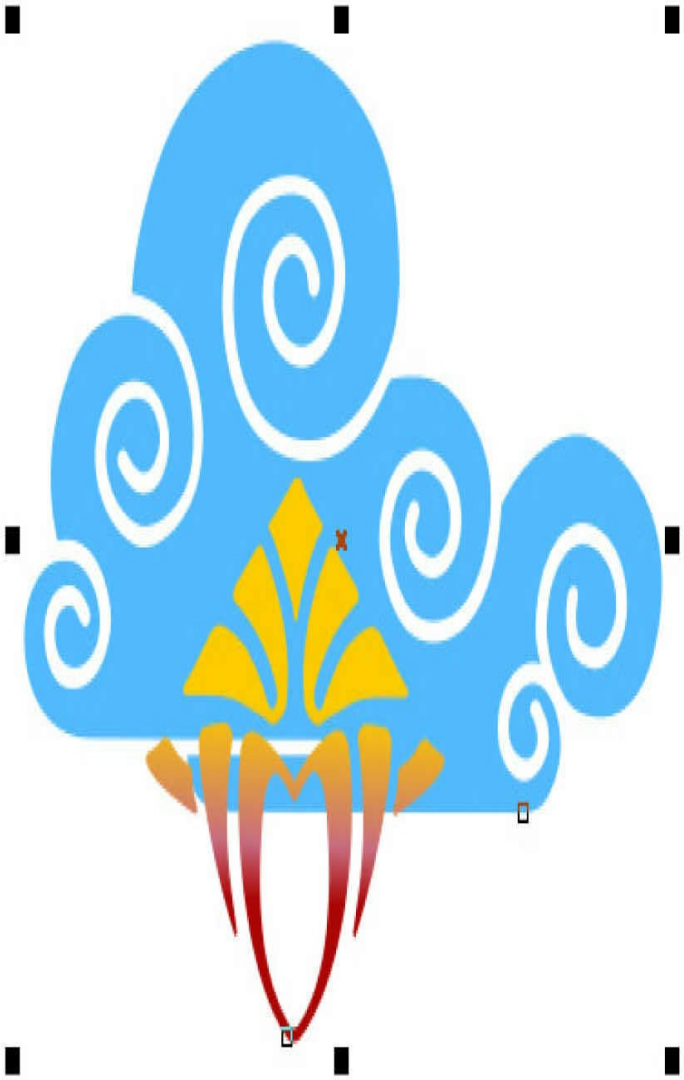
CorelDRAW has great shaping commands to speed the object-creation process, such as Trim, Weld, Intersect, and Create Boundary. You'll also find four other shape commands at your disposal: Simplify, Front Minus Back, Back Minus Front, and Create Boundary. In this section, you'll learn exactly how you can use these commands to shape and reshape your

objects. Before getting into the specifics of each type, though, let's take a look at where you can find them in X8.

Shaping Commands and the Property Bar

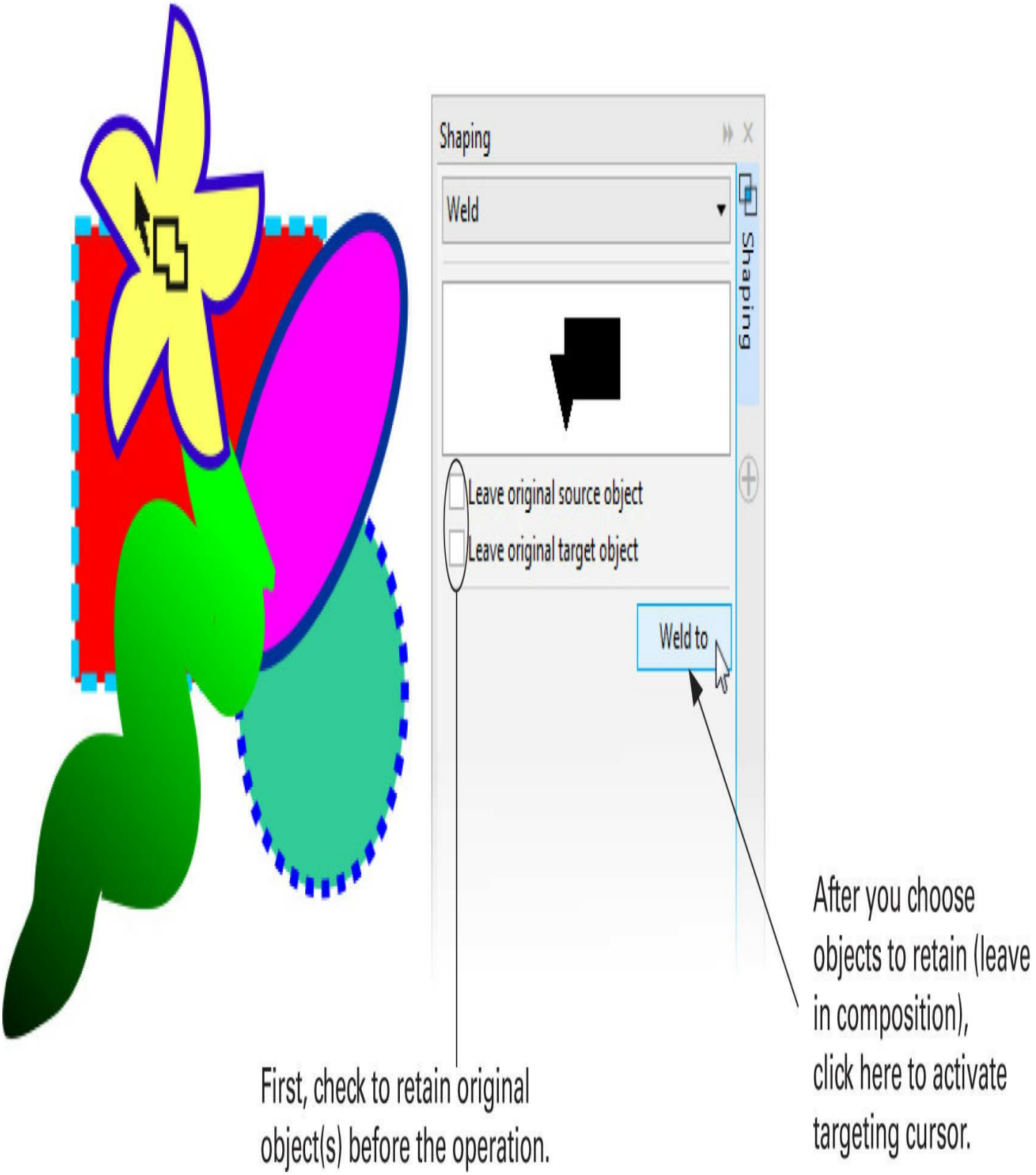
X8's Property Bar provides shaping command buttons that let you shape selected objects instantly. These Property Bar options become available only while at least two objects are selected—and they make shaping commands available, whether or not the objects are positioned to overlap. Property Bar shaping buttons are shown here:


Trim (trims the selected shapes)
Intersect (intersects the selected shapes)
Simplify (simplifies the selected objects)
Front Minus Back
Back Minus Front
Weld (welds all selected shapes)
Create Boundary (makes a new object that surrounds the selected shapes)



When you use the Property Bar's shaping buttons, shapes are subtracted, added, and so on, but the original objects go away. To keep your original objects, use the Shaping *docker*, which offers options to specify that the *source object* (the one performing the operation—that is, the "scissors") and/or the target object (the object receiving the operation—that is, the "paper") should remain after shaping.

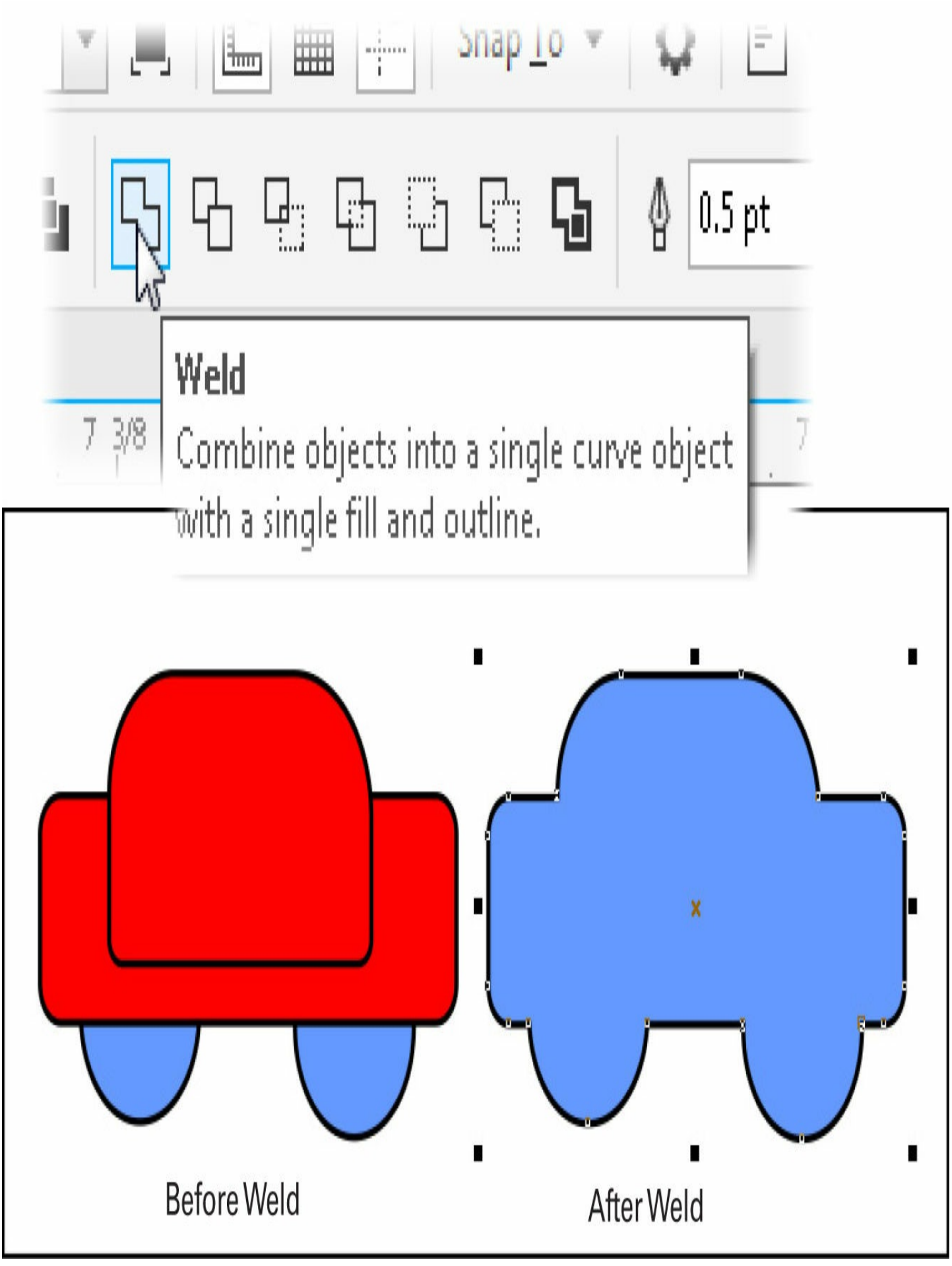
Tip When using the Shaping docker and the Weld and Intersect operations, you have an additional helper at the bottom: the Intersect With or the Weld To button. When only one object is selected, naturally it's hard for CorelDRAW to perform these operations. The idea behind this option is that if you have several objects nestled closely together (making a target object hard to select), you click the Weld To or the Intersect With button, your cursor changes to a unique shape, and you then click on the desired target object to complete the operation, as shown next.



Now that you know where to find the buttons to launch these commands quickly, it's time to examine what you can do with them. The following section explains the results of applying each command to at least two selected objects:

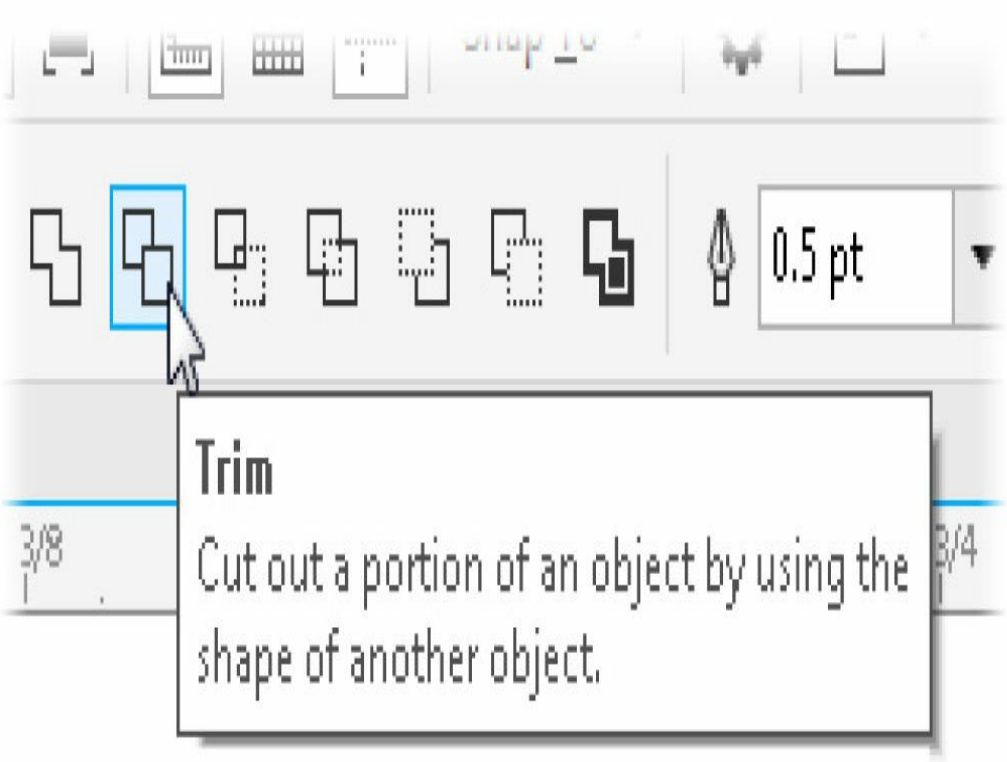
- **Weld** The Weld command creates a new shape based on the outline shape of two (or

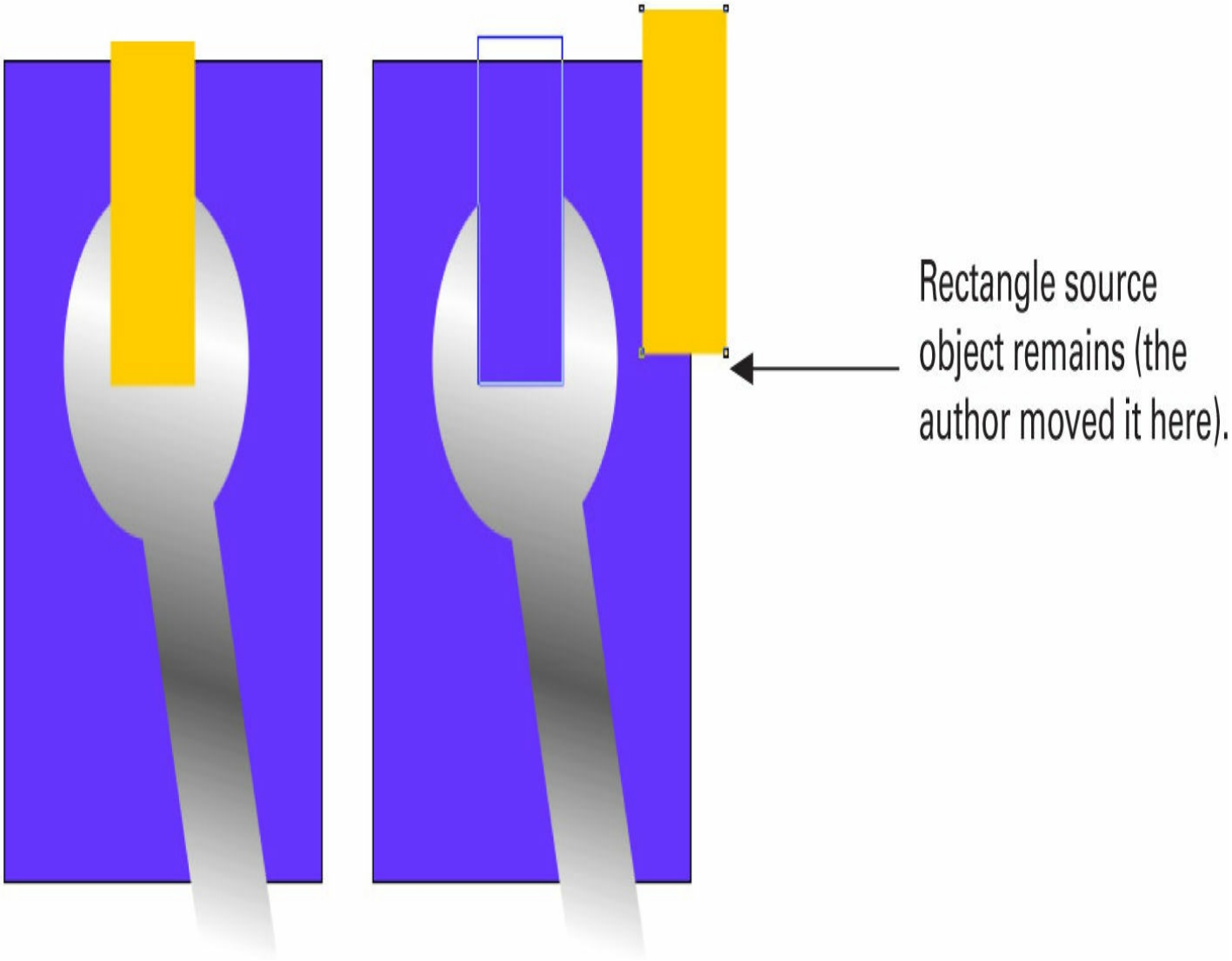
more) overlapping objects, as shown on the right in the following illustration. You can specify via the Shaping docker whether or not the *original* shapes remain on the page.


Snap To
0.5 pt
Weld
Combine objects into a single curve object with a single fill and outline.
Before Weld
After Weld

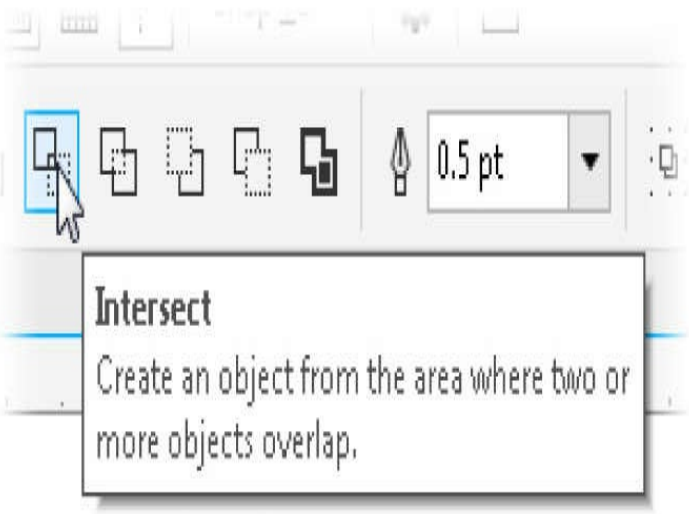
This illustration shows a couple of circles and two modified rectangles so their edges are rounded. The car is going to be welded (because that's the way cars are manufactured), and the image on the right is the result of how the different colored objects weld together. Not only did the Weld operation create a single object, but it also gave the result object the *color* of the *bottommost* object, the wheels. This is an important thing to know when welding objects.

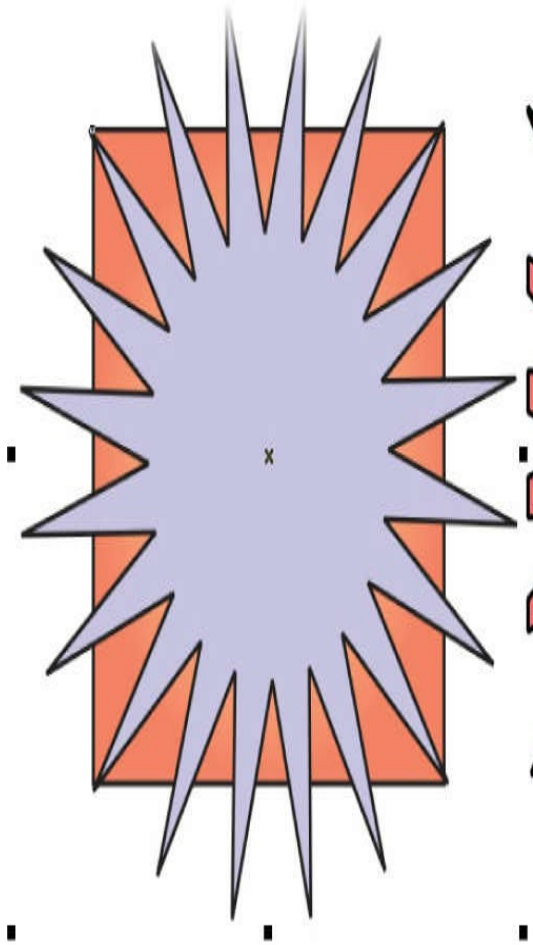
- **Trim** The Trim command removes any area of the backmost object that overlaps the frontmost object, as shown here—the rectangle used in this operation is *not* deleted and has been moved to make the result more obvious. No color change takes place; the back object does not inherit the front object's color, transparency, or any other trait.


0.5 pt
Trim
Cut out a portion of an object by using the shape of another object.
3/8
3/4

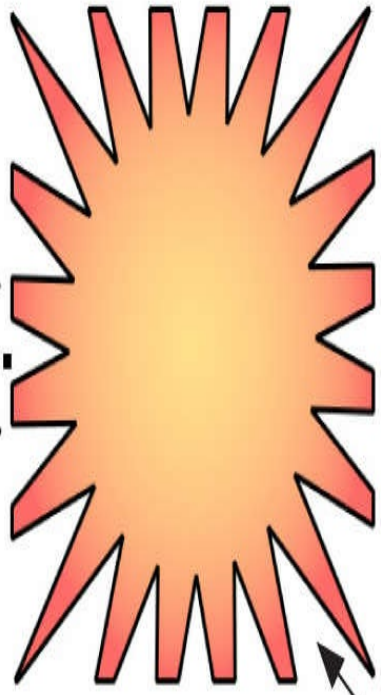

Rectangle source object remains (the author moved it here).

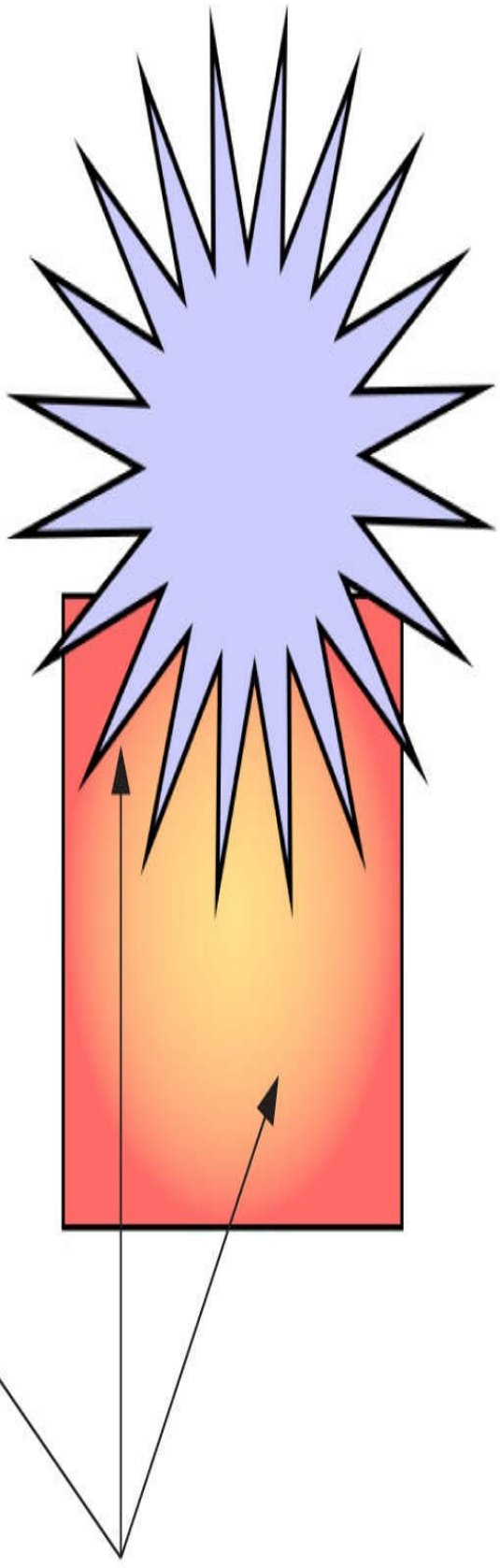
- **Intersect** The Intersect operation creates a new object based on the overlapping areas of two or more objects. The original objects remain on the page, and the result is not obvious because the new object is in the same position as the overlapping parts of the original objects. In the following illustration, the square was on the bottom, and the resultant object takes on the color of the bottom object. Intersect is a great operation for creating difficult crops of complex objects. The new sun shape would make a nice logo for a tanning salon!





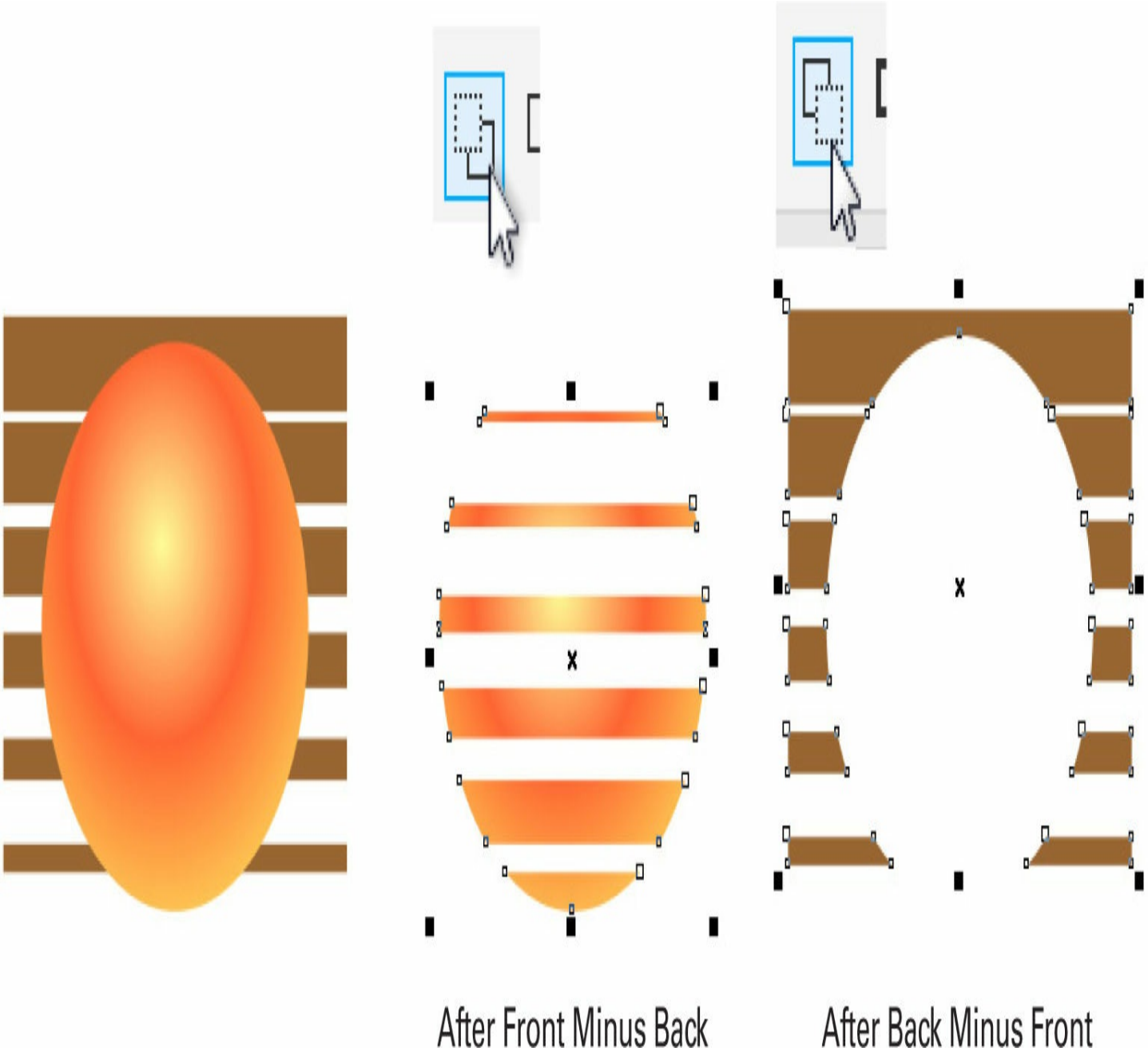
Before Intersect.



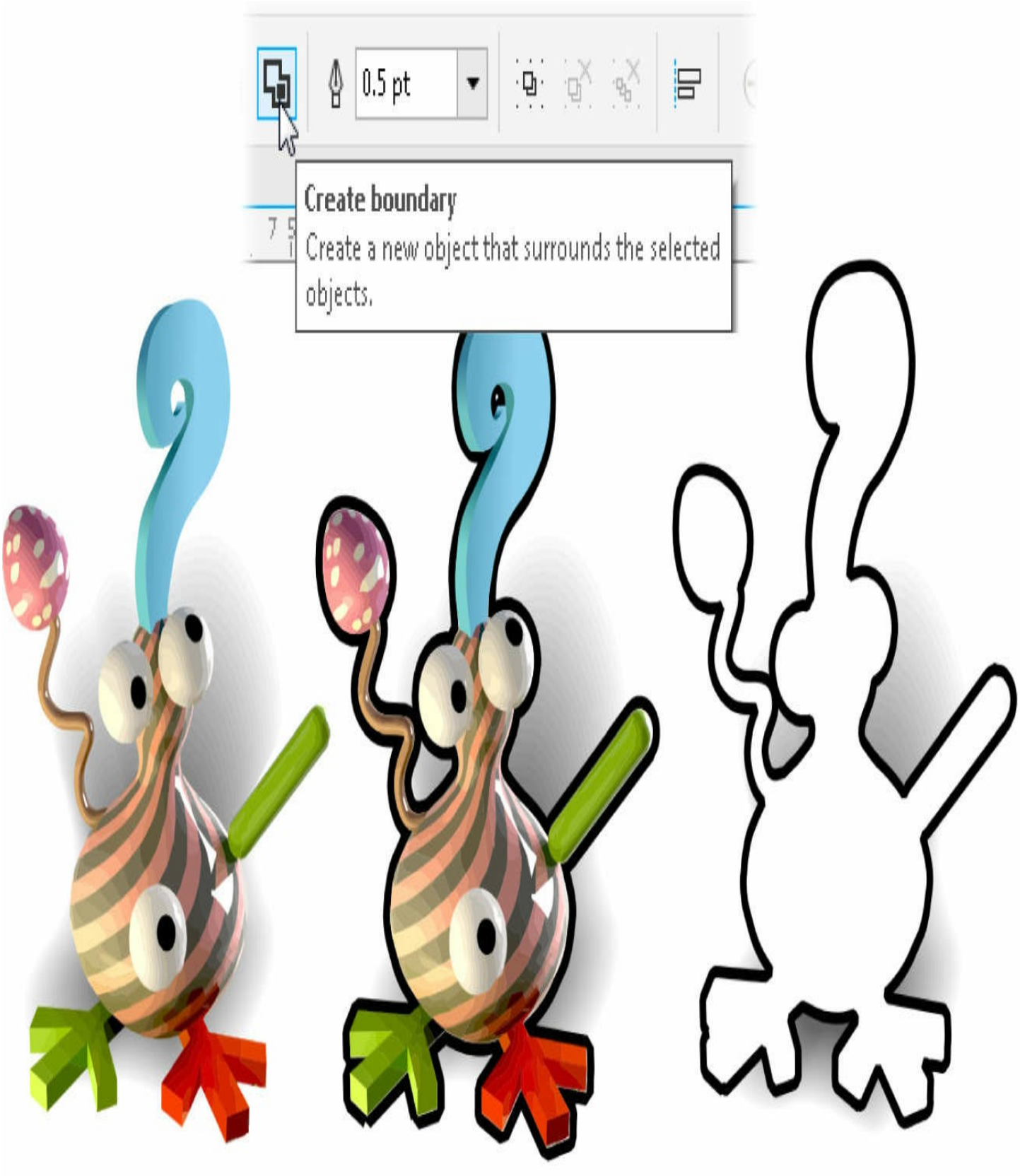


After Intersect. (The original source and target objects remain. The author moved them away.)

- **Simplify** The Simplify command removes all hidden areas of objects that "underlap" the foreground object. This command is great for simplifying an intricate drawing, and it can also make a design that otherwise might not print to PostScript correctly print just fine. Different order and arrangements of objects will result in slightly different results.
- **Front Minus Back** When two or more shapes are selected, applying the Front Minus Back command removes the hidden area of the object in back from the shape in front. When more than two shapes are selected, it removes all portions where the shapes in back are overlapped by the object in front, leaving only the object in front remaining, as shown in the following illustration.
- **Back Minus Front** This shaping command is the opposite of Front Minus Back. While at least two shapes are selected, applying the Back Minus Front command removes the portions of the shape layered in front from the shape in back. When more than two shapes are selected, it will remove all portions where the shapes in front overlap the shape in back, leaving only the shape in back remaining. The following illustration shows the results of Front Minus Back and Back Minus Front, when applied to two objects, in the same front-to-back order.



- **Create Boundary** This is similar to the Weld operation, except it leaves the target objects on the page. Also, if there are empty spaces between objects, Create Boundary ignores them when making the combined single object. Here is an example of several objects selected and, below them, the result shape. By default, the new object has no fill and is ordered on top of the target objects. Just click a foreground color on the color strip, and the new object will become immediately apparent. This operation provides particularly good results when you have an easily recognizable figure, and you want a silhouette version in one click.



Before Create Boundary

After, with outline widened

Boundary moved and white fill applied

Tip When you're using the Shaping docker instead of the operation buttons on the Property Bar, there are two important differences in the results you'll get. You can choose to keep or delete the target and source objects. When the Source Object(s) option is selected, the object you selected before the shaping operation remains after the command has been applied. With the Target Object(s) option selected, the object you trim, weld to, or intersect with remains after the command has been applied.

Working Examples of Object Shaping

If you've seen some stunning CorelDRAW artwork and said to yourself, "Wow, that must've taken that artist ages to do all that work," nope, it probably didn't: the artist put *object shaping* to work. The following examples show just three of the thousands of creative possibilities for shaping operations; these are just a few examples to kindle your efforts.

Figure 9-1 shows a sample problem and a solution using the Trim operation. The peanut shell is whole, there appears to be a peanut outside instead of inside the peanut shell, and it would be a swell artistic touch if you took part of the shell off the top and let the peanut poke out of the shell. The peanut drawing is composed of several grouped sub-objects, and fortunately the Trim operation trims all objects in a group. Walk through the next set of steps to see how the Trim operation solves a lot of the manual effort of editing dozens of objects to create a more visual story for the scene. All the shapes needed to perform the Trim operation have been added for you; just focus on how to use the Trim operation.

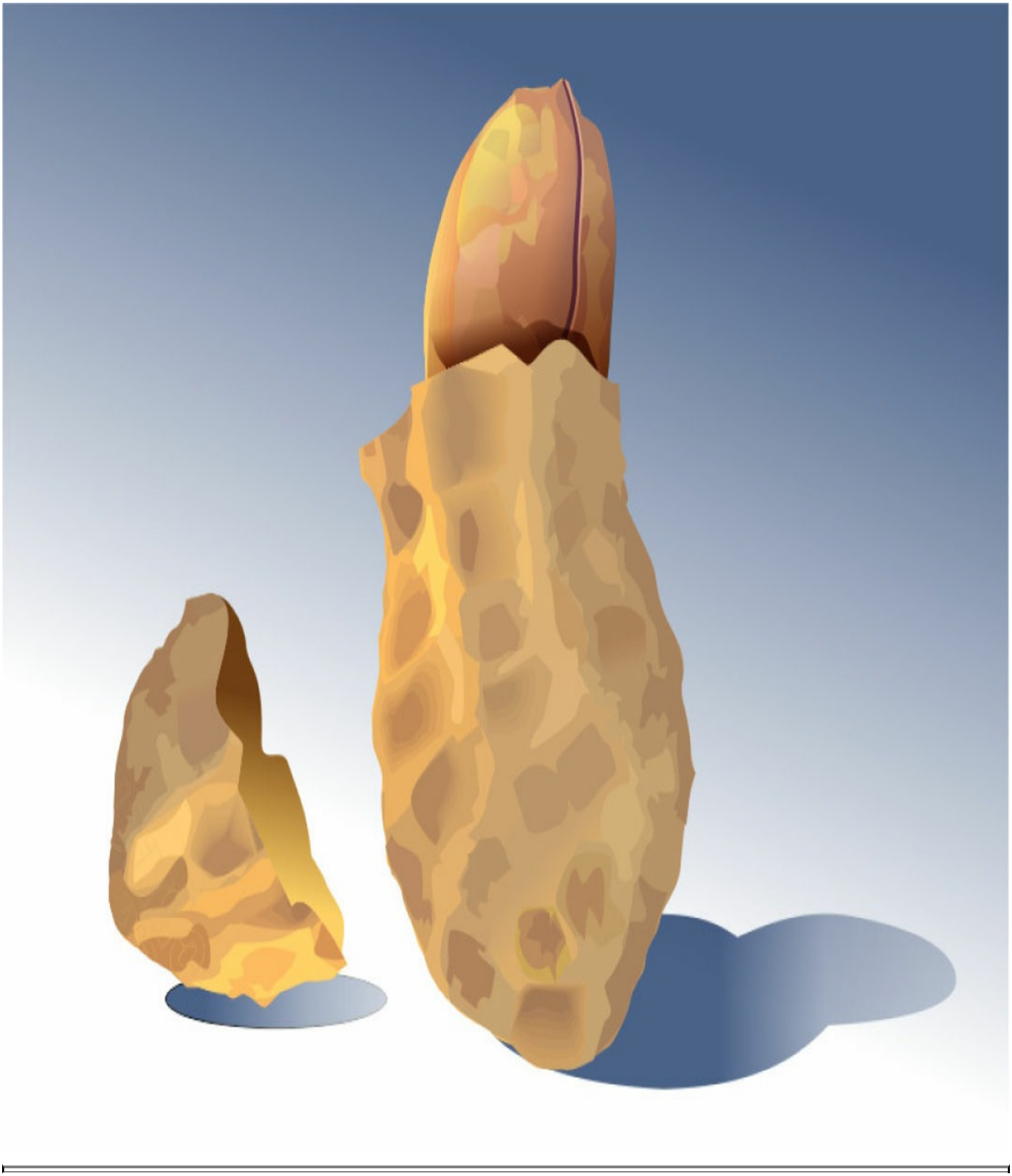
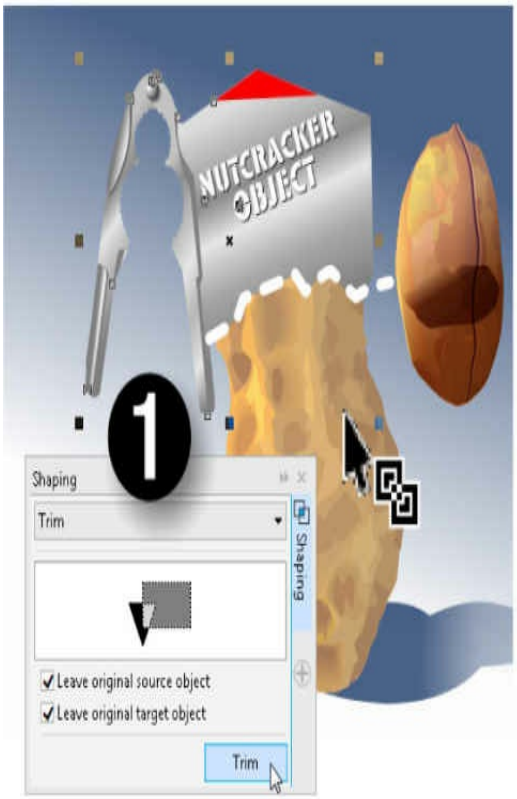


FIGURE 9-1 **Creating the illusion that something is inside or behind some other object is usually a job for the Trim operation.**

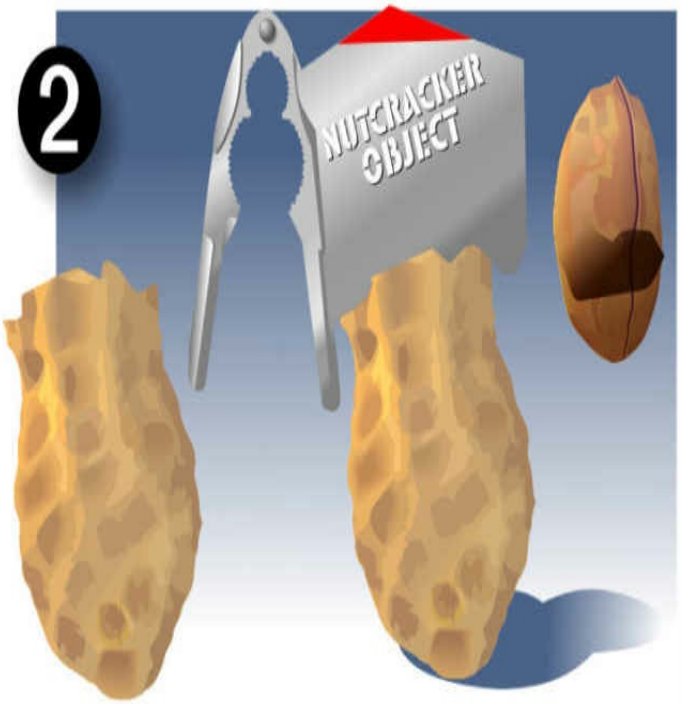
Getting Nutty With the Trim Operation

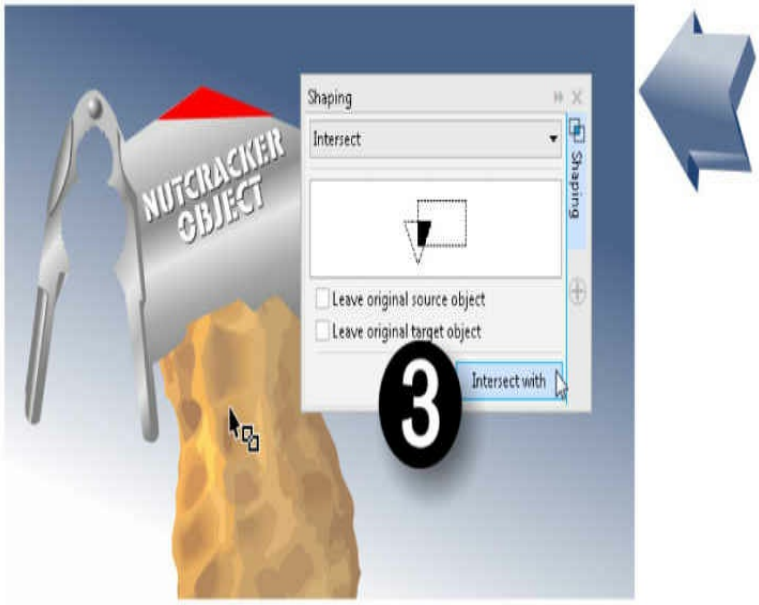
1. Open Nutty Tutorial.cdr. The goal is to visually slice off part of the top of the shell, put that piece near the rest of the shell, and then to move the peanut so it appears to be nestled in the shell.
2. With the Pick tool, drag the Nutcracker group of objects to a position that covers almost the top half of the peanut shell. (See callout 1 in the following illustration.)

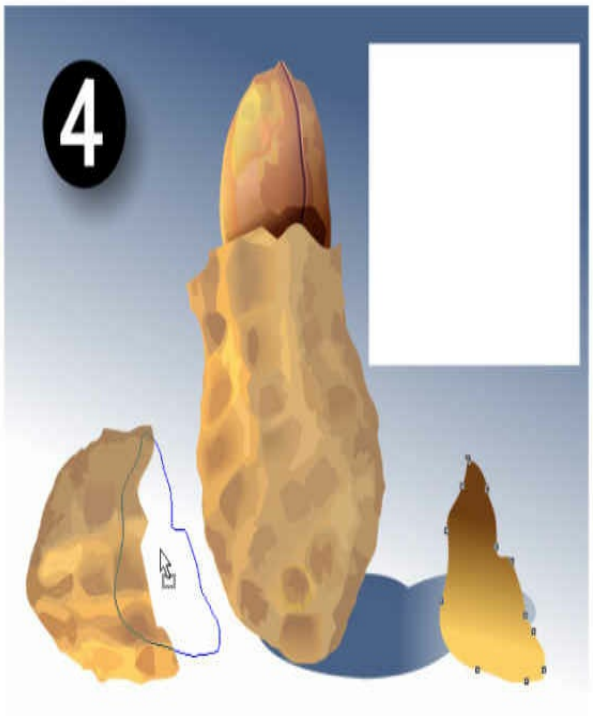
Choose the Nutcracker grouped objects; then check the boxes on the Trim docker and click the peanut group of objects.



Move trimmed peanut to the side, but leave the Nutcracker shapes and original peanut in place.







Intersect creates the top of the peanut shell.

Position the nut and then position the back part of the smaller shell.

3. Choose Object | Shaping | Shaping to display the Shaping docker.
4. Select the Nutcracker object group of shapes. The illustration is overly embellished; you can perform the next steps just using a single four-sided shape, but it seemed like more fun to include a badly executed pun in this tutorial. If you were designing this composition from scratch, the Pen tool is ideal for drawing such a shape. The white dashed outline is not in the file but only in the illustration, meant as a suggested guide for your object drawing—the shape can be any outline color or style.
5. Choose Trim from the drop-down list on the docker. Put a check in both the Leave Original Source Object and Leave Original Target Object fields. You'll need to reuse both the peanut shell and the Nutcracker object in the following steps.
6. Only one object is selected, the Nutcracker object, which becomes (because you've selected it first) the *source* shape, the shape that performs the operation on the following object you click on. Now click Trim on the Shaping docker to then prompt the docker to query you on what you want trimmed. Your cursor takes on a new shape.
7. With the special cursor, click over the peanut shell. Because you've elected to keep both the original target and source objects, apparently nothing has happened. It has, though.
8. The trimmed peanut is already selected, so move it to the side temporarily, but leave the Nutcracker object in its position over the original peanut shell. (See callout 2 in the above illustration.)
9. Choose Intersect in the Shaping docker. (See callout 3 in the above illustration.) Uncheck the Leave Original Source Object and Leave Original Target Object boxes. Click Intersect With, and then use the special cursor to click on the original peanut. This leaves just the top of the peanut shell behind.
0. Move the trimmed peanut back to its original position, using the shadow on the ground plane and the trimmed top as a reference.
1. Now that you have both the top and bottom of a broken peanut shell, move the top shell to the lower right. Select the peanut itself to the right of the first shell piece, and then put it "in the top of the peanut," poking through. To rotate the removed top shell, select it and then click the selection one more time. Do this, and rotate the peanut itself until its degree of rotation suits your artistic sensibilities.
2. Take that mysterious piece on the far right of this document and move it over to the right side of the small, rotated peanut shell. (See callout 4 in the above illustration.) This piece makes the whole composition look more dimensional because logically, if you split a peanut shell, the back side of one of the pieces would be partially visible.

Fillet/Scallop/Chamfer

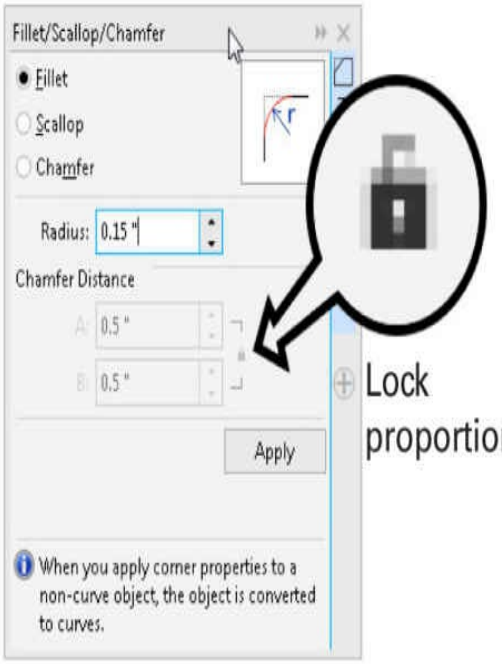
The Fillet/Scallop/Chamfer docker can be displayed by choosing it from Window | Dockers, and with it, you have your choice of truncating sharp corners of an object you

draw. This docker will not alter a curved path segment: a shape that consists of straight paths is the best to use with this feature; objects with a combination of curved and straight segments will only be affected along the convergence of two straight path segments.

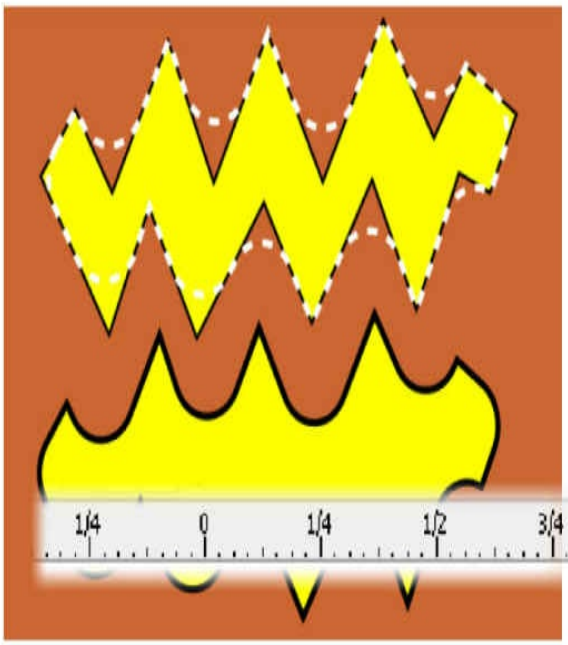
When Fillet/Scallop/Chamfer evaluates sharp direction changes along a path, it "rounds off" the point of a convex area toward the inside of the path and then adds to concave areas. This is a terrific feature for quickly building elegant objects such as furniture pieces, machine parts, and simply nice ornaments for desktop publishing documents. You enter a positive value in the Radius field (or use the elevator buttons on the docker), you see a faint outline preview in your document, and then you click Apply when you're happy with the preview. Fillet/Scallop/Chamfer is a destructive operation, unlike the shaping operations, so if you want to keep your original object, duplicate it before using this docker.

- **Fillet** Rounds the corners of an object.
- **Scallop** Trims a semicircle from the corner of an object.
- **Chamfer** Lops a straight angle off a corner, perpendicular to the interior angle of the corner.

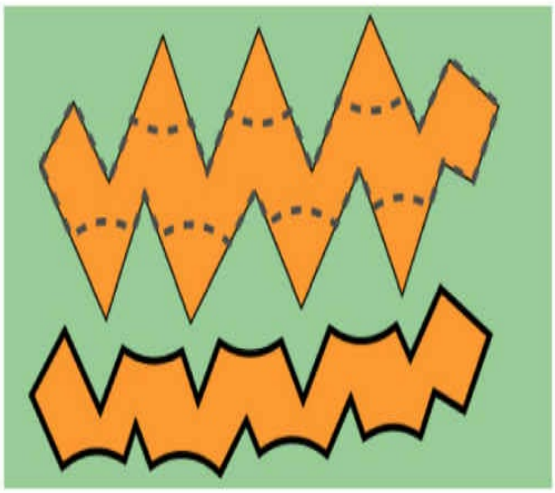
Figure 9-2 shows the effects of the Fillet/Scallop/Chamfer docker on the same zigzag object created with a single click and the Pen tool. Because the radius of this trimming effect is measured in page units, it's usually a good idea to keep rulers visible in your document, and to refer to them to achieve the exact degree of corner truncation you need.

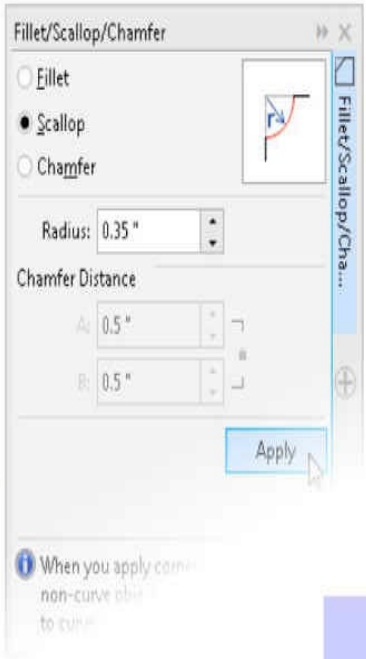


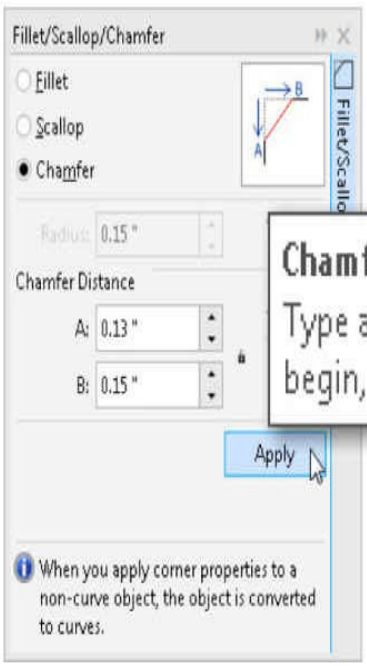
Lock proportions.



Use the page rulers.







Chamfer distance

Type a value to set where the chamfer will begin, relative to the original corner.

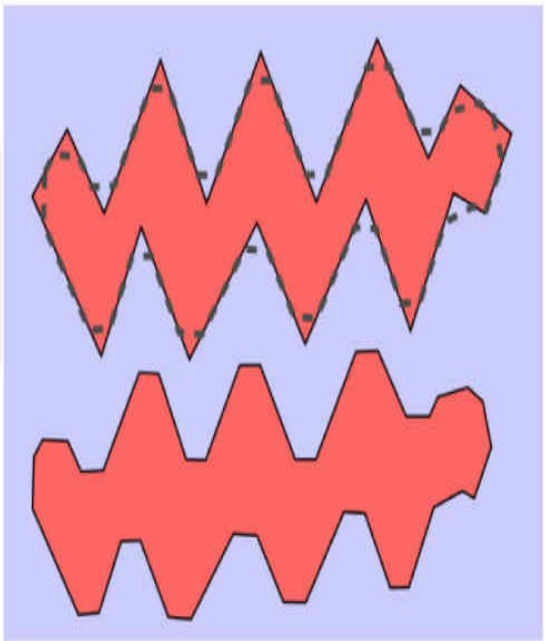


FIGURE 9-2 **Use the Fillet/Scallop/Chamfer docker to take the corners off an object with intricacy and classic style.**

Down and Dirty and the Shape Tool

Up untill now in this chapter, you've learned how to reshape objects using docker features and menu commands. The Shape tool in CorelDRAW gets right to the heart of object editing; it's used to do the following:

- Connect the beginning and end nodes of a path to close the path, so it becomes an object you can fill.
- Add nodes to an object so you can alter part of the object's outline.
- Remove (delete) nodes to smooth out a very rough object.
- Move nodes to alter the shape of an object.
- Change a straight line—a standalone line, or a line that's part of an object—to a curve.
- Change the amount of curve that a curve segment has.
- Make the node that joins two curves in an object sharp, smooth, or even symmetrical.

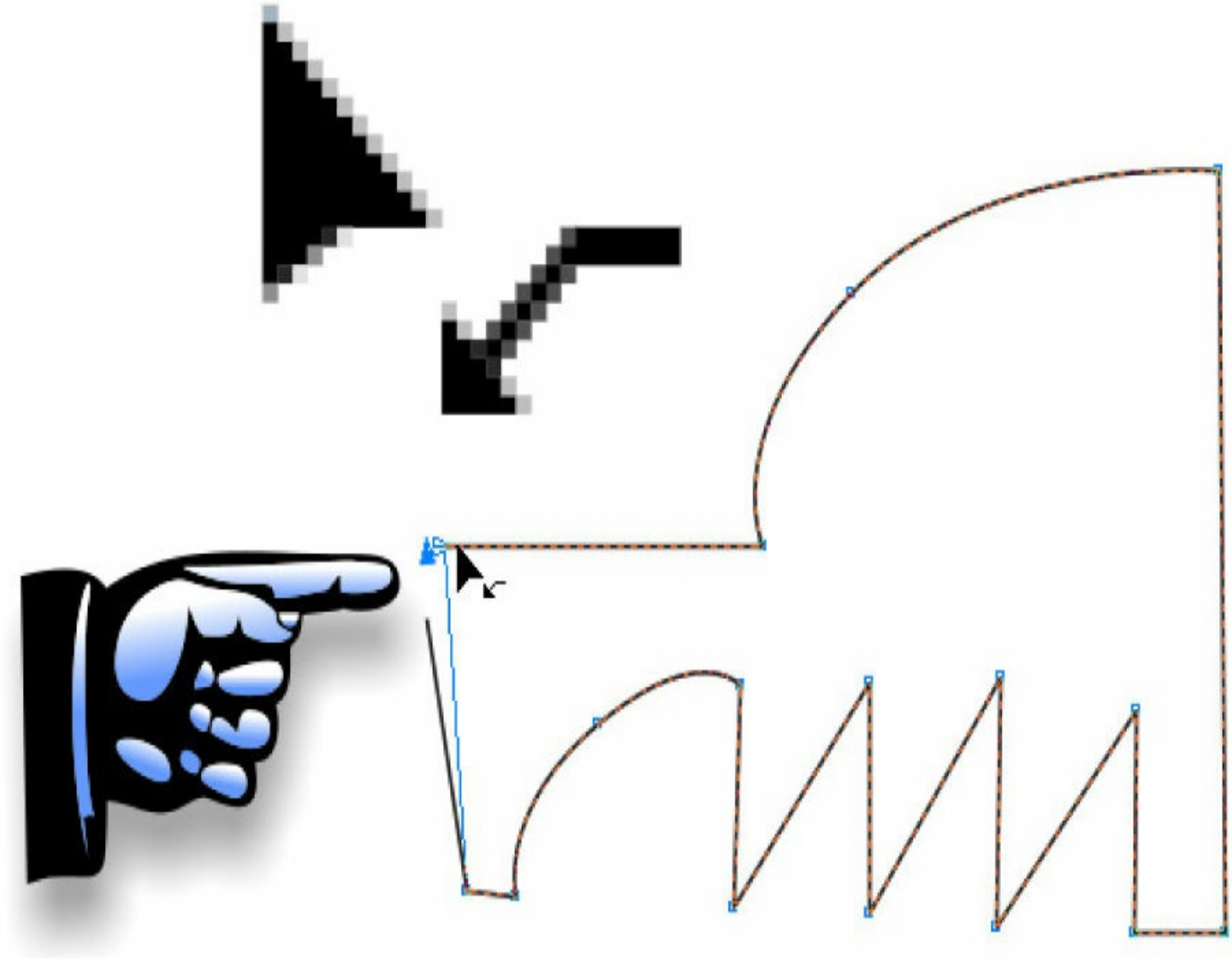
Note The Shape tool responds differently and creates different effects depending on the type of object on which you use it. The examples in this section use the Shape tool in combination with ordinary objects consisting of nodes and path segments. Text handling with the Shape tool is covered in Chapter 10, and special objects such as those drawn with the Ellipse and other preset shape-creation tools can be modified using the Shape tool and the directions in Chapter 5.

You might say that the Shape tool is to editing what any of the Pen tools is to drawing. The Shape tool's use is covered in other chapters during tutorials, but right now it's time for a taxi driver's tour of what you can do with the Shape tool—and what the results look like. Follow along in this whirlwind exhilarating (but hardly overwhelming!) series of participatory events in tutorial style.

Reshaping Objects With the Shape Tool

Tutorial

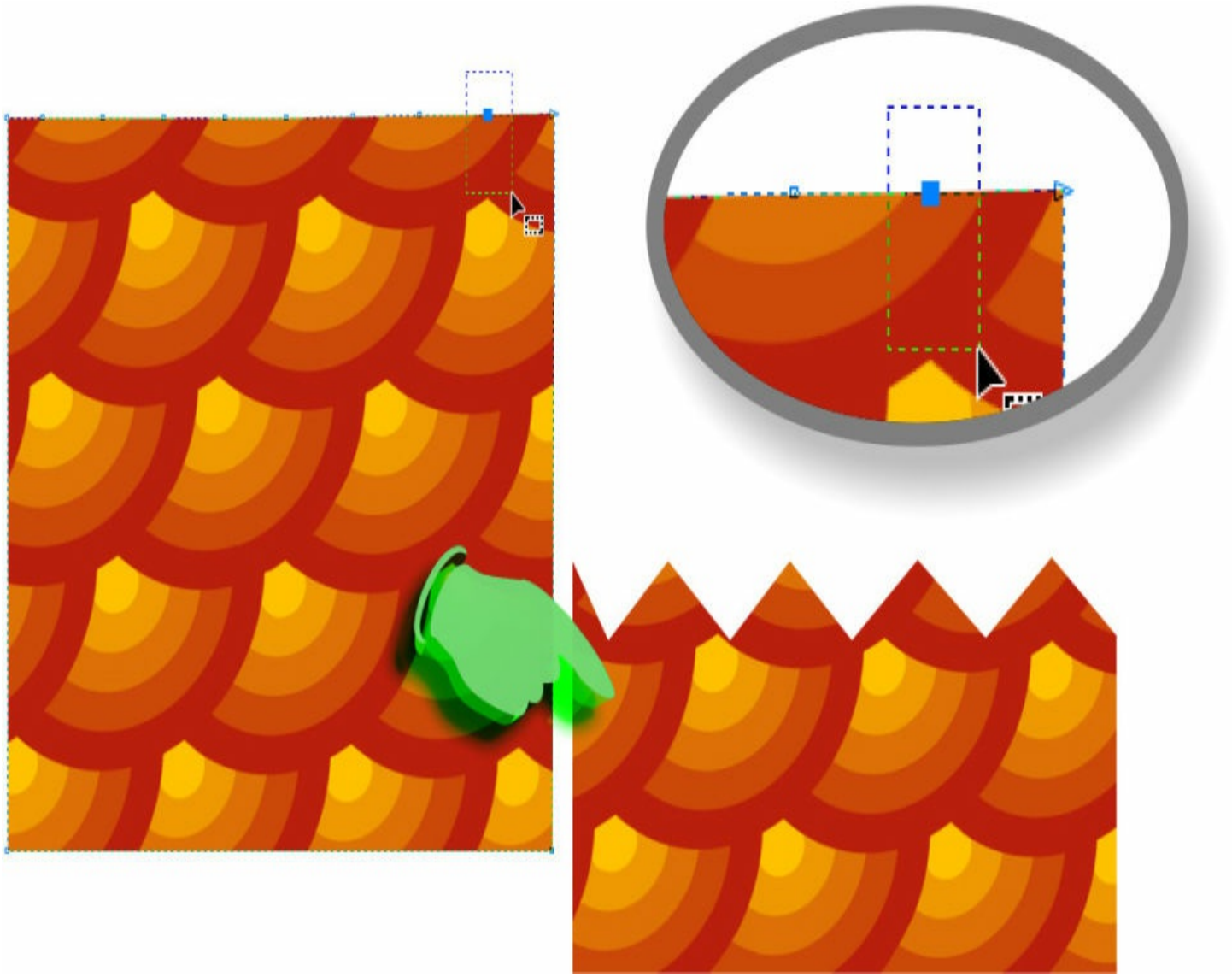
1. Open the Shape tool playground.cdr file, which contains sample objects to work with during the steps here. Pan over to the strange (and open) path to the right of the whimsical pointing hand.
2. Select the path with the Pick tool and then try to fill the shape by clicking a color well on the Color palette. Nothing happens, right? This is because the path is almost, but not quite closed. Zoom in to the upper-left corner of the shape; if necessary, to see where the start and end points are, go to View| Wireframe.
3. Choose the Shape tool from the Toolbox (the group directly below the Pick tool), and while the shape is selected, click-drag on either end of the shape and then drag the node over to the opposing node. When your cursor looks like that shown in the following illustration, it means when you release the mouse button, the shape will then be closed.



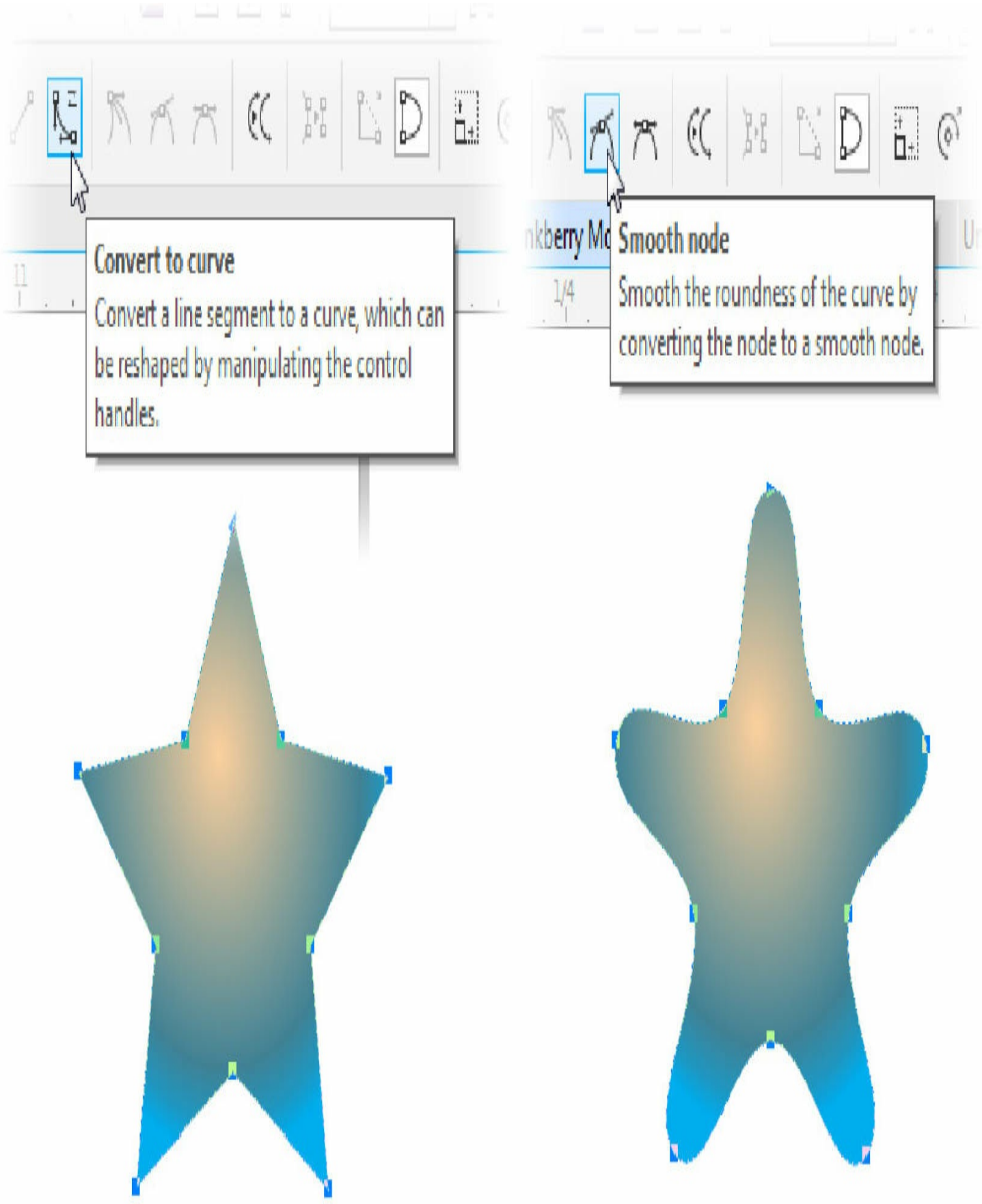
4. Now, what gives with the dull purple fill in this newly closed object? Aha! This is *another* trick found in CorelDRAW: the author closed the shape, filled it, and then reopened it in preparing this CDR file, and DRAW remembers the fill to an object that

was previously closed.

5. Let's move on to the rectangle to the right of the closed object, the one filled with red fish scales or something. You can tell that this is a rectangle, and as such has editing properties we do not seek using the Shape tool—you just select the object and look at the status line, and the Status Bar says it's a rectangle. The object needs to be converted to a simpler object, one with no special editing properties. So, with the rectangle selected, press CTRL-Q (Object | Convert to Curves).
6. With the Shape tool, double-click a point on the top center line of the rectangle. To remove this point, you can double-click on this node and it disappears, but don't do this now (it's sort of a Tip). Now the closed rectangular series of straight paths has five nodes, and each can be moved. But let's explore just a little more here.
7. Press the plus (+) key on your keyboard. Surprise! A new node has been generated, and its position on the top path segment is equidistant between the first node you added and the left corner node. Quit after you've grown about four nodes.
8. Try clicking the top-right corner of the object and then press the plus key a few more times until you have about eight nodes in total.
9. With the Shape tool, marquee-select the new node at left on this top line. Then, while holding CTRL to additively select, select every other new node across the top of the line of the rectangle. See the following illustration.
0. Press DOWN ARROW on your keyboard several times, to nudge the selected nodes down, until your shape looks like that shown in the lower right of this illustration.



1. For the grand finale to our mini-tutorial, select the star shape at the right in the document, and then press CTRL-Q to convert this polygon shape (which has special editing properties when the Shape tool is used) into an ordinary shape composed of a straight path and nodes connecting the lines.
2. With the Shape tool, marquee-select all the nodes, and then click the Convert to Curve button on the Property Bar. It's okay to look ahead to the following illustration, where the button is called out. You could also have right-clicked and chosen To Curve from the contextual pop-up menu, but it's good to learn more than one technique for accomplishing a CorelTASK!
3. The path segments have control handles on them, and technically they are now curves, but they aren't curve shaped because all you've done is add control handles—you haven't moved the handles to create curves. Fortunately, there's a real easy way to make all the control points force the handles to become in opposition to one another, and what this does is… oh, just watch! Click the Smooth Node button, and you'll probably see something like a form of aquatic sea life on your page now.



Editing Shapes via Their Nodes and Control Points

Because you only worked through three examples of the power of the Shape tool when editing the basic components of an object, a little more discussion is worthy here. Because *nodes* and *control points* and *control handles* sound more like parts in a 1979 Chrysler LeBaron than the building blocks of objects you draw in CorelDRAW, a few definitions and explanations are provided here. They are low-cal and won't fill up your brain, so not to worry!

When a vector path describes an arc, *nodes* (points) connect a beginning and end point, and the nodes have *control handles*, at the end of which are *control points*, the screen elements you use to manipulate curves. The number of control handles and points depends on the segment connected by each node. For example, an arc (a curve) connected to a straight line segment has one control handle visible, and it controls the slope of the curve segment. When two curve segments are connected, you'll see two control handles if you click the connecting node with the Shape tool, and this node can have different connection properties (Cusp, Smooth, or Symmetrical). A straight path segment can be described as two nodes connecting the segment, and the control handles for the nodes coincide in position with the node itself. For all intents and purposes, the control handles can't be seen; they become visible when the segment is changed to a curved segment: the control handles appear on the segment, and you can move them away from the launch point of the curve and then freely manipulate the slope of the curve by dragging the control points.

You can read more about creating curves and producing (and editing) the nodes that connect these curves in Chapters 7 and 17. For now, let's get back to easier and more dramatic reshaping procedures.

PowerClips

CorelDRAW PowerClips change the appearance of a shape by *hiding* certain areas of its exterior using a different shape. This, unlike other reshaping operations, is completely nondestructive, and the clipping object can release the inner clipped object(s) at any time. Consider the usefulness of PowerClips: You can hide most of an object from view and put other objects behind the PowerClip. You can play a dozen possible scenarios for the composition you have on a page and never commit to any of them, unlike trimming an object.

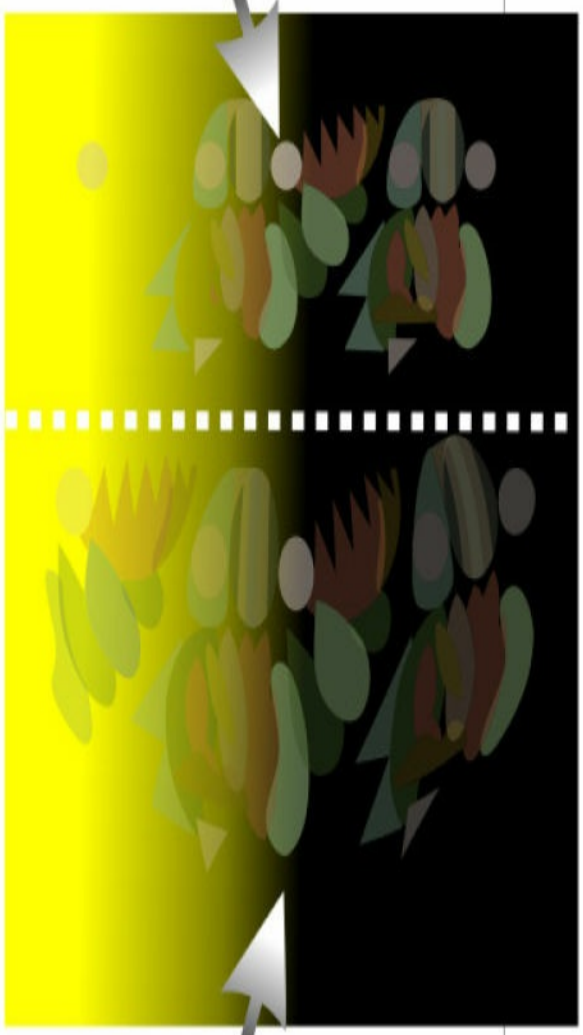
To give you an idea of the creative power of PowerClips, follow these steps with a document whose objects have already been created for you. The assignment is to put a design on the bottom of a flower vase, stencil-style, so parts of the vase's original color still show through in different regions. It's not hard work when you're familiar with PowerClips.

PowerClipping a Design Onto an Object

Tutorial

1. Open Flower and Vase.cdr. To the left you'll see a grouped pattern with transparency. Below it is the same pattern with an Envelope effect applied to make the pattern look bulged, as it would when viewed on the surface of a round shape such as the vase drawing here. On the right in Figure 9-3, over the vase is a thin yellow outline shape that is a fairly accurate trace over the vase. This will be your PowerClip shape for the pattern—it will hide all shapes outside of it. If you'd like to experiment with the non-enveloped grouped pattern with the Envelope tool, Chapter 14 provides additional documentation on this feature.

ORIGINAL
semi-transparent
GROUP



ENVELOPED
semi-transparent GROUP

use this one

FIGURE 9-3 **Using a PowerClip can simulate the painted texture on an object.**

2. Select the bottom pattern with the Pick tool, and then drag it over so it's on top of the yellow outline object, making certain that all parts of the pattern overlap the outline. You don't want gaps in the pattern as it's displayed on the vase.
3. Choose Object | PowerClip | Place Inside Frame.
4. A huge arrow becomes your cursor. Click the cursor over the yellow outline, and the pattern scoots inside the container object.
5. The container object is now selected, and a control bar appears below the PowerClip object, with buttons and a flyout menu that cover all the commands you'd otherwise have to go up to the Object menu to access. More about these later.
6. Right-click over the No Fill color well on the color palette to remove the outline. Alternatively, choose None for the Outline Width from the drop-down list on the Property Bar (see Figure 9-4).


Right-click to remove the
outline of the PowerClip.

FIGURE 9-4 Let empty areas in patterns and other complex drawings show through a PowerClip object.

Although the preceding example shows how to mask the exterior of a group of shapes, a PowerClip container can also have an outline width, color, and fill. In any case, the nondestructive property of PowerClips will serve you in a number of design situations.

- **Edit PowerClip** This button takes you to a unique view of your document, where the contents of the PowerClip are available for you to rotate, reposition, scale, and recolor. You can even create a new shape and put it inside the outline of the "frame," the container shape as it is represented in this Edit state. When you're done editing, there will be a single icon below the PowerClip called "Stop editing contents"; click it, and you're done adjusting the PowerClip.
- **Select PowerClip Contents** You can rotate, scale, and move the contents of the PowerClip after using this command, but the contents always stay *inside* the PowerClip object. Attempts to move the contents outside the container will result in hiding them. This is a terrific command, for example, if the pattern in the preceding flower vase tutorial didn't line up exactly the way you wanted it to with the vase.
- **Extract Contents** This command takes the objects out of the PowerClip container. The container now features an "x" through it, indicating it's an empty PowerClip frame, and the objects on your page have no relationship to one another. However, if you want to do some editing on your formerly contained objects and then put them back inside the PowerClip shape, drag the first one (if there's more than one object you extracted) and then drop it inside the boundaries of the PowerClip object. You can put other objects back inside the PowerClip, but you need to hold W on the keyboard before letting go of the mouse button to bind the second, third, or other object to the interior of the PowerClip.
- **Lock Objects to PowerClip** This is possibly an ambiguous name for the function. If you use this command in its unlocked state, the objects inside the container object are "nailed" to the drawing page, and by moving the container object, you are changing what parts of the inner objects are seen. In the command's locked state, the contained shape(s) travel wherever you move the PowerClip container object. This is a good feature to use if the contained objects are the right size and in their ideal relative positions, but the container object isn't where it should be on the page.

Figure 9-5 shows the mini-toolbar and the flyout extended.

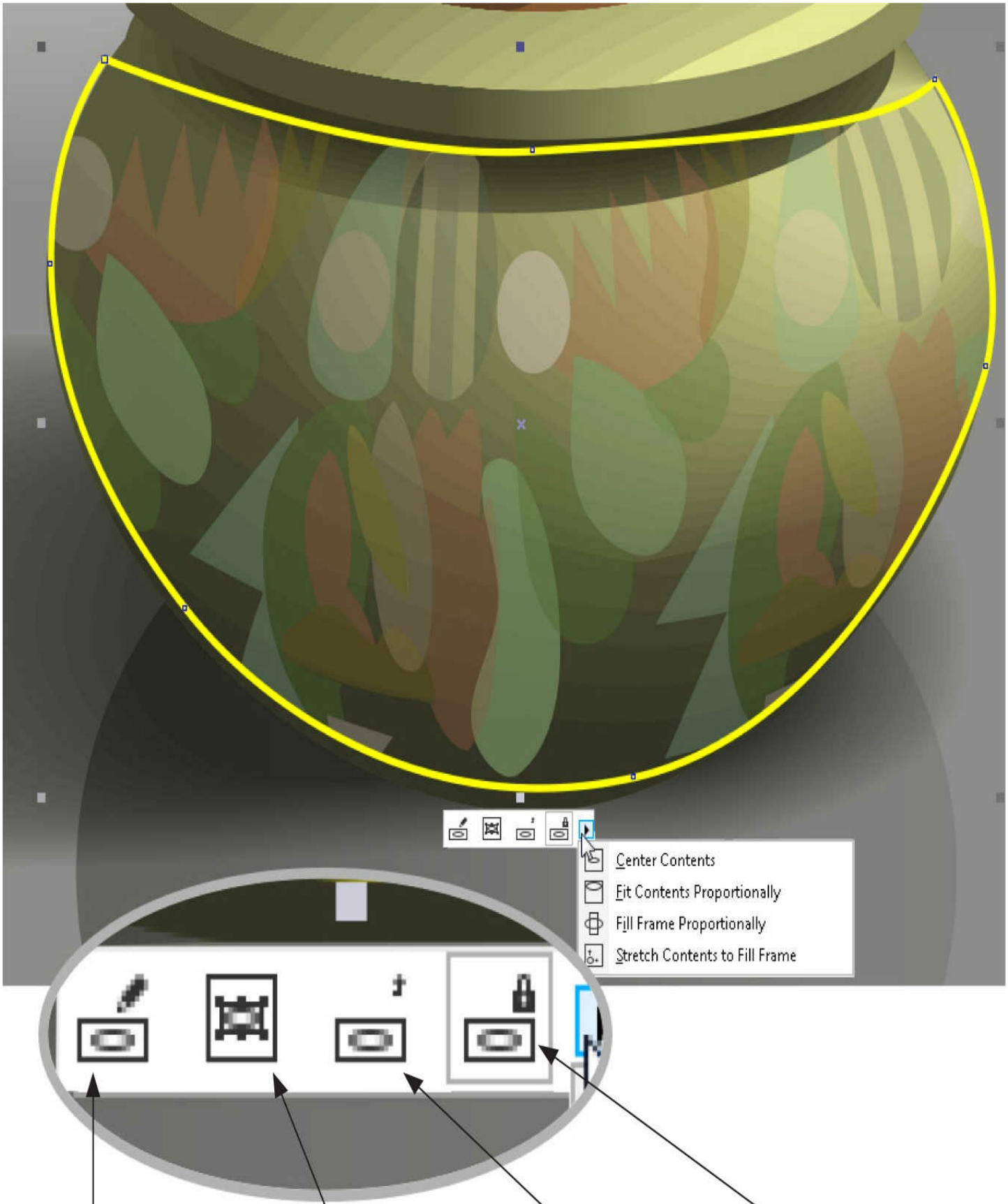

Center Contents
Fit Contents Proportionally
Fill Frame Proportionally
Stretch Contents to Fill Frame
Edit PowerClip
Select PowerClip Contents
Extract Contents
Lock Contents to PowerClip

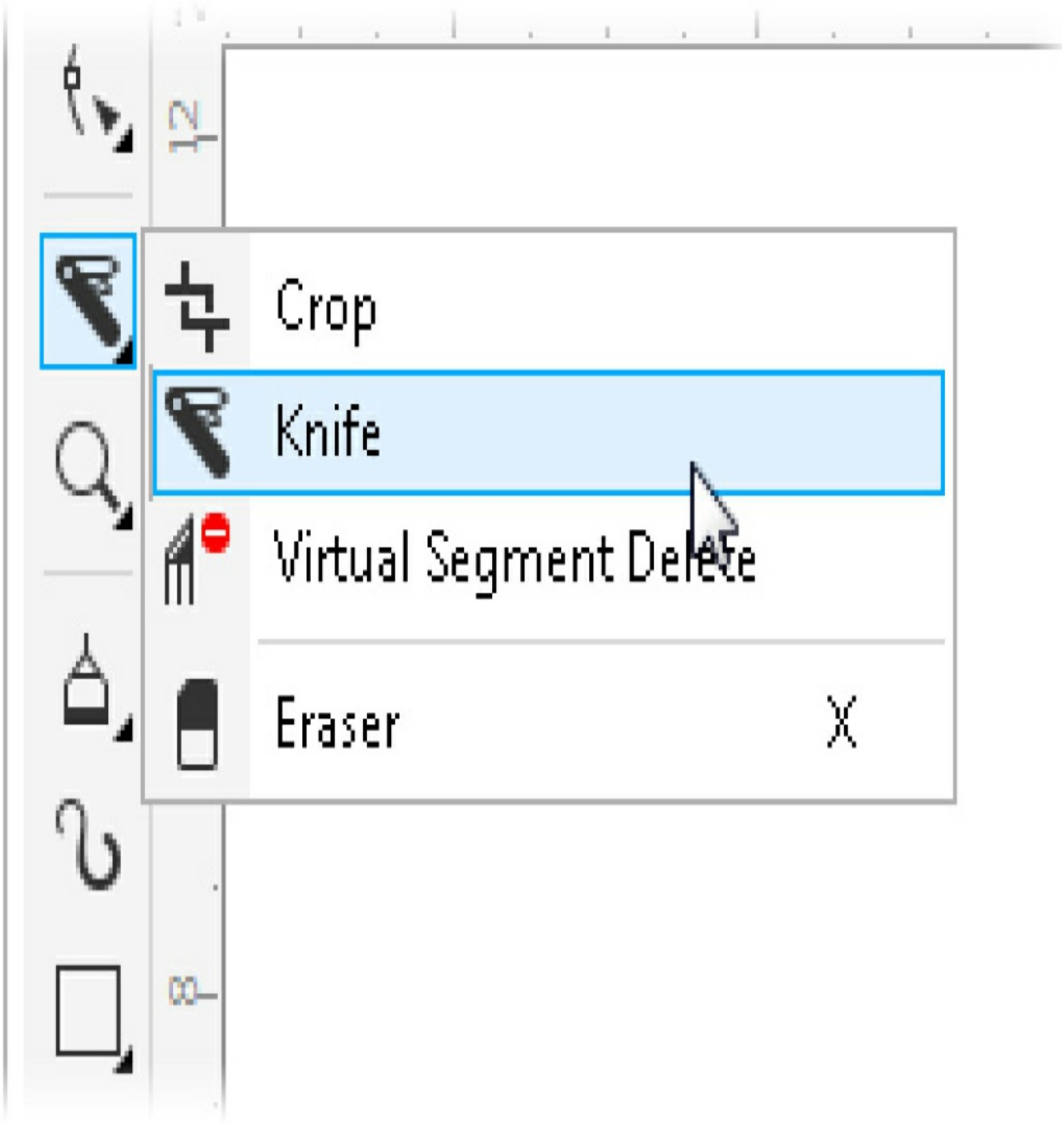
FIGURE 9-5 **In CorelDRAW X8, a lot of menu commands can be more easily accessed through a context-sensitive mini-toolbar right next to where you're working.**

On the flyout of this floating mini-toolbar are four commands that are almost self-explanatory. First, Center Contents will completely reveal the contained objects within the frame (the container shape). This is useful when you've edited the contents in such a way that you can no longer see a specific object. Next, Fit Contents Proportionally resizes the contents so that all objects can be seen, none are completely outside of the frame, and no disproportionate scaling (commonly called "smooshing") is performed. Similarly, Fit Frame Proportionally increases the size of the contained shapes until each shape occupies the same volume within the container. Sometimes, in order to perform this operation, shapes might disappear outside the frame object to retain everything's proportions.

Finally, Stretch Contents to Fill Frame will distort the shapes "inside" the PowerClip and usually give you a pattern within that's a consistent combination of objects and the frame (container) color, if it originally had one. With this option, imagine a rectangular bounding box that encompasses the container, and contained objects are scaled to fit within the boundary box, not the PowerClip container itself.

The Knife Tool

The Knife tool functions like a knife you'd use in the real world—except you can run with it, and it requires no sharpening—and feels quite natural to use. You begin by hovering over an object area where you want to begin the cut; your cursor changes its appearance to signify it is ready, and then you click-drag to the end of the cut, the other side of the object. The result is two separate closed objects. As with many of CorelDRAW's tools, SHIFT and CTRL can be used as modifier keys as you work with the Knife—and in the case of the Knife tool, these modifier keys add precision to your cuts. You'll find the Knife tool in the Toolbox grouped together with the Crop, Eraser, and Virtual Segment Delete tools, shown here.

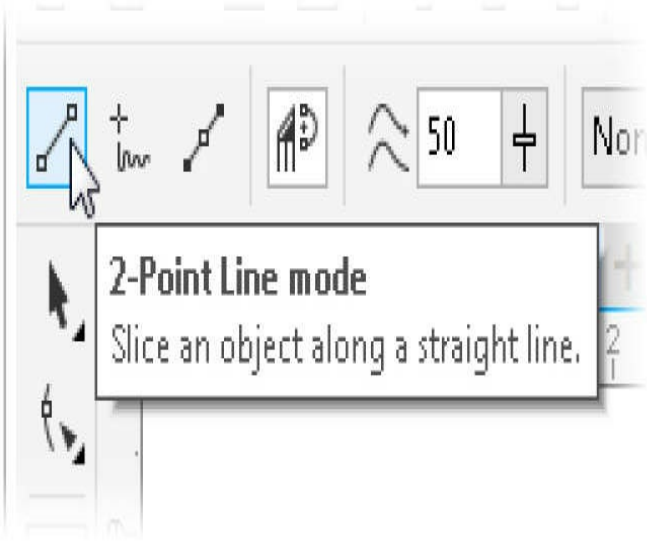


Types of Cuts With the Knife Tool

New to version X8 is a simplification to making cuts with the Knife tool. Gone is the required precise placing of the tool to make cuts on an object. You just make sure the object isn't right next to a different object (your target object doesn't have to be selected), you drag across the target shape, and it's now two shapes. Depending on the options you choose on the Property Bar, there are three ways to cut a shape with the Knife tool, and

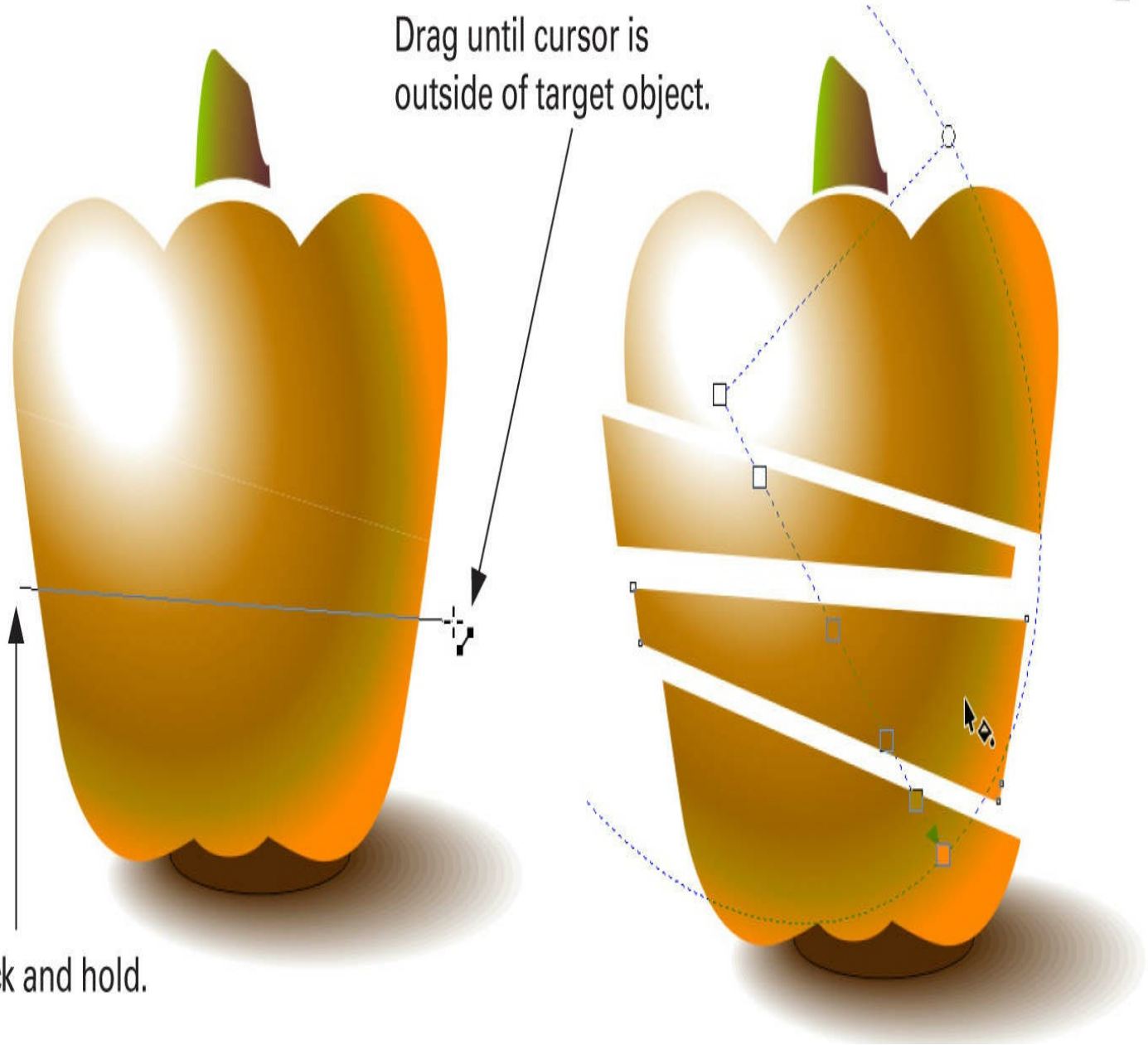
each one requires a little different approach, as covered next:

- **Straight cuts** If you want to slice an object into two separate shapes as you'd do with a workshop saw, to produce straight lines on sides of both objects, you aim the cursor on the near side of the object, release the mouse button, and then click on the far side of the object, as shown in Figure 9-6.



Fountain Fill remains relative to all new slices.

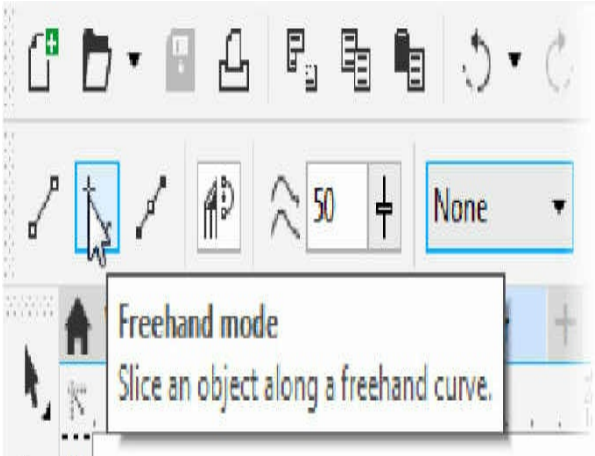
Drag until cursor is outside of target object.



Click and hold.

FIGURE 9-6 **The Knife tool's 2-Point Line mode makes it a snap to make straight cuts through objects.**

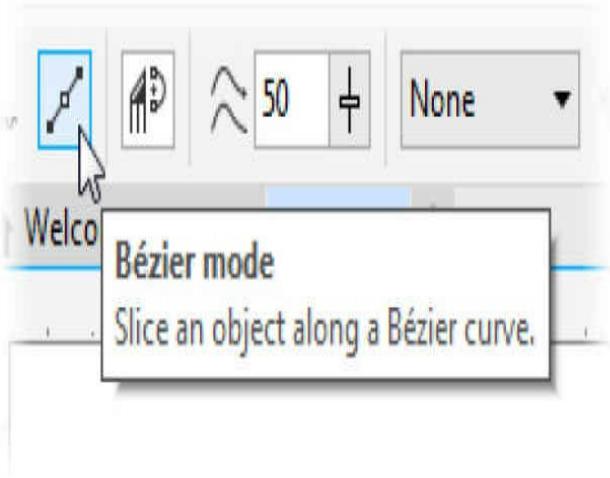
- **Freeform cuts** This mode of slicing can be used, for example, to quickly create an illustration of a sheet of paper roughly torn in half—or in this example, a broken promise. Sorry! You begin your drag at the near side of the object, and then drag until you reach just a little outside of the far side of the shape, as shown here.

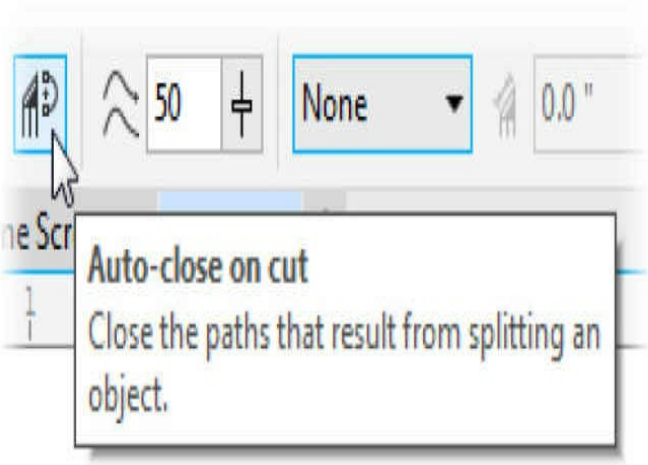


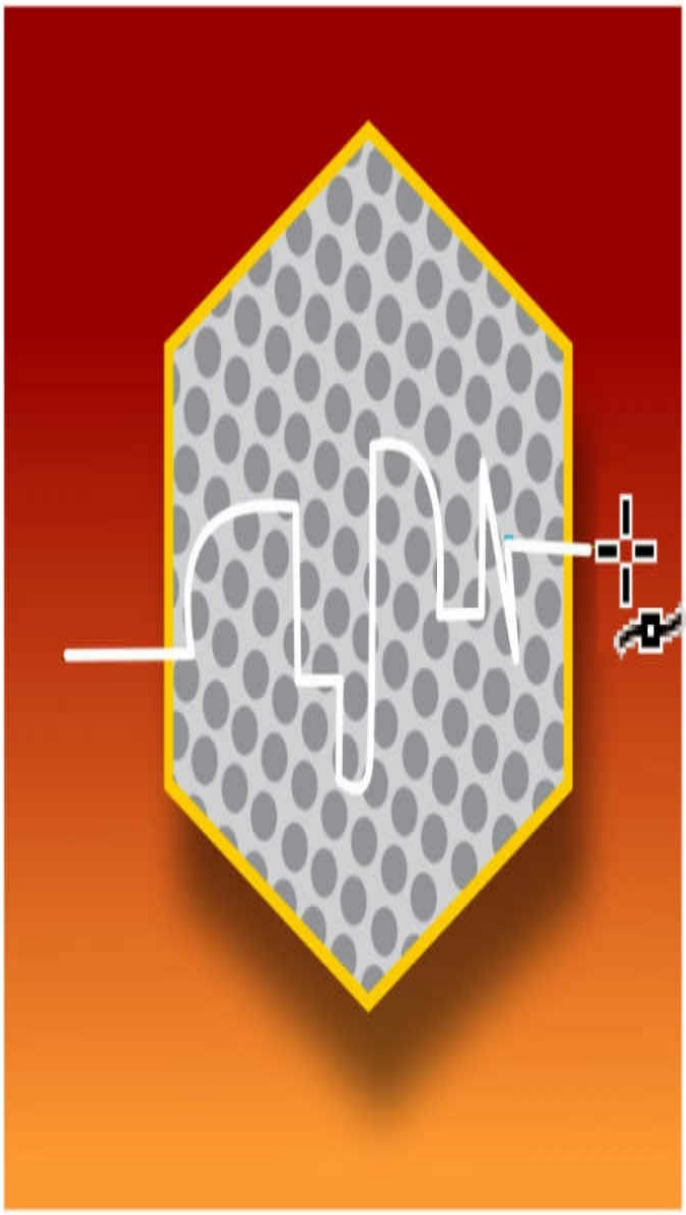
Fountain Fill remains relative to the original object. (The author moved the cut piece so you can see the effect better.)

- **Bézier mode** If you need to guide the Knife tool to make smooth jigsaw-like cuts, use the Bézier mode of the Knife tool. The operation of this tool is just like the Bézier drawing tool: click a point and then a second point, and a straight line segment is produced. When you click (and hold) and then drag, the segment behind the cursor is a curve. To end the line (or in this case, the cut), you double-click. In the following illustration, the rectangle background is locked. If it weren't, the Knife tool would also divide this object. Remember that to cut a shape with the Knife tool, both the beginning and end points of the cut you draw must lie completely outside of the target object.

Here is where a setting has been changed on the Property Bar for the Knife tool that you might want to explore in your own work.

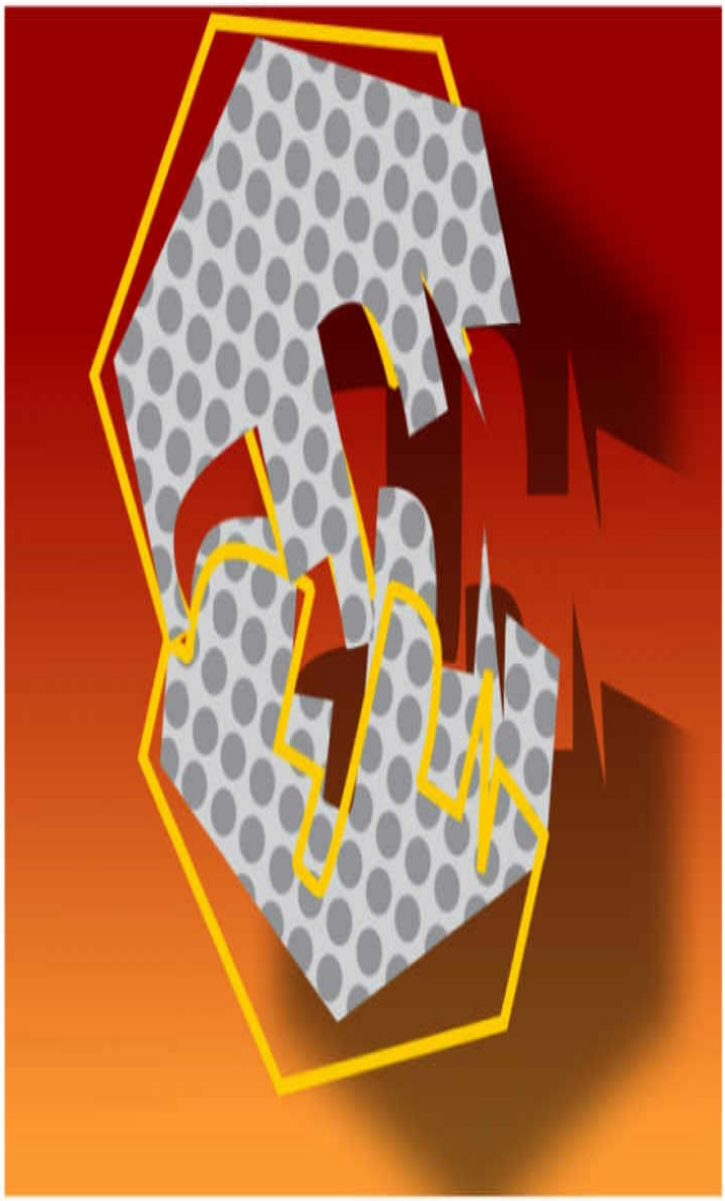






Click-click = line segment.

Click-drag = curve segment.



New split outline is closed, two shapes.

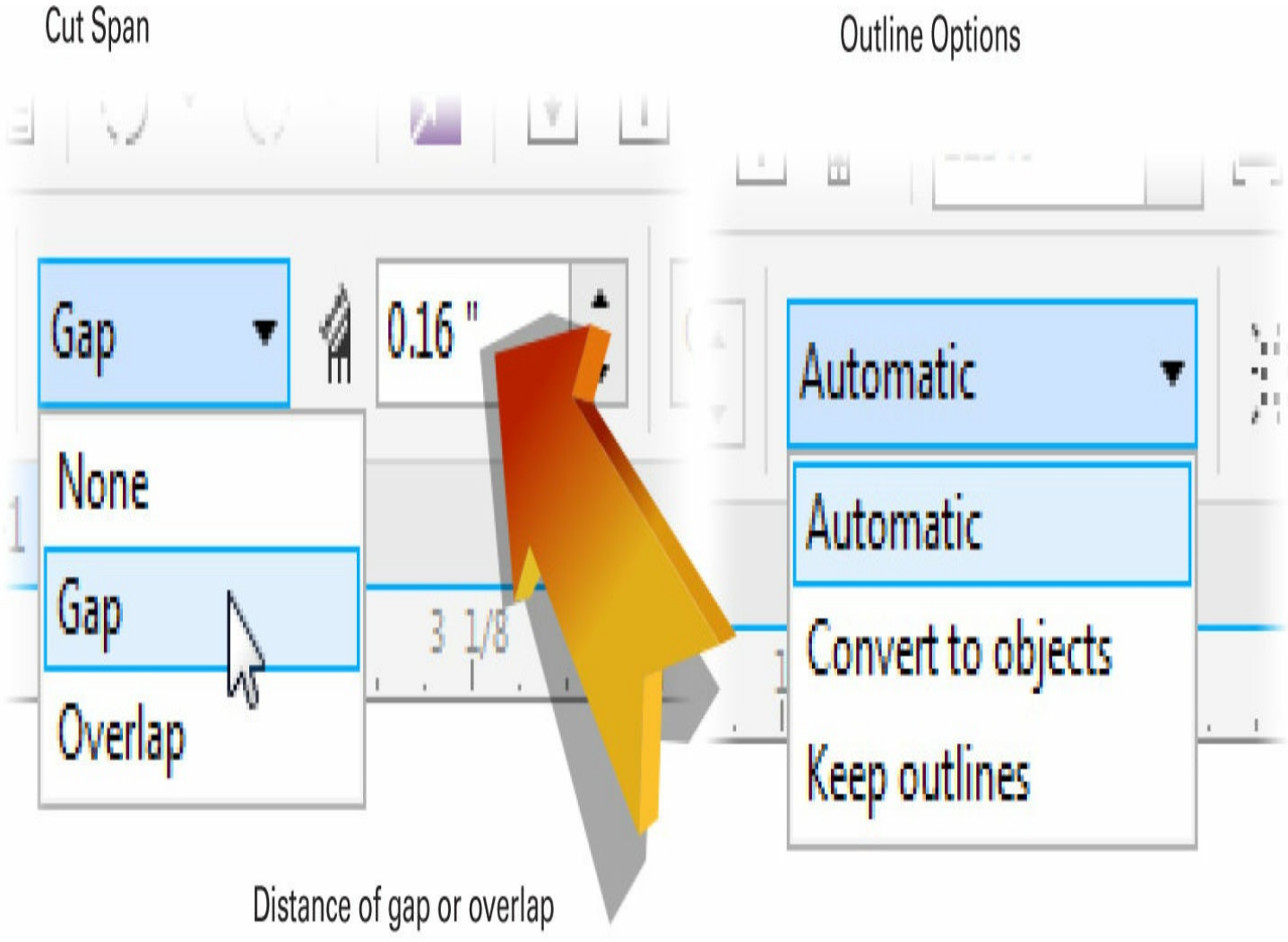
Shadow is split, two shapes.

If Auto-close is active when you use the Knife tool in *any* mode, as long as Close Options is set to Automatic on the Property Bar, any outline is split into two new closed outlines along with separate objects for the cut object. In the illustration, note that the Drop Shadow (Lens effect) is applied to two separate objects.

Although you cannot adjust the Bézier cut's path as you *make* the cut, you can indeed use the Shape tool later to alter the nodes the Knife tool left behind.

Setting Knife Tool Behavior

Using the Knife tool results in just what you'd expect—several objects out of a single one. However, you *do* have options: the two Property Bar options shown here are of the most importance. Each of these options is a drop-down list of approaches to the cutting act on shapes.



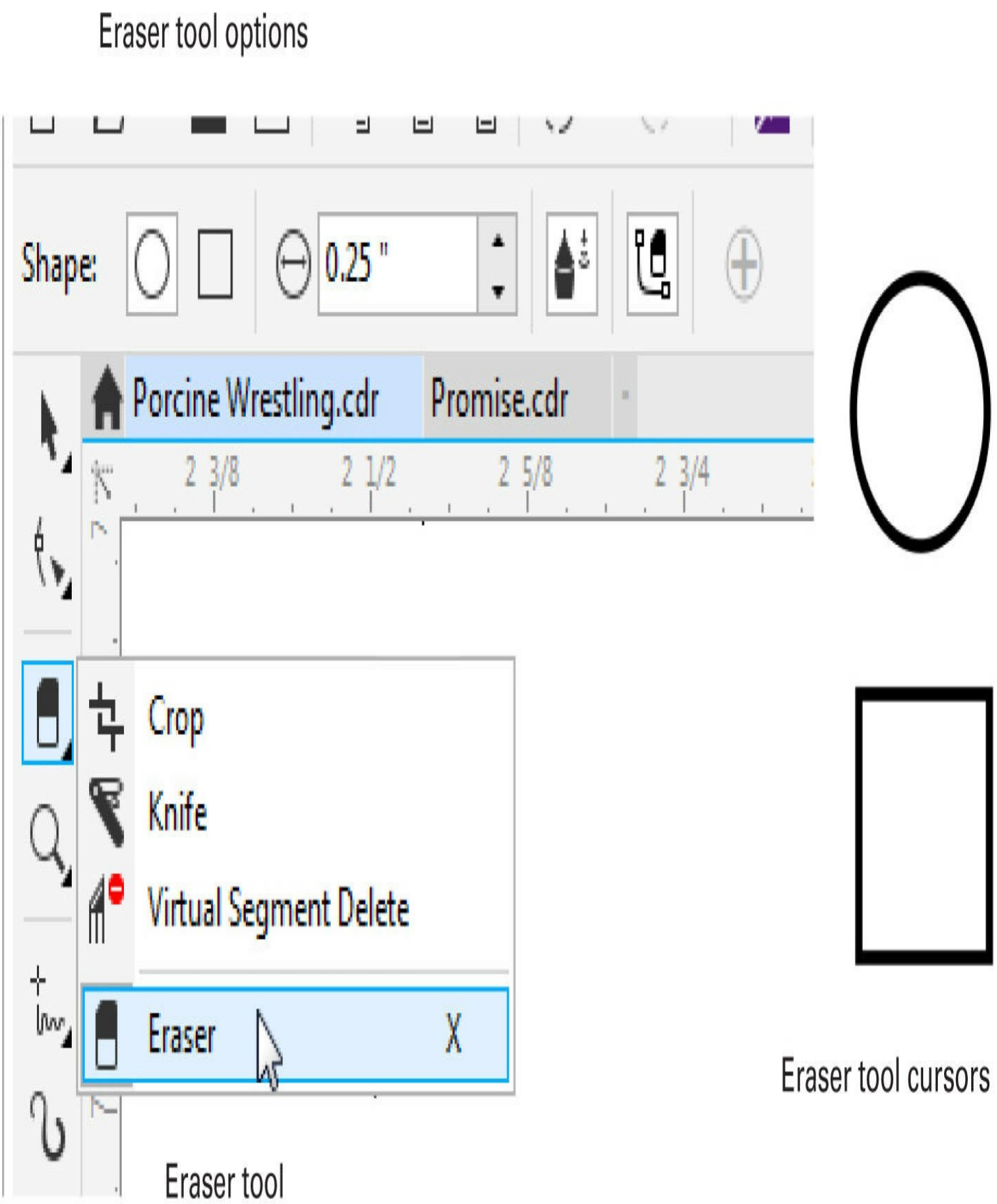
- **Cut Span** The three options you have on this drop-down determine the width of the cut, and whether a cut duplicates the edge of the object and tucks it under the other resultant shape. The amount of offset is determined when you choose Gap, Overlap, or None (the default). This option can be very useful if you've designed a poster that's too large to

be printed on your home printer. You calculate how many pages need to be printed to assemble one whole poster, and then set Overlap to, say, a quarter inch. Then you cut up the poster to make physically cutting and taping the complete poster together after printing a snap.

- **Outline Options** This is a truly neat feature, as demonstrated earlier. If your target shape has an outline, and you want only the exterior of the outline to remain—not around the cut itself, but just around the original shape's profile—choose Convert to Objects. This produces four shapes and no paths with a color width. The shapes are the two parts of the original object, and two parts of the original outline, except they are now shapes—the same result as if you chose Object | Convert Outline to Object (CTRL-SHIFT-Q). The option Keep Outlines will produce two outlines around the sliced object, with both outlines entirely around both shapes. Automatic is recommended before you master this admittedly complex feature.

Using the Eraser Tool

The Eraser tool, shown next, completely removes areas of selected objects you click-drag over—just like a real art eraser, but without the stubble landing in your lap. The Eraser comes in two different shapes, and you can define the size by using the Property Bar. You'll find it in the Toolbox grouped with the Knife, Virtual Segment Delete, and Crop tools.



Working With Eraser Operations

With this tool, you can remove portions of shapes in four ways:

- **Double-clicking** When you double-click a selected shape, you remove an area that is the shape of the cursor. Therefore, if you double-click a lot with the circular cursor chosen, you can quickly design a town sign in the Old West.
- **Single-click two points** If you single-click, move your cursor, and then click a second time, the Eraser tool erases a straight line through the selected object.
- **Click-drag** This is the most common method of erasing, and the results are totally predictable and usually look like hand-painted strokes. If you click-drag, you erase the area you've dragged over on a selected object.

Note Grouped objects do not qualify for use with the Eraser tool. However, if you CTRL-click an object in a group to temporarily isolate it, you can indeed erase part of that object.

- **Click, hover over a different area, and then press TAB** This technique creates several connected straight-line segments, and after you get the hang of it, it will feel like you're painting with an eraser, and you'll be able to quickly produce phenomenally expressive and complex drawings.

Walk through the following tutorial to see the power of this hover-TAB erasing technique and make it your own.

Power Erasing

Tutorial

1. Open *Don't Litter.cdr*, an incomplete international symbol that tells the audience, "Put refuse in the appropriate place; don't be a pig." The pale blue outlines are guides for you; they're locked on the Guides layer.
2. Select the main object. Choose the Eraser tool and then set the nib style to rectangular by clicking on the default nib style (the circle) on the Property Bar. For this example, set the nib size to about 0.15".
3. Single-click at the top left of the wastebasket guide. Move your cursor over to the bottom left of the wastebasket guide, but don't click. Notice as you move the Eraser tool that a path preview follows the cursor.
4. Press TAB, but *don't* click your mouse button. Notice that a new erasure appears between the first single-click point and the point where you pressed TAB.
5. To define a third point, move your cursor to a new point (without clicking the mouse

button) and then press TAB again. A third point is defined, and the path between the second and third points is erased. Now single-click to end the progressive erasing feature.

6. When you're done with the wastebasket, set the nib style to round, and then add limbs to the thoughtful international guy. Use the TAB technique, for example, to extend a forearm from the guy's shoulder. Once this segment has been erased, double-click where you think his hand would be to extend the erasure. Single-click to end an erasure. Figure 9-7 shows the work in progress.

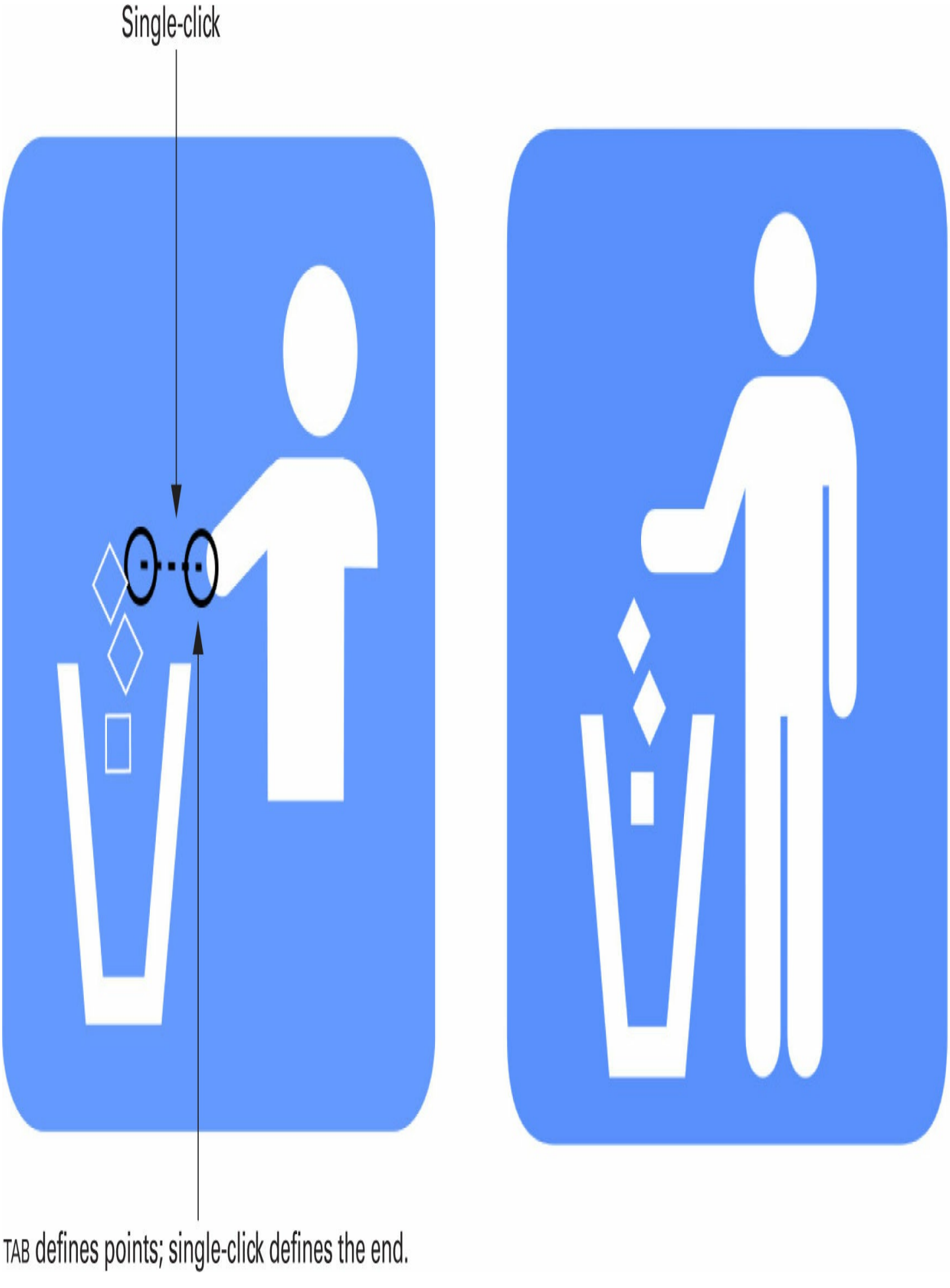
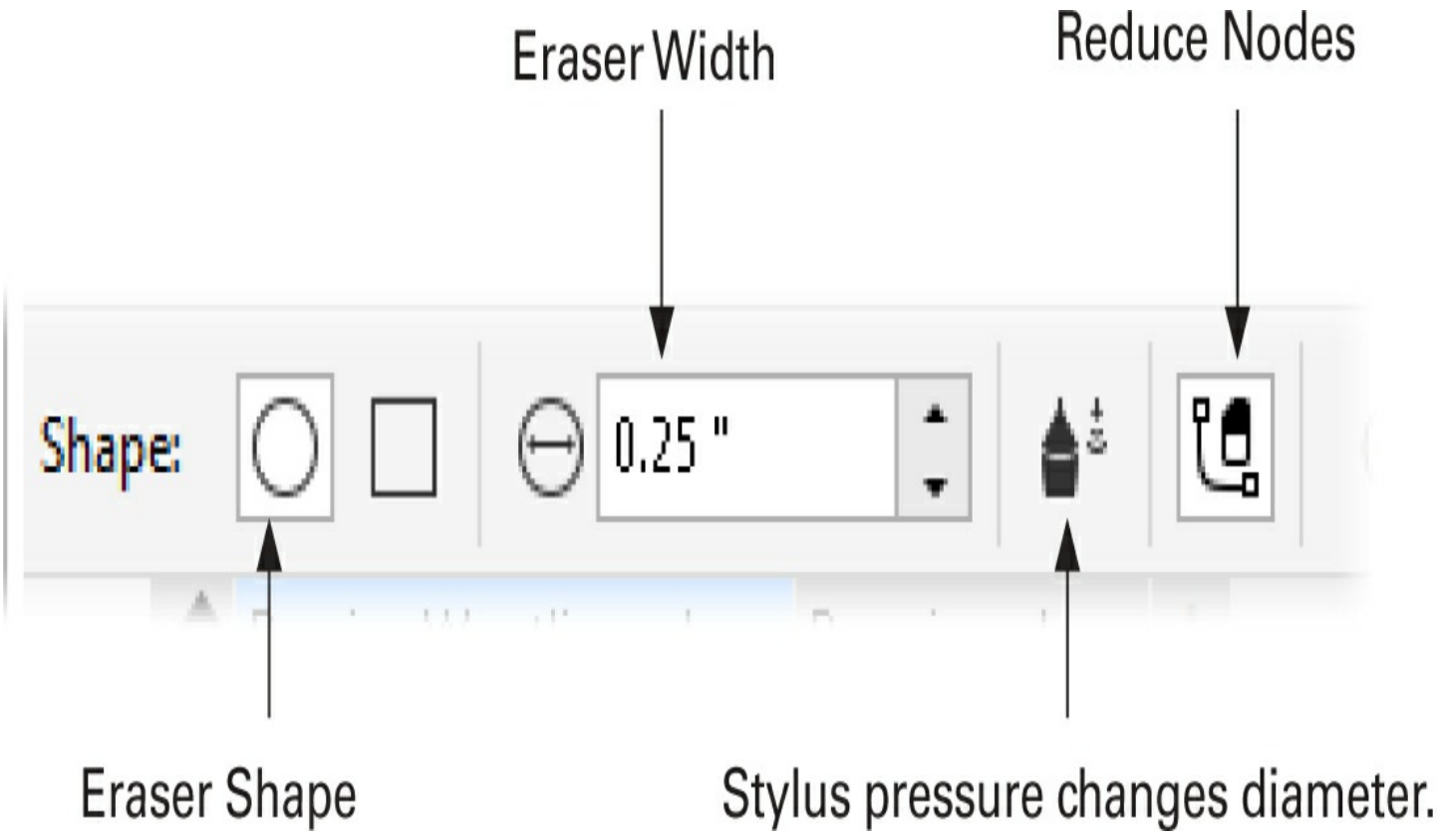

Single-click
TAB defines points; single-click defines the end.

FIGURE 9-7 Press TAB to define intermediate points between your first and last erase path points to create connected, straight-line erasures.

Setting Eraser Tool Properties

The width and shape of the Eraser tool are set using Property Bar options, as shown next. The complexity of the removed shape, the number of path segments, and the connecting nodes created during an erase session can also be controlled. These properties significantly affect the shape of erased object areas.

Tip As with most of the Toolbox tools, you can get to the options for the Eraser in Options by double-clicking the button on the Toolbox.



Tip Use the keyboard to change the cursor size while you erase. Press UP ARROW and/or

DOWN ARROW on your keyboard while click-dragging, and the result can be a tapered brush. After you release the mouse button, the Eraser tool resets to its original size, so you don't have to worry about starting out a new erase stroke with a yard-wide tip!

The Reduce Nodes Option

Enabling the Reduce Nodes option (also called *Auto-Reduce Nodes of Resulting Objects* in the Eraser tool options) lets you reduce the complexity of erased area shapes at the price of what's usually trivial inaccuracy. The importance of removing unneeded nodes is two-fold: First, fewer nodes along paths makes editing easier and provides more predictable results. Second, having too many nodes (and we're talking hundreds of thousands of nodes) can occasionally cause a failure when trying to print to older PostScript printing technology. Depending on the shape, the speed at which you erase an area, and the shape of the Eraser cursor, you might produce 45 or 125 nodes when you make a complex erasing stroke. The option is better than having none, but auto-node reduction also requires a vigilant eye to ensure the feature is doing what you want it to be doing with your artwork.

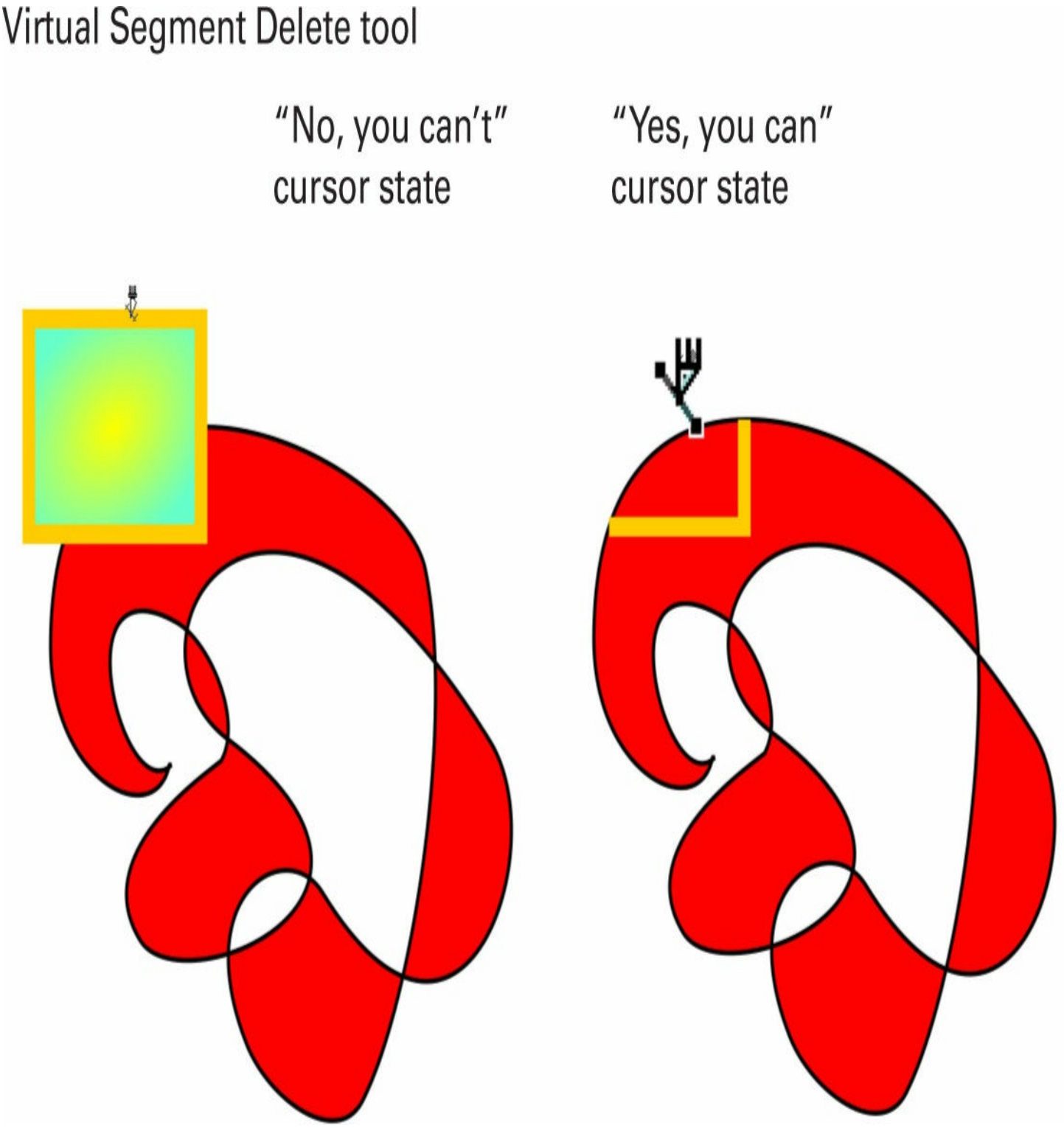
Using the Virtual Segment Delete Tool

The Virtual Segment Delete tool is used to delete specific portions of objects—specifically, overlapping areas. Additionally, this tool removes portions of an object's path where it intersects the paths of *other* overlapping objects.

To use this tool to delete path segments where an object intersects itself, use these quick steps:

1. With the Freehand tool, draw a path that loops around and crosses itself.
2. With the Rectangle tool, create a rectangle that overlaps a little of the freeform path you drew in Step 1.
3. Choose the Virtual Segment Delete tool.
4. Let's see how much of the rectangle remains when you click on its top segment. Hold your cursor over the segment to delete—you don't need to have the objects selected to use this tool. You'll notice the cursor becomes upright when an eligible segment is hovered over. Now click. As you can see in this illustration, the fill of the rectangle disappeared because it's not a closed path any more. But the segments that did remain are inside the freeform shape you drew.

Virtual Segment Delete tool

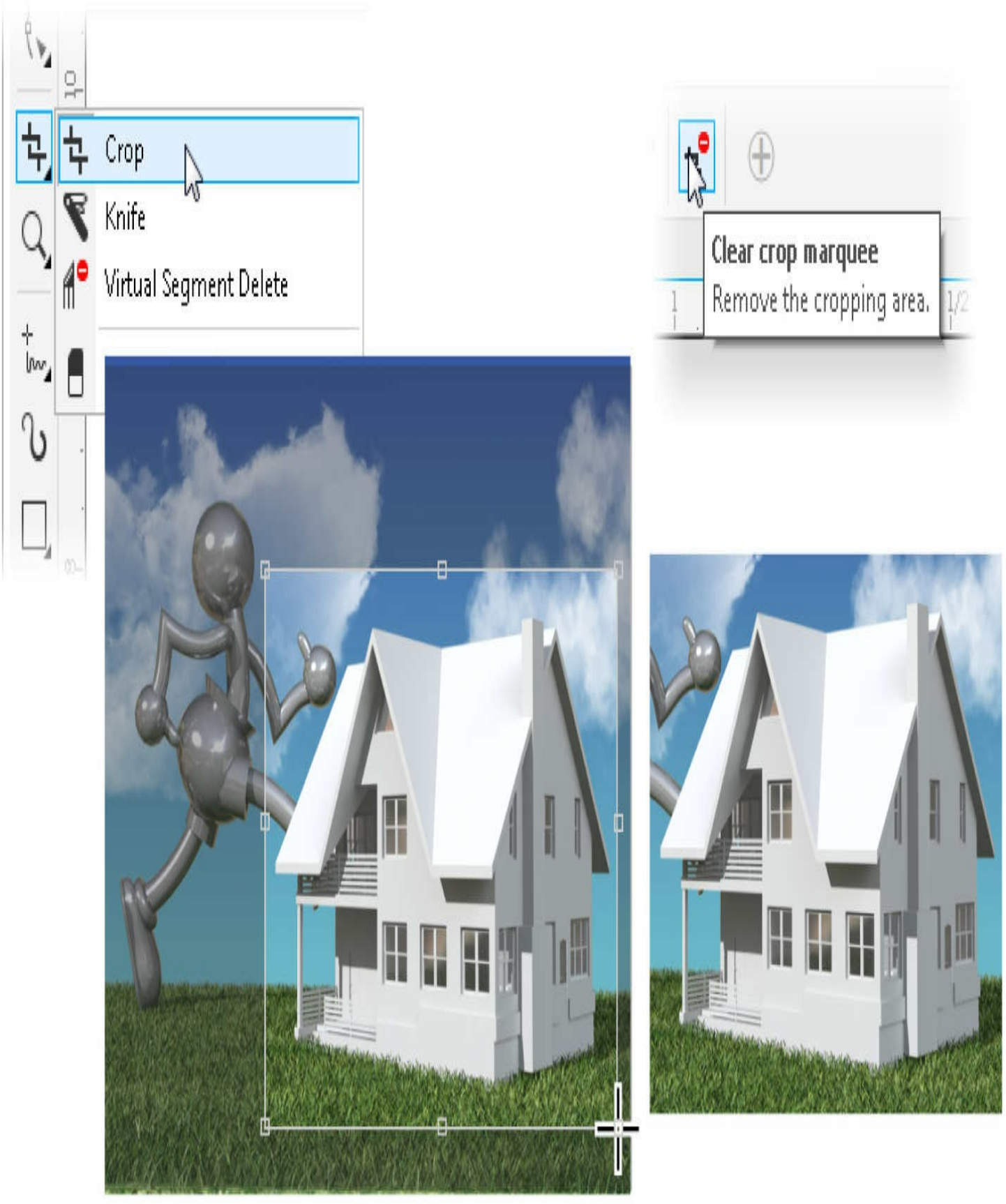


After you delete portions of a path with this tool, what remains is either an open curve with just one path, or a compound curve with two or more subpaths. For example, if the object you're deleting segments from is a closed path, deleting one segment will result in an open curve. Deleting a segment from a rectangle, ellipse, or polygon object will convert the resultant shape to curves and remove the dynamic object properties. To delete segments that are hidden behind an overlapping object, temporarily set its Fill to None.

Cropping an Illustration

The Crop tool, located in the group with the Knife and the Eraser, brings a bitmap effect to vector drawing. If you have experience with Corel PHOTO-PAINT or another photo-editing program, you already are familiar with a crop tool: you select an area within a photo, perform a command such as clicking inside the crop area, and the result is that the area outside the crop is deleted and the image is resized.

The Crop tool in CorelDRAW behaves exactly like an image editor's crop tool. Objects do not have to be grouped; you just drag a rectangle around the area of your design you want cropped, double-click inside the proposed crop area, and all object areas outside the crop box are deleted. On the left in Figure 9-8, you can see a chrome cartoon character photo-bombing a real estate photo. The prudent countermeasure is to isolate the house in the picture, so the house is worth its sticker price when this photo sells it. You drag the Crop tool around the desired area, and then you double-click inside the crop area to permanently alter the imported image.



DEXTER PHOTO-BOMBS A REAL ESTATE AD.

FIGURE 9-8 The Crop tool removes all areas of every object that lies outside the crop box.

This is a powerful and potentially very destructive tool, but fortunately you can work with the crop box *before* cropping: you can drag a *corner* crop box handle before cropping to proportionately resize the crop; dragging a *middle* handle disproportionately resizes the crop area. Additionally, once you've made a proposed crop, clicking and then clicking again inside the box puts the box in rotation mode, and you can actually crop a diagonal shape such as a diamond. If you want to cancel a crop operation, press ESC—or click the Clear Crop Marquee button on the Property Bar—and the crop box goes away.

This chapter has taken you through several processes by which you can create minor and big-time alterations to just about anything you draw; additionally, many of the operations apply to bitmaps you bring into the workspace. Use the command that best suits the task you have in mind, and use your judgment as to which operation will get you to your goal fastest. Personal computers are productivity enhancers: there's no need to labor over something when CorelDRAW and your PC can do it for you in less time.

Now that you have one, or two, or a dozen shapes on your drawing page, it would be nice to mix them up with some honest-to-gosh text: a headline here, a little body copy there. Shapes and words live together—practically no one publishes an image-only website. Chapter 10 of this guide gets you into the language of typography and the features in CorelDRAW that make your keyboard a professional communications tool.

PART IV Working with Text in Composition

10 Paragraph Text, Artistic Text, and When (and How) to Use Them

CorelDRAW is a great facilitator of communication and self-expression, and that includes text as well as graphics. This chapter gets you started with the Text tool and other CorelDRAW type features and puts them to use in order to make your thoughts and ideas inviting and presented in a clear fashion. Text and graphics go hand in hand in presentations, and as you'll witness in the following pages, you have many tools at your disposal. This chapter shows you how to access them and how to work with them.

Note Download and extract all the files from the Chapter10.zip archive to follow the tutorials in this chapter.

CorelDRAW's Text Tool

All the text you want to enter on a page in CorelDRAW is created with the Text tool, the tool with an *A* as its icon in CorelDRAW's Toolbox. To begin, click its button in the Toolbox or press F8. If there's *already* text on the page, double-clicking the text with the Pick tool switches the current tool to the Text tool and makes an insertion point for adding text. The Text tool cursor is a small crosshairs with an *A* in the bottom-right corner, which becomes an I-beam (a text-editing cursor) when it's over a text object. You click anywhere on the page or the pasteboard to create an insertion point, and then you get to work with your keyboard.

Note Text copied from the Clipboard can be pasted when the Pick tool is your current tool. Usually, unformatted text—text from a TXT file you copied from TextPad, for example—will import as Paragraph Text. Text copied from word processors will