CERTIFICATION PREP

Adobe Illustrator Creative Cloud

Common
Occupational
Readiness
Essentials

D. Michael Ploor

Certification Prep Series

Start on Monday.
Test on Friday.

by D. Michael Ploor

Certification Prep Series consists of individual guides that provide practice in the basic skills needed to be successful using the corresponding software. No previous software experience is required. Although the guides focus on learning skills, not test taking, users that complete the practice will be prepared to take the official software certification exam and exhibit workplace readiness. Step-by-step instructions demonstrate actual software commands and features, building from basic to advanced. Content is divided into small units for better learning and usage. There is no need to purchase additional materials as all lesson content is created using the software.

- Provides an affordable way to prepare for industry certification versus other methods.
- Integrates easily into existing classroom activities.
- Focuses on hands-on experience to develop skills.

Microsoft Office Products

- Microsoft Word 2016
- Microsoft Excel 2016
- Microsoft PowerPoint 2016
- Microsoft Outlook 2016
- Microsoft Access 2016
- Microsoft Word 2013
- Microsoft Excel 2013
- Microsoft PowerPoint 2013
- Microsoft Outlook 2013
- Microsoft Access 2013

Microsoft Office 2010 is also available.

Adobe Products

- Adobe Photoshop Creative Cloud
- Adobe Dreamweaver Creative Cloud
- Adobe Flash Creative Cloud
- Adobe Illustrator Creative Cloud
- Adobe InDesign Creative Cloud
- Adobe Photoshop CS6
- Adobe Dreamweaver CS6
- Adobe Flash CS6
- Adobe Photoshop CS5
- Adobe Dreamweaver CS5
- Adobe Flash CS5

G-W PUBLISHER

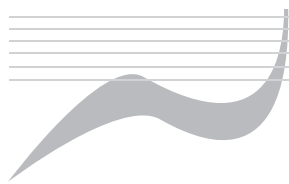To learn more, please contact your G-W Educational Consultant, visit www.g-w.com, or call 800.323.0440.

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Introduction

The Common Occupational Readiness Essentials (CORE) series of certification preparation guides focuses on mastering the essential basic skills needed as a workplace-ready user of the software. The goal of each CORE certification preparation guide is to provide practice in each essential basic skill required by employers who use the software. To prove workplace readiness, you will also be prepared to take the official certification exam for the software.

CORE Adobe Illustrator Creative Cloud will help prepare you to take the Adobe Certified Associate (ACA) Adobe Illustrator Creative Cloud certification exam. It provides step-by-step instruction for the features and commands covered on the certification exam. The focus of the lessons is to practice *using* the actual commands and features instead of creating a complete end product. Most lesson content is created using the software, and minimal downloading of files is required. Furthermore, each certification preparation guide is broken down into small learning units to enable better comprehension and application of the software. Where required, answers are provided at the back of the certification preparation guide.

Certification as an Adobe Certified Associate demonstrates an aptitude with Adobe software. ACA certification is offered for Adobe Dreamweaver, Adobe Flash, Adobe Photoshop, Adobe Premier, Adobe Illustrator, and Adobe InDesign. Certification exams are provided by Certiport, Inc., through various testing facilities. Visit www.certiport.com for more information on registering for certification exams.

About the Author

D. Michael Ploor is the author of the CORE series of certification preparation guides. Mr. Ploor's students have achieved exceptional results with the CORE certification preparation guides. His students collectively pass more than 500 industry certification exams each year without the need for other preparation materials. Mr. Ploor has demonstrated the strength of integrating the CORE guides in a diverse mix of courses.

Mr. Ploor is also the author of three textbooks on the subject of video game design: *Introduction to Video Game Design, Video Game Design Foundations,* and *Video Game Design Composition.* He is a National Board Certified Teacher in Career and Technical Education and holds an MBA degree from the University of South Florida. He maintains professional teaching credentials in Business Education and Education Media Specialist.

Mr. Ploor is at the forefront of innovative teaching and curriculum. He developed STEM curriculum while serving as the lead teacher in the Career Academy of Computer Game Design at Middleton Magnet STEM High School. Mr. Ploor has applied his skills as a STEM Curriculum Integration Specialist in designing innovative curriculum and by collaborating to construct the state standards for video game design in several states. He has also been instrumental in authoring competitive events for Career and Technical Student Organizations such as the Future Business Leaders of America (FBLA) and Phi Beta Lambda (PBL).

In addition to publishing textbooks and lessons, Mr. Ploor provides professional development as a frequent presenter at regional and national conferences to promote CTE education and video game design curriculum.

Lesson 4
Illustrator Interface

Objectives

Students will describe a workspace. Students will use Illustrator tools. Students will explain the function of layers. Students will apply various colors to Illustrator shapes. Students will use a panel menu. Students will discuss the use of smart guides. Students will evaluate color according to harmony rules. Students will modify pattern swatches. Students will manage artboards on the canvas. Students will use rulers and the grid. Students will create new shapes from multiple individual shapes. Students will apply a blend between shapes. Students will describe how to create a customized workspace. Students will export artboards to a PSD file.

Situation

The Nocturnal Interactive Computer Entertainment (NICE) company is hiring a new apprentice for its digital image department. You have interviewed for the job and have been given a chance to participate in the apprentice program. To be hired as a full-time artist with the company, you will have to pass the Adobe Certified Associate (ACA) Illustrator Creative Cloud industry certification exam. The first step in preparing for the exam is to gain experience using the functions of the software.

How to Begin

TIP
Adobe Creative Cloud provides running updates of the software. As a result, the version of the software you are using may be slightly different than the screen captures and tools illustrated in this certification guide.

TIP
The [Ctrl][N] key combination can be used to quickly display the **New Document** dialog box.

1. Before beginning this lesson, download the needed files from the student companion website located at www.g-wlearning.com, and unzip them into your working folder.

2. Launch Adobe Illustrator Creative Cloud.

3. If a splash page or quick launch window appears, click the close button (**X**) in the top-right corner of the window to close it.

4. Click the **File** pull-down menu on the menu bar at the top of the screen, and click **New…** in the menu (**File**>**New…**). The **New Document** dialog box is displayed, as shown in **Figure 4-1.**

5. Enter *LastName_*Circles in the **Name:** text box. This is the name of the artwork, which will be the default file name when the file is saved for the first time.

6. Click the **Profile:** drop-down arrow, and click **Web** in the drop-down list. This is a preset profile that creates a single artboard in RGB color model. Notice that many of the other settings in the dialog box are automatically changed. A preset profile contains various default settings that are typically appropriate for a given type of project.

7. Click the **Portrait** button in the **Orientation:** area so it is on (depressed or shaded). The orientation is the direction the paper is turned and can be set to
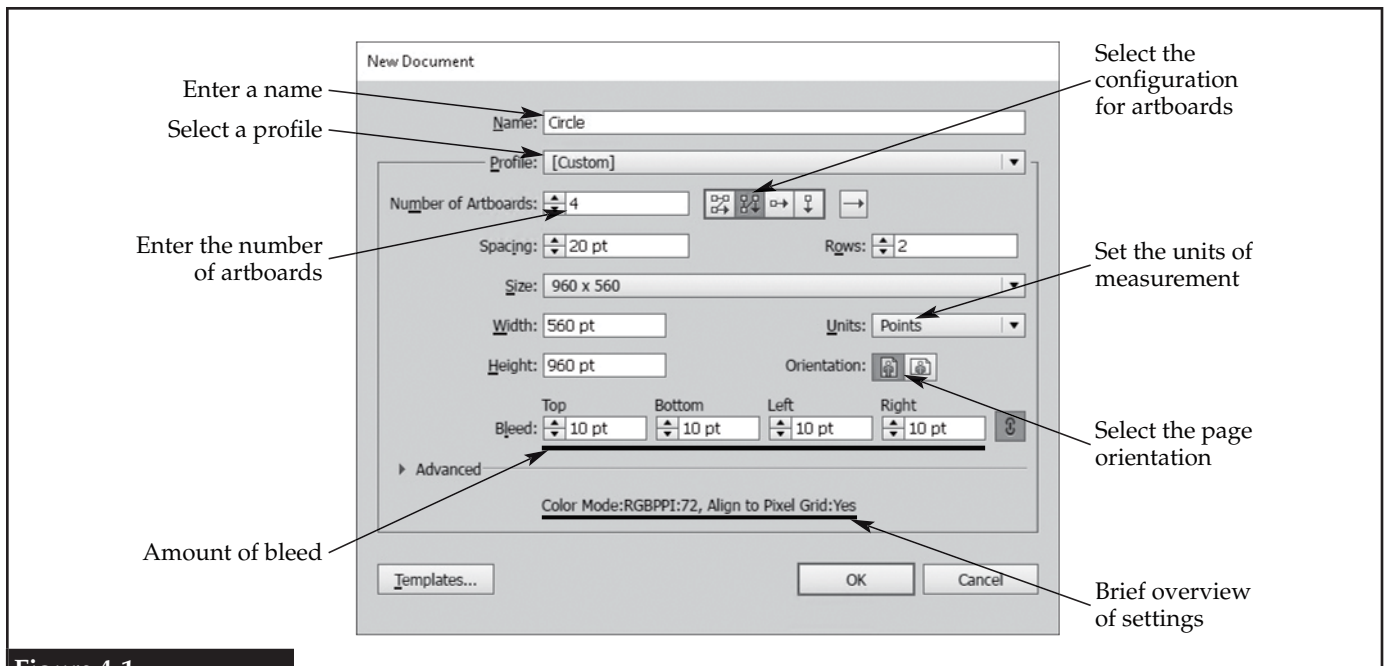
Figure 4-1.

Creating a new Adobe Illustrator document.

TIP
To return to the settings of the preset profile, reselect the profile in the **Profile:** drop-down list.

TIP
If you will be working in the printing, publishing, or graphic design industries, it is important to learn to think of distances in terms of points and picas. There are 72 points in one inch. There are 12 points in one pica, and six picas in one inch.

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either portrait or landscape. *Portrait* orientation has the short end of the paper at the top and bottom like a sheet of notebook paper. *Landscape* orientation has the short end of the paper at the left and right like a flat-screen television. Also notice that the preset profile has changed to Custom. A *custom profile* is any document profile that does not exactly match a preset option. Even if you change the orientation back to landscape, the profile will still be Custom.

8. In the **Bleed:** area, enter 10 px (ten pixels) in the **Top** text box. By default, the values in the **Top**, **Bottom**, **Left**, and **Right** text boxes are locked, as indicated by the button to the right of the text boxes, so 10 px is automatically entered in the three other text boxes. The *bleed* is the distance beyond the final trimmed edge of the printed sheet where the image can extend. When the sheet is trimmed to final size, the portion of the image in the bleed is trimmed off. This ensures the color (image) extends to the very edge of the paper. The bleed is needed to compensate for normal variations in the equipment used to trim the sheets to final size.

9. Click the **Units:** drop-down arrow, and click **Points** in the drop-down list. *Point* is a unit of measurement used in the printing, publishing, and graphic design industries. One point is equal to 1/72 of an inch. Notice that when this setting is changed to points, the units in the **Bleed:** text boxes automatically change to points (pt) as well, but the values themselves do not change.

10. Enter 4 in the **Number of Artboards:** text box. An *artboard* is where the images you create will be placed. These are like sheets of paper. There can be more than one artboard for a document. All of the artboards in a document are placed on the canvas. The *canvas* is a like a large table that holds all the sheets of paper. You can also draw on the canvas, but anything on the canvas will not be output to the final image. Only the content of an artboard can be saved as an image or printed.

11. Click the **Grid by Column** button to the right of the **Number of Artboards:** text box. This will arrange the four artboards in columns on the canvas. The name of the button can be displayed in help text by hovering the cursor over the button. To *hover* means to place the cursor over an item without clicking or moving.

12. Click the **OK** button to close the dialog box and start the new document. Notice that the document name appears in the tab above the canvas, as shown in **Figure 4-2.** However, the file has not yet been saved.

13. Click **File**>**Save**. Since the file has not yet been saved, the **Save As** dialog box is displayed, which is a standard save-type dialog box.

14. Navigate to your working folder.

15. Verify the default file name in the **File name:** text box is *LastName*_Circles. Since the document was named when it was launched, that name should appear here. If not, enter the name.

16. Click the **Save as type:** drop-down arrow, and examine the different file formats in which the file can be saved. Click **Adobe Illustrator (*.AI)** in the list. The AI file type is the native format for Adobe Illustrator.

17. Click the **Save** button. The **Illustrator Options** dialog box is displayed, as shown in **Figure 4-3.** Settings for the file can be configured in this dialog box, as you will see in later lessons.
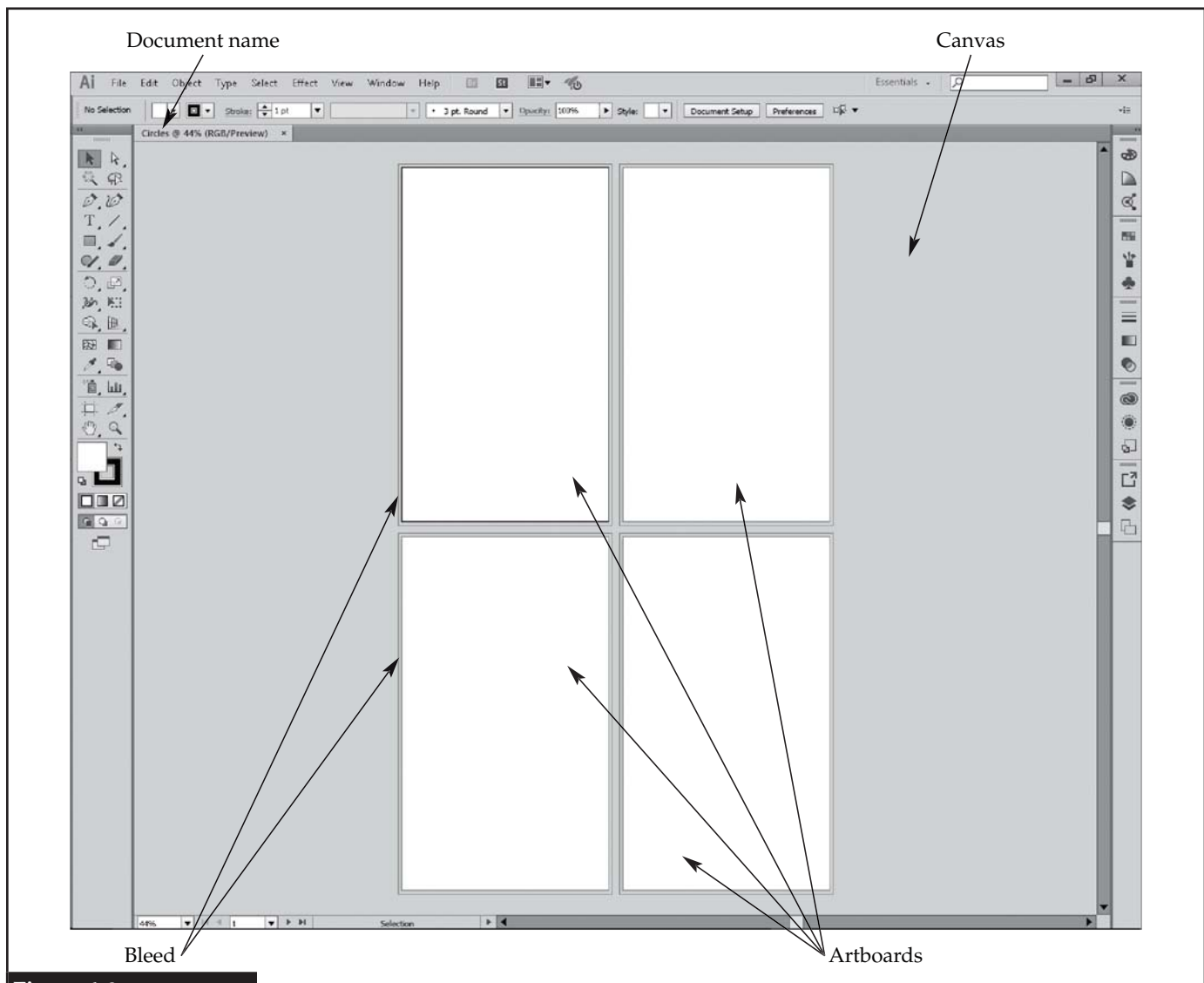

Figure 4-2.

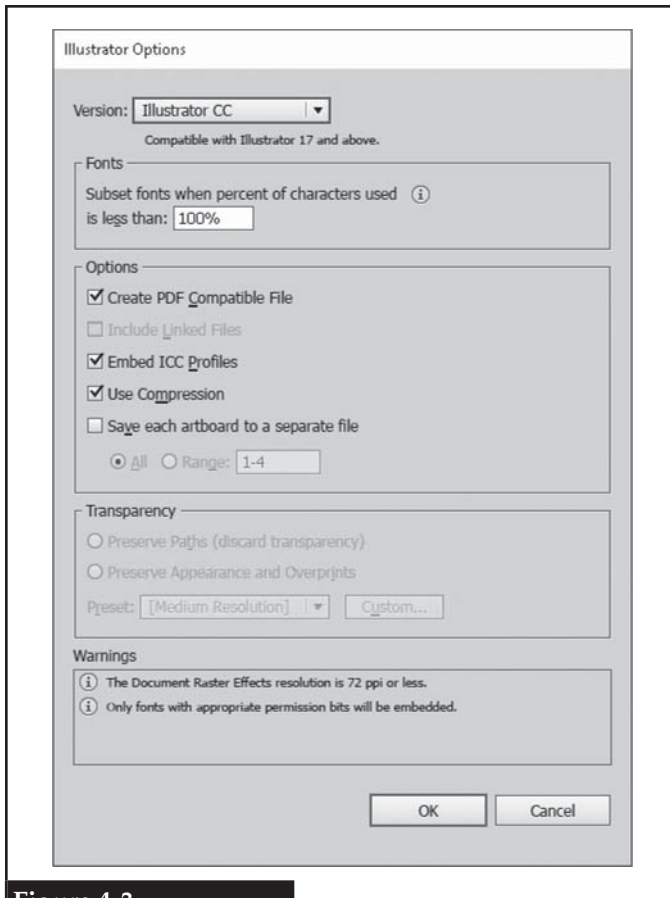**An Illustrator document contains the canvas and any number of artboards.**

Illustrator Options

Version: Illustrator CC
Compatible with Illustrator 17 and above.

Fonts
Subset fonts when percent of characters used ⓘ
is less than: 100%

Options
☑ Create PDF Compatible File
☐ Include Linked Files
☑ Embed ICC Profiles
☑ Use Compression
☐ Save each artboard to a separate file
   ⦿ All ○ Range: 1-4

Transparency
○ Preserve Paths (discard transparency)
○ Preserve Appearance and Overprints
Preset: [Medium Resolution] ▾ Custom...

Warnings
ⓘ The Document Raster Effects resolution is 72 ppi or less.
ⓘ Only fonts with appropriate permission bits will be embedded.

OK   Cancel

Figure 4-3.

When saving an Illustrator document for the first time, certain options must be set. In many cases, the default settings can be accepted.

18. Click the **OK** button to accept the default options and save the file. Notice that the .ai file extension is added to the document name in the tab above the canvas.

Workspace

A *workspace* is the layout of the toolbars, panels, and document on the screen. Several standardized workspaces are available in Illustrator, including workspaces such as Painting and Typography. You may also create custom views by dragging the workspace tools to different locations and saving the workspace. Changing the layout by moving panels, adding more tools, rearranging panels, or otherwise changing the screen setup changes the workspace.

Review the location and name for each tool shown in **Figure 4-4.** These will be referred to by name throughout these lessons. Note: the color scheme shown in the screen captures in this guide has been changed to a lighter scheme for easy viewing. The **Application** bar holds commands in a pull-down menu format. Click a pull-down menu to see the commands it contains, and then click a command to activate it. This bar also contains the workspace switcher.

The **Control** panel contains some basic tools and a contextual toolbar. A contextual toolbar, panel, or menu contains options or features for the active tool or selected shape. For example, if a line segment is selected, the **Control** panel displays settings for color, alignment, shapes, and transforms near the right-hand side of the bar.

The **Tools** panel holds the common tools used to design in Illustrator. Tools are organized on the panel by function with a line separating each group.

Illustrator makes use of panels. A panel is a small window that holds commands or options. A panel may be in a group by command function. A designer can arrange the panels in any configuration. The panels can even be moved from one panel group to another. Panels may be expanded with the commands visible or collapsed. Collapsed panels have been minimized to icons to save space on the screen. Clicking a panel icon will expand the panel.

The document tab displays the name of the document as well as the zoom percentage and the color space. The designer can have multiple documents open in Illustrator at the same time. Each document will have a separate document tab. The designer can navigate between open documents by simply clicking the different document tabs. Dragging a document tab off the document tab area opens the document in a separate window.

An *artboard* is the area where the images and scenes are created. It is like a page in a sketchbook. Here the artist can draw and color the scene. The area outside of the artboard is called the canvas. The *canvas* does not print and is not included
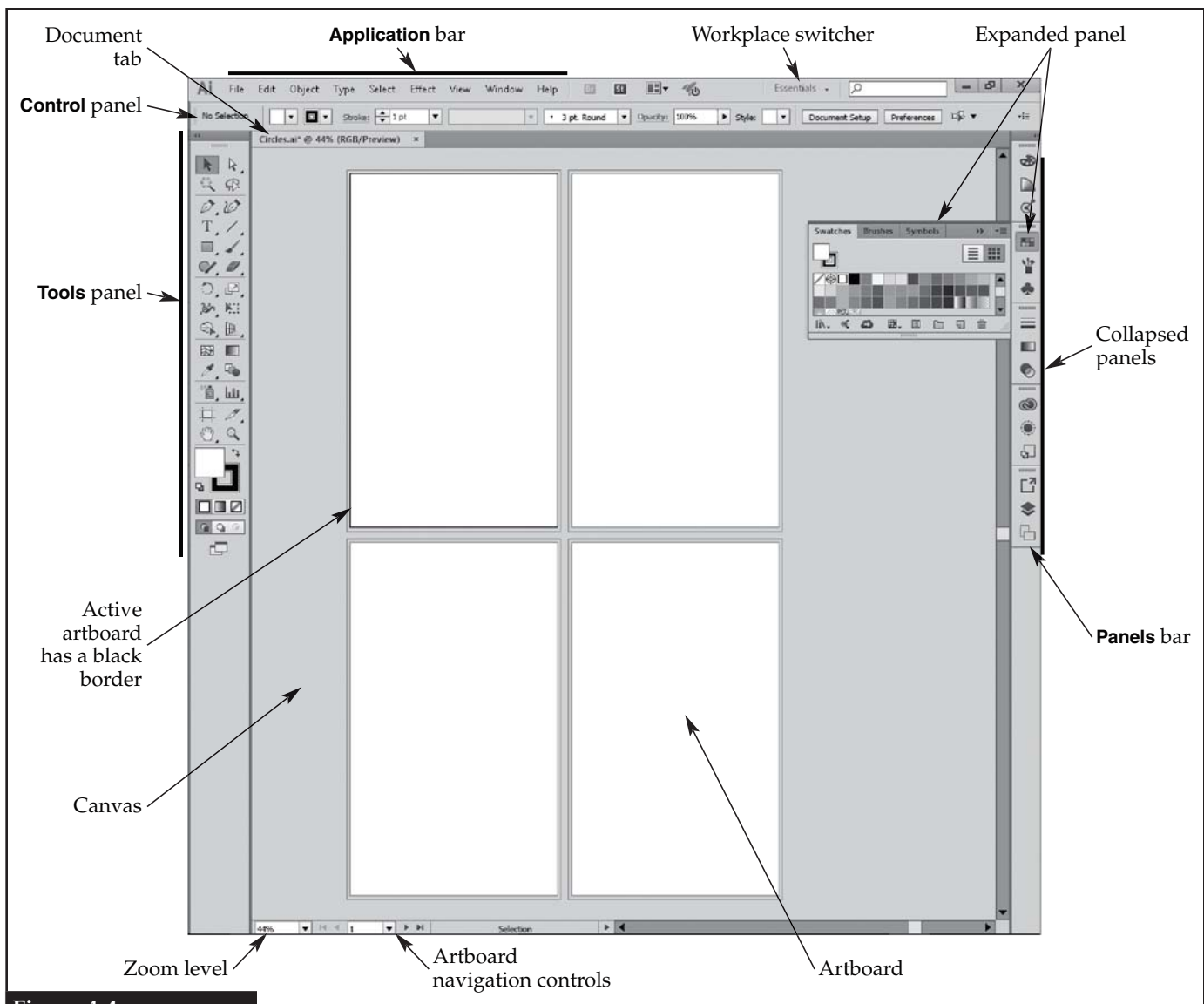
Figure 4-4.

The Illustrator user interface.

in exported images. Often, an artist will place items on the canvas so they can be combined and layered to create composite images. Those images can then be used in the scene on the artboard. Alternatively, the artist could create the composite image on a different artboard and move it where needed within the scene.

19. Locate the workspace switcher in the top-right corner of the screen, and click it to display a drop-down menu. Notice the standardized workspaces that are available, as shown in **Figure 4-5.** The current workspace is checked.

20. Click **Essentials** in the drop-down menu. This restores the Essentials workspace.

21. Click the bar at the top of the **Tools** panel, hold, and drag the panel to the middle of the screen. This panel is now *floating,* whereas before it was *docked.*

Color

22. Click the **Color** button in the **Panel** bar on the right side of the screen. This panel changes from *collapsed* to *expanded,* as shown in **Figure 4-6.** Notice that two other panels—**Color Guide** and **Color Themes**—are nested in the expanded panel along with the **Color** panel. Clicking the name of either panel brings that panel to the front.
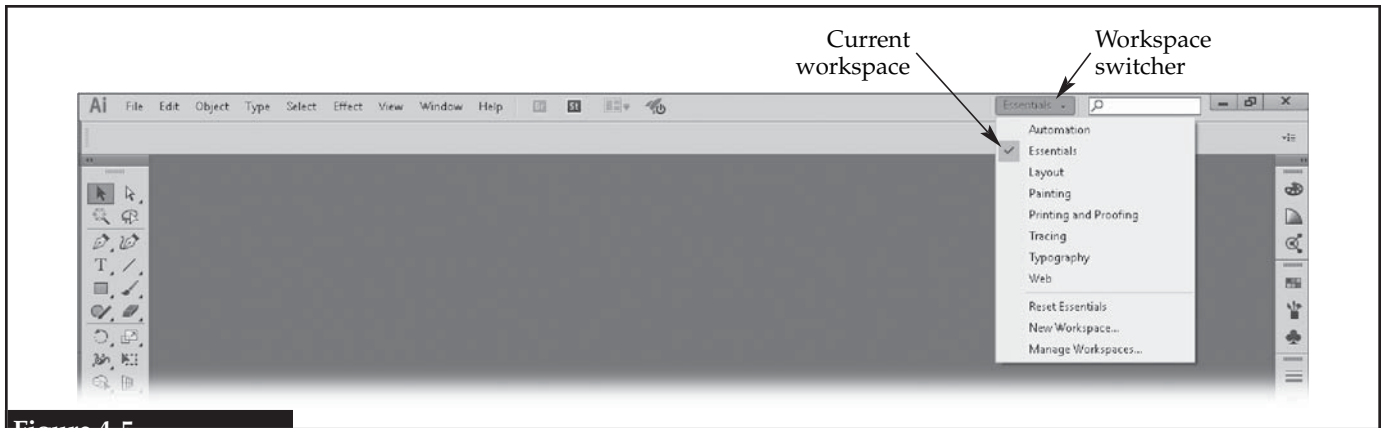
Figure 4-5.

There are a number of default workspaces that can be used to create drawings in Illustrator.

Figure 4-6.

The **Panel** bar contains collapsed panels that can be expanded. The **Panel** bar and the **Tools** panel are the two main means of accessing tools in Illustrator.

TIP

An expanded panel can be collapsed by clicking the button used to expand it. For example, to collapse the **Color** panel, click the **Color** button.

23. Click the double-chevron button (**>>**) in the top-right corner of the **Color** panel. This collapses the panel.

24. Click the workspace switcher, and click **Reset 'Essentials'** in the drop-down menu. This returns the Essentials workspace to the default settings. The changes you make are automatically saved to the current workspace, and resetting the workspace basically undoes those changes.

Tools

The Illustrator **Tools** panel contains buttons for various tools, which are organized in groups. Some tools have similar tools hidden under the tool shown by the button. A black triangle at the bottom-right corner of a button indicates that clicking the button will display a flyout. A *flyout* is a hidden toolbar that will "fly out" and be displayed like a panel. Clicking and holding a flyout button displays the flyout from which additional tools can be selected. A single click on the button will activate the tool displayed by the button without displaying the flyout.

25. Identify each of the tools shown in **Figure 4-7.** Hover the cursor over each tool in the **Tools** panel to display the name, and record the name of each tool in the figure. In some cases, you will need to click and hold the button to display the flyout in order to see the tool.

26. Identify each of the tools shown in **Figure 4-8.** Hover the cursor over each tool in the **Panels** bar to display the name, and record the name of each tool in the figure.

	Icon	Name		Icon	Name
1.			20.		
2.			21.		
3.			22.		
4.			23.		
5.			24.		
6.			25.		
7.			26.		
8.			27.		
9.			28.		
10.			29.		
11.			30.		
12.			31.		
13.			32.		
14.			33.		
15.			34.		
16.			35.		
17.			36.		
18.			37.		
19.			38.		

Figure 4-7.

Write the name of each tool identified here.

	Icon	Name		Icon	Name
1.			9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.					

Figure 4-8.

Write the name of each tool identified here.

Rectangle Tool

27. Click the **Rectangle Tool** button in the **Tools** panel. The tool is activated, and the cursor changes to a crosshair or plus sign.

28. Click anywhere on the top-left artboard, hold down the mouse button, and drag a rectangle of about half the size of the artboard. When the mouse button is released, the rectangle is created and automatically filled with the current fill color. The current fill and stroke colors appear in swatches at the bottom of the **Tools** panel, as shown in **Figure 4-9.** If the current fill color is white, the rectangle may not appear to be filled as the artboard is white, but it is filled. Also, notice the **Control** panel has changed to display options for the selected shape (the rectangle).

29. Click the color swatch for the fill color on the **Control** panel. A panel is displayed containing multiple color swatches, as shown in **Figure 4-10.**

30. Hover the cursor over each swatch to reveal the color name as help text.

Current fill color

Current stroke color
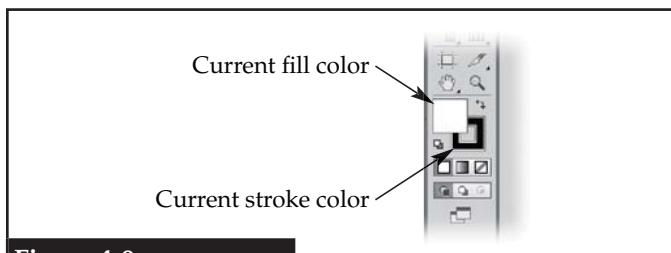
Figure 4-9.

The current fill and stroke swatches indicate the colors that will be used for new shapes.

31. Click the RGB Red color swatch to apply a solid red fill to the rectangle. Then, press the [Esc] key to close the color swatch panel.

32. Applying what you have learned, use the stroke color swatch on the **Control** panel to change the stroke to a dark green. The stroke is a line shape or the outline of a shape.

33. Click the **Stroke:** link on the **Control** panel. Notice the link is underlined. Underlined words are links to contextual panels. In this case, the stroke panel is displayed.
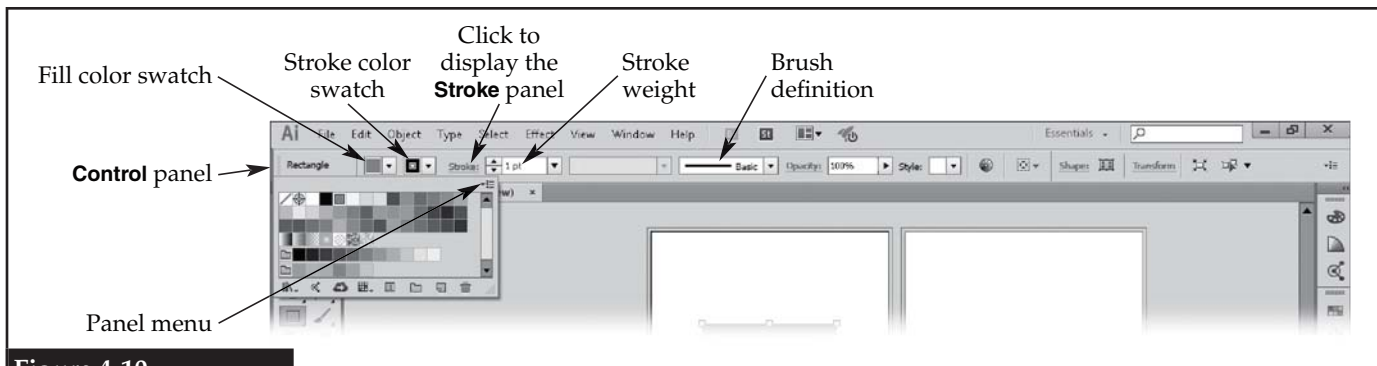
Figure 4-10.

Using the **Control** panel to change the fill and stroke colors for a selected shape.

34. Click in the **Weight:** text box in the stroke panel, change the value to 50, and press the [Enter] key. Notice that the outline of the rectangle is now much thicker and the panel is closed. The *weight* is the thickness of the stroke.

35. Save your work by clicking **File**>**Save** on the **Application** bar.

Layers

Layers are like invisible sheets of paper stacked on top of each other, and each sheet can have different drawing shapes placed on it. The layers can be moved up or down within the layers stack to change the placement of shapes. Shapes placed on the top layers will appear in front of shapes on the bottom layers. The **Layers** panel is used to rearrange the order of layers in the stack. Layers exist in the drawing across all artboards. In other words, an artboard cannot have a unique set of layers that is not shared with other artboards. The **Layers** panel uses multiple icons to show the designer information, as shown in **Figure 4-11A.** Notice the template icon in the visibility section. The Circles layer is a template layer that is locked. Locked layers cannot be changed until unlocked. The selected object is on the layer indicated by the enlarged target icon, which in this case is the Polygons layer. Target icon indicates which object is selected and will be changed on the layer.

Layers

Create New Layer

36. Click the **Layers** button in the **Panels** bar to open the **Layers** panel. Notice the rectangle was placed on a layer named Layer 1.

37. Double-click the name Layer 1 to begin changing the name. Once the name is editable, enter Rectangle for the name, as shown in **Figure 4-11B.** Press the [Enter] key to finish changing the name.

38. Click the **Create New Layer** button in the **Layers** panel to add a new layer. Notice the new layer is named Layer 2 and placed above the Rectangle layer. Since it is above the Rectangle layer in the stack, any shapes drawn on Layer 2 will appear in front of the rectangle.

39. Applying what you have learned, rename the new layer as Circle.

40. Click the **Ellipse Tool** button in the **Tools** panel. This button is located in the flyout displayed by holding down the **Rectangle Tool** button. Notice that once you click the **Ellipse Tool** button, it replaces the **Rectangle Tool** button as the visible button in the flyout.

41. Hold down the [Shift] key, click anywhere on the artboard containing the rectangle, and drag to draw a circle of any size. Holding the [Shift] key while drawing an ellipse constrains the shape to a circle. Also, notice the circle takes

Ellipse Tool
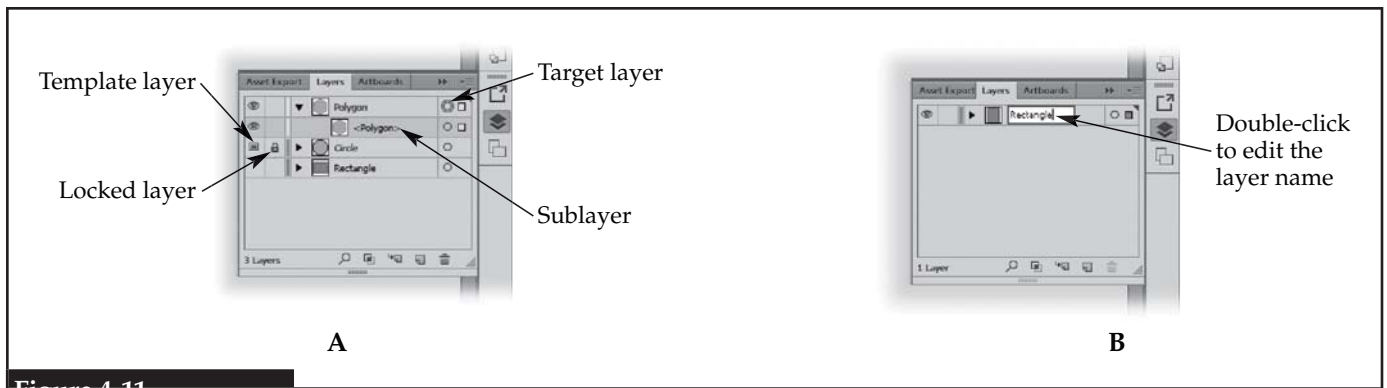
Figure 4-11.

A—The **Layers** panel provides information through the use of icons. B— Layers can be added, renamed, and reordered in the **Layers** panel.

TIP

Holding down the [Shift] key while drawing a rectangle constrains the shape to a square.

Selection Tool

Create New Sublayer

Selection Tool

Color

on the fill and stroke properties of the rectangle as that was the last shape edited.

42. Click the **Selection Tool**. Then click on the circle, and drag it so it overlaps the bottom edge of the rectangle.

43. Applying what you have learned, display the **Layers** panel.

44. Click and hold the Circle layer in the list, drag it below the Rectangle layer, and drop it. Notice the circle is now behind the rectangle on the artboard.

45. In the **Layers** panel, click the black triangle to the right of the Circle layer name. This expands the layer, as shown in **Figure 4-12.** Layers are composed of several shapes and colors. Each shape is saved as a sublayer to the main or parent layer. In this case, the sublayer is <Ellipse>.

46. Make sure the Circle layer is selected (highlighted) in the **Layers** panel, and then click the **Create New Sublayer** button on the **Layers** panel. Notice that a sublayer is automatically joined to a parent layer. It will always be beneath, or a child of, the parent layer.

47. Applying what you have learned, name the new sublayer Star.

Colors

48. Click the **Selection Tool** button, and click the rectangle to select it.

49. Click the **Color** button icon in the **Panels** bar to open the **Color** panel.

50. Click the None swatch located above the color spectrum, as shown in **Figure 4-13.** This removes the fill color from the rectangle.
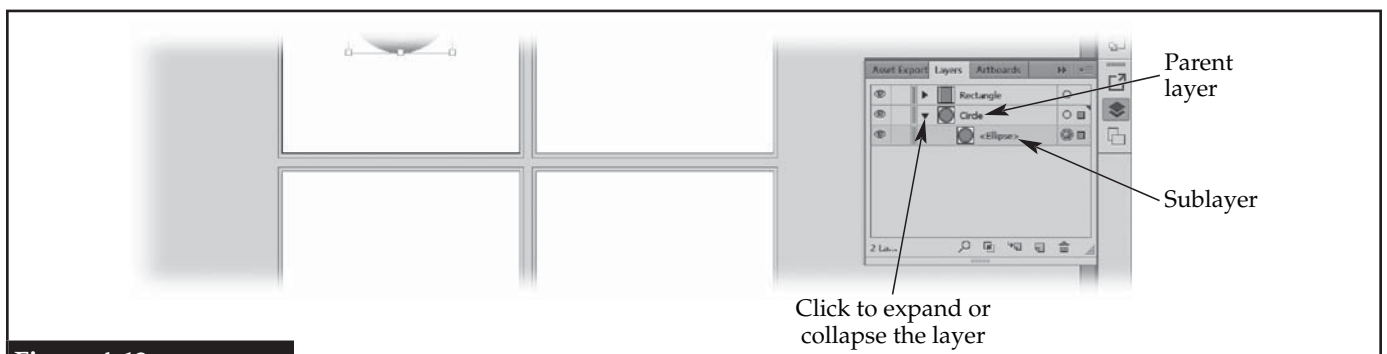
Figure 4-12.

A layer will contain sublayers for various drawing shapes.

Click to remove the fill color

Hexadecimal color code

Color spectrum
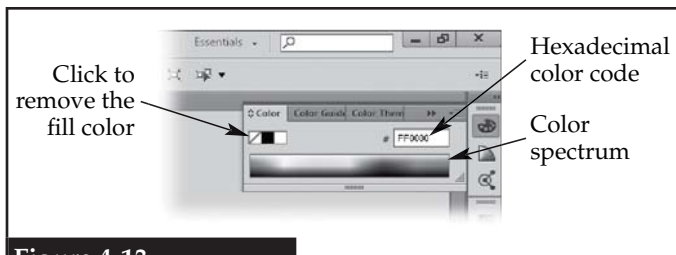
Figure 4-13.

Using the Color panel to remove or change the fill color of a shape.

Click to display the panel menu
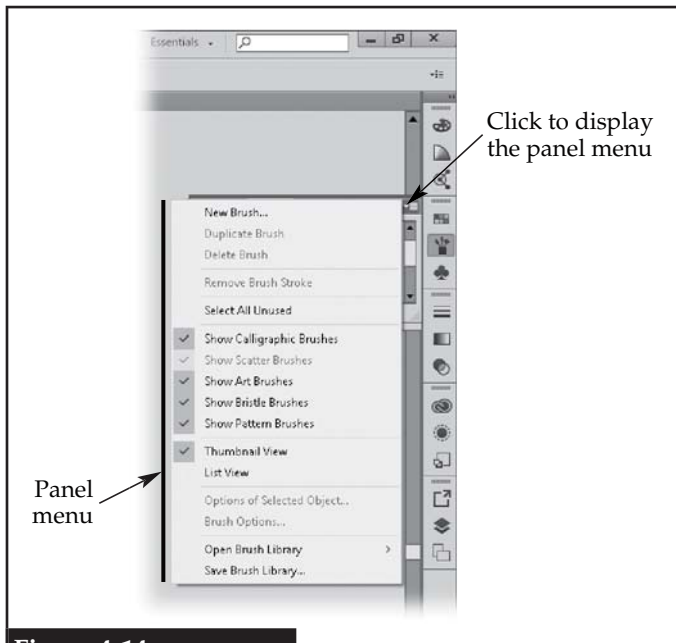
Panel menu

Figure 4-14.

Using a panel menu.

Brushes

51. Applying what you have learned, select the circle.

52. Click in a light-green area of the color spectrum in the **Color** panel. The fill color of the circle is changed to the green you picked. Notice the hexadecimal color code for the green that is shown in the upper-right corner of the **Color** panel.

53. Click in the text box for the hexadecimal color code, and change the code to 0000FF. Enter zeroes, not the letter O, but the letter F can be entered as uppercase or lowercase characters. When you press the [Enter] key, the fill color of the circle is updated to a color that has values of red 0, green 0, and blue 255. In other words, this color is pure blue.

Panel Menu

Most panels have a panel menu. This menu contains additional commands not displayed as buttons or settings in the panel. The panel menu button is located in the top-right corner of the panel.

54. Click the **Brushes** button to display the **Brushes** panel.

55. Click the panel menu button in the top-right corner of the panel to display the menu options, as shown in **Figure 4-14.** Notice the check marks next to the default brush categories. A check mark indicates the item is enabled. A disabled item is unchecked.

56. Click **Show Bristle Brushes** in the menu to disable this category. The brushes in this category will no longer appear as options in the panel.

57. Applying what you have learned, disable the pattern brushes category.

58. Applying what you have learned, enable the bristle brushes category.

Smart Guides

Smart guides are guidelines, locations, and comments that appear to help the designer properly align shapes. They are temporary guides and can be turned on or off. They are on by default.

TIP
The [Ctrl][U] key combination can be used to quickly turn on or off the smart guides.

59. Click the **View** pull-down menu, and make sure the **Smart Guides** menu item is checked. When checked, smart guides are enabled.

60. Activate the **Selection Tool**.

61. Hover the cursor over the center of the circle. A smart guide appears as an X at the center of the circle along with a comment specifying center, as shown in **Figure 4-15.** Also notice the coordinates of the center point are displayed in a separate box near the cursor.

Figure 4-15.

Using smart guides to precisely locate shapes.

62. Hover the cursor over any of the four quadrants of the circle. A smart guide comment of anchor is displayed when the cursor is touching the anchor point along with the coordinates of that point. An X also appears on the anchor point.

63. Move the cursor along the edge of the circle. A smart guide appears as an X on the edge of the circle nearest the cursor. The comment is path. Notice that coordinates are not displayed for this smart guide.

64. Applying what you have learned, select the circle and move it across the rectangle. Smart guides appear when key points on the rectangle align with key points on the circle. Comments appear to indicate how the alignment will be applied.

65. Using the smart guides, align the circle so that the center of the circle intersects the bottom-right corner of the rectangle, as shown in **Figure 4-16.**

66. With the circle selected, click **Transform** in the **Control** panel to open the **Transform** panel.

67. Click in the height text box (**H:**), and enter 216, as shown in **Figure 4-17.** Since the units are set to points, this is equal to 3 inches (216 points ÷ 72 points per inch = 3 inches). Enter the same for the width (**W:**).
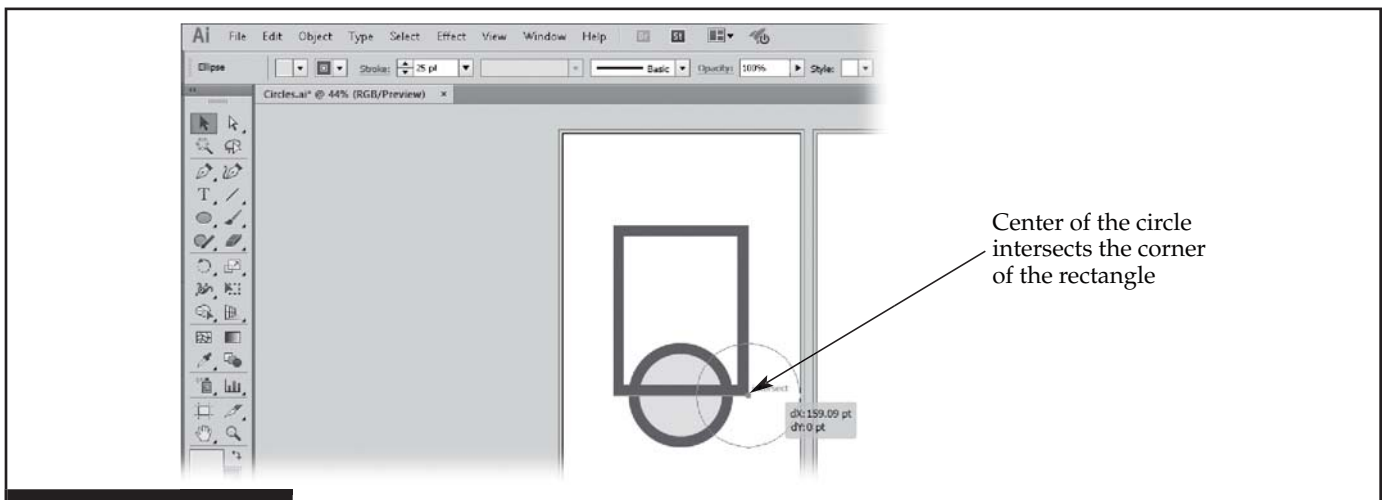
Figure 4-16.

Moving the circle shape to the bottom-right corner of the rectangle using smart guides to locate it.
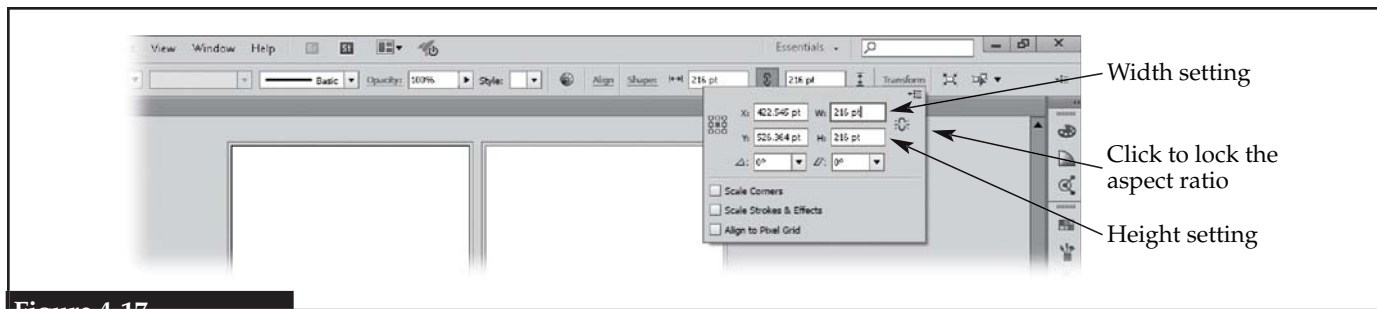
Figure 4-17.

Setting a precise size for a shape.

68. Applying what you have learned, change the rectangle dimensions to 4 inches wide and 3 inches high. What are the values you entered?

_____

_____

69. Applying what you have learned, realign the center of the circle with the bottom-right corner of the rectangle to correct for any movement that occurred when resizing.

Color Guide

The **Color Guide** panel organizes color swatches according to harmony rules. Harmony rules are defined in the software to determine which will provide the best complement to a selected color.

70. Applying what you have learned, display the **Layers** panel and select the Rectangle layer.

71. Click the **Toggle Visibility** button (eye) next to the layer name to hide the layer. The layer is hidden, but it still exists in the drawing.

72. Select the Star sublayer in the **Layers** panel. This makes the layer the current layer. Any new shapes will be placed on the Star sublayer as long as it is the current layer.

73. Click the **Star Tool** in the **Tools** panel. The star tool draws a star from the center and expands outward. This takes a little practice to get good at drawing stars properly.

74. Click on the center of the circle, and drag. Keep the mouse button held down. Notice that the star has five points by default. Press the up arrow key until there are eight points. Then, drag to the edge of the circle and release the mouse button. Use smart guides to help precisely locate the star.

75. Applying what you have learned, use the **Control** panel to change the stroke of the star to 6 points in width and black.

76. Applying what you have learned, change the fill color of the star to #FF0000.

77. Display the **Layers** panel. Notice how each layer and sublayer has a thumbnail preview of what is on the layer. These thumbnails are automatically updated to reflect the current state of the layer.

78. Applying what you have learned, display the **Color** panel, and then click the **Color Guide** tab to bring that panel to the front, as shown in **Figure 4-18.**

Star Tool

TIP
Click **Edit**>**Undo** on the **Application** bar or use the [Ctrl][Z] key combination to undo the drawing and try again if needed.

Fill color of
selected object

Harmony Rules
selector
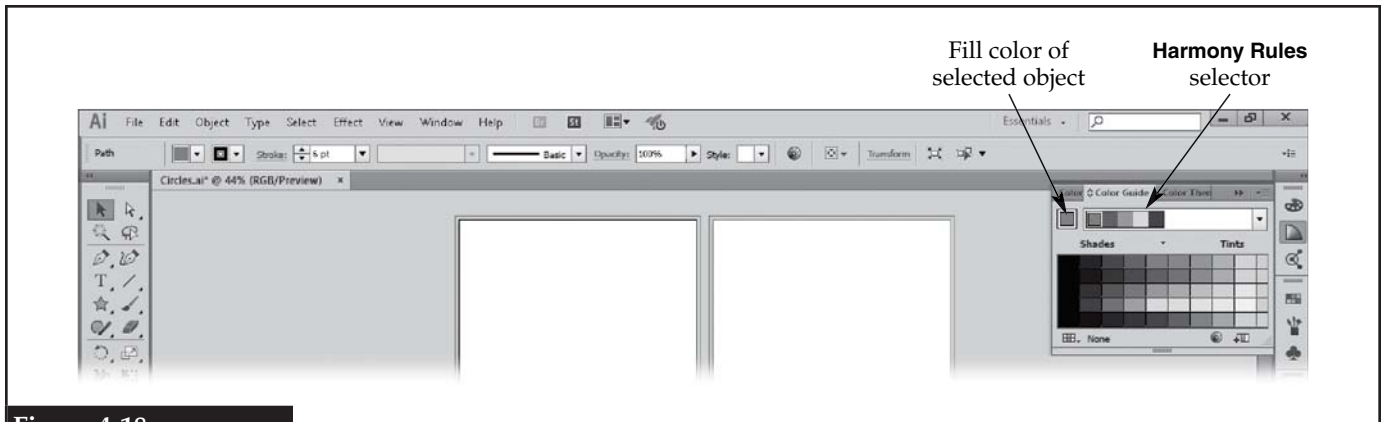
Figure 4-18.

Using the **Color Guide** panel to select colors based on harmony rules.

79. Select the star shape, and examine the **Color Guide** panel. The fill color of the selected shape appears in the color swatch in the upper-left corner. Clicking this color swatch sets the fill color of the selected shape as the base color for the harmony rules.

80. Click the color swatch in the upper-left corner of the **Color Guide** panel. If you hover the cursor over this swatch, the help text is Set base color to the current color.

81. Click the **Harmony Rules** drop-down arrow. Scroll through the drop-down list to see the various rules that can be selected, and then click **Complementary** in the list. The swatches in the **Color Guide** panel are now only shades of red and shades of green.

82. Select the circle shape. You may need to first click on a blank spot on the artboard to deselect the star. Notice the upper-left color swatch in the **Color Guide** panel is now blue, but the harmony rules color swatches still reflect the complementary colors for red.

83. Click a light green color swatch in the **Color Guide** panel. The fill color of the circle is updated to that color, which complements the red of the star.

84. Select the star shape.

85. Look at the color swatches in the lower part of the **Color Guide** panel. Notice the labels above the swatches are **Shades** and **Tints**, and a downward-pointing triangle appears between these two labels. The triangle indicates the active colors included in the selected harmony rule. To the left of the triangle are color swatches that provide shades of the active color. To the right of the triangle are color swatches that provide tints of the active color. Shades are darker than the active color, while tints are lighter.

86. Click the red swatch that is 70% (two shades) darker than the original red in the star.

87. Applying what you have learned, change the fill of the circle to be tinted with the 90% (lightest) green tint.

88. Applying what you have learned, unhide the Rectangle layer. You can see that while the rectangle was not visible when the layer was hidden, it was still included in the drawing.

TIP

Shade and tint values do not appear as help text. Unless the default scale is changed in the **Color Guide** panel menu, the values from left to right are: 90% shade, 70% shade, 50% shade, 30% shade, hue color, 30% tint, 50% tint, 70% tint, and 90% tint.

Swatch Libraries

The **Swatches** panel holds color swatches and pattern swatches. New patterns are stored as swatches in this panel as well. Patterns can be edited by double-clicking the pattern swatch in this panel.

89. Applying what you have learned, deselect all shapes.

90. Click the **Swatches** button in the **Panel** bar to open the **Swatches** panel.

Swatches

91. Click the **Swatch Libraries Menu** button in the bottom-left corner of the panel. A drop-down menu is displayed, as shown in **Figure 4-19.**

Click to display a drop-down menu
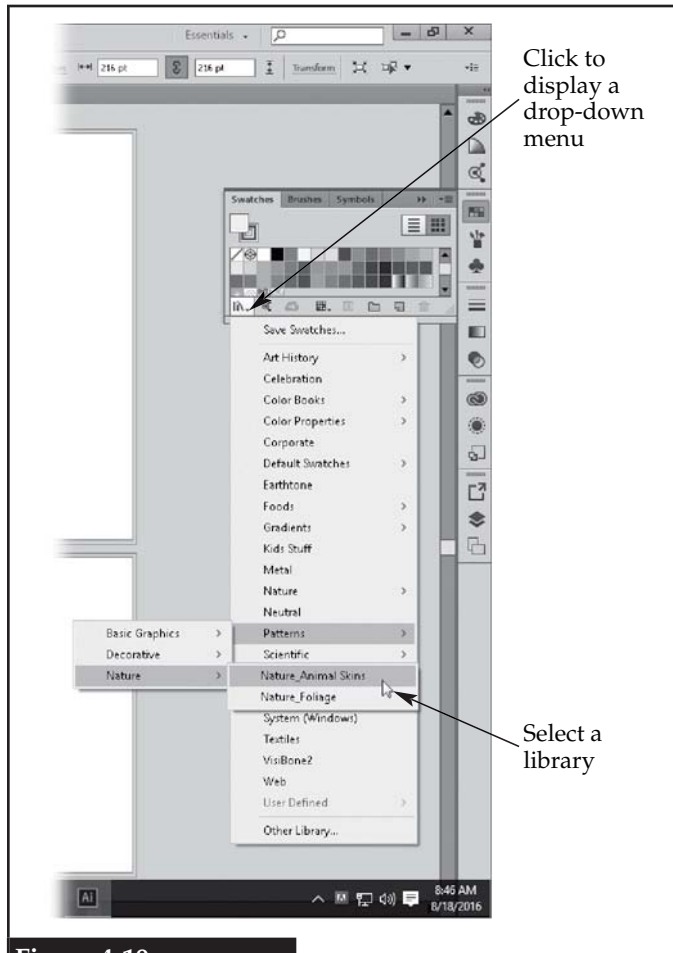
Select a library

Figure 4-19.

Selecting a library of color swatches.

92. In the drop-down menu, click **Patterns**>**Nature**>**Nature_Animal Skins**. This library is opened in a floating panel.

93. Hover the cursor over each pattern swatch in the **Nature_Animal Skins** panel to see the name of each pattern. Click the Jaguar pattern swatch. This pattern swatch is added to the **Swatches** panel, and the pattern is also made the current fill color in the **Tools** panel.

94. Click the close button (**X**) on the floating panel to hide the panel.

95. Select the circle shape, and click the Jaguar pattern swatch in the **Swatches** panel. The fill color of the circle is replaced with the pattern.

96. Double-click the Jaguar pattern swatch in the **Swatches** panel. The view in Illustrator changes to pattern-editing mode and the **Pattern Options** panel is displayed, as shown in **Figure 4-20.** In this view, you can adjust the alignment of the pattern.

97. Click the **Tile Type:** drop-down arrow in the **Pattern Options** panel, and click **Brick by Row** in the drop-down list. This setting controls how the tiles of the pattern are aligned. Notice how the rows are now offset, and you can clearly see the breaks in the pattern.

98. Click the **Brick Offset:** drop-down arrow in the **Pattern Options** panel, and click **2/5** in the drop-down list. Notice the change to the pattern alignment.

99. Click the **Copies:** drop-down arrow in the **Pattern Options** panel, and click **3 × 3** in the drop-down list. The amount of pattern in the area is reduced. If there is a situation in which the pattern does not completely fill the shape, the **Copies:** value would need to be increased.

100. Hover the cursor over each button in the **Overlap:** area of the **Pattern Options** to see the name of each. There are two groups of buttons. The two buttons in each group are toggles. Only one button in each group can be active.

101. Toggle between the **Top in Front** and **Bottom in Front** options in the **Overlap:** area of the **Pattern Options** panel to see how the pattern changes.

Click to exit pattern-editing mode

Double-click the pattern swatch to enter pattern-editing mode

Pattern for editing

Pattern Options panel
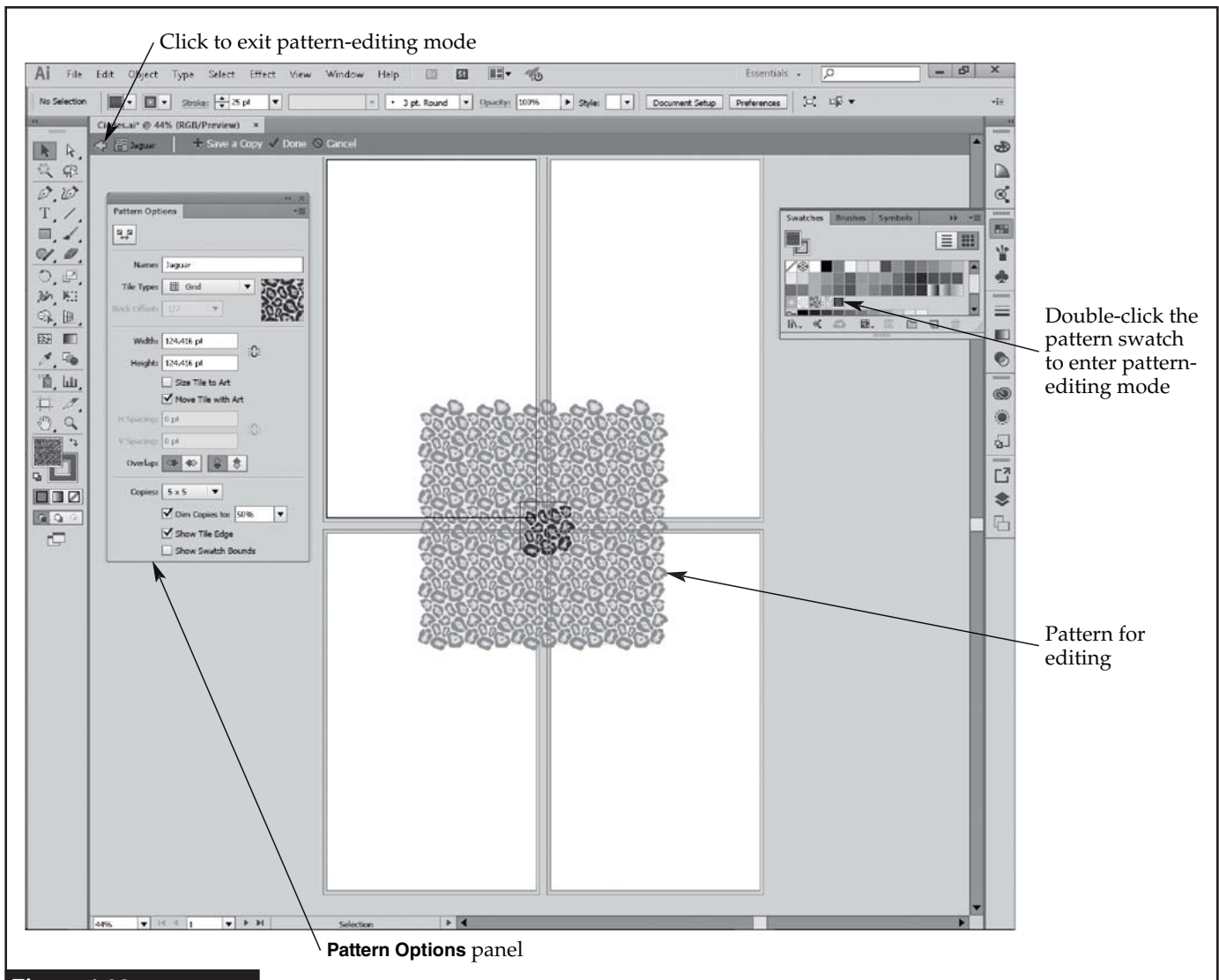
Figure 4-20.

Editing a pattern in pattern-editing mode.

Exit Pattern Editing Mode

102. Click the **Exit Pattern Editing Mode** button (the arrow) or the **Done** link below the document tab to save the changes to the pattern and exit pattern-editing mode. The **Pattern Options** panel is automatically closed as well.

Canvas and Artboards

When this document was created, it was set up with four artboards each in portrait orientation. Each artboard can be modified at any point. How the artboards are placed on the canvas can also be changed.

Artboard Tool

103. Click the **Artboard Tool** button on the **Tools** panel. A label appears in the upper-left corner of each artboard indicating the name and number of the artboard. Notice that the name of the currently selected artboard appears in a text box on the **Control** panel. This text box can be used to rename the artboard.

104. Click anywhere on Artboard 4 to select it.

Delete Artboard

105. Click the **Delete Artboard** button on the **Control** panel to remove the artboard.

106. Select Artboard 3, click in the **Name:** text box on the **Control** panel, and change the name to Blank Page.

107. Applying what you have learned, use the **Control** panel to change the height of Artboard 2 to 8 inches and the width to 4 inches. What values did you enter?

_____

Landscape

108. Select Artboard 2, and click the **Landscape** button on the **Control** panel. The orientation of the artboard is changed.

109. Click and hold Artboard 2, and drag it below the Blank Page artboard (artboard #3).

110. Applying what you have learned, move the Blank Page artboard below Artboard 1. Use smart guides to align the left edge with the left edge of Artboard 1.

111. Applying what you have learned, move Artboard 2 so its top edge aligns with the top edge of Artboard 1.

Artboards

112. With Artboard 2 selected, click the **Artboards** button on the **Panels** bar to open the **Artboards** panel. Notice that Artboard 2 is selected (highlighted) in the panel.

113. Click the **New Artboard** button at the bottom of the panel. A new artboard is inserted on the canvas, as shown in **Figure 4-21.** Notice that the new artboard is identical to the selected artboard. Also notice that the artboards are renumbered based on their placement in the arrangement.

New Artboard

114. Applying what you have learned, name the new artboard Copy.

115. Press the [Esc] key to exit artboard-editing mode.

Rulers and Grid

Illustrator provides tools to help the designer in precisely locating shapes. Rulers can be used to help show the position of shapes on the artboard. The grid helps the designer align to the ruler and position graphics on the artboard.

116. Make the Blank Page artboard active. This can be done by clicking the artboard itself or selecting it in the **Artboards** panel.

117. Click **View**>**Rulers**>**Show Rulers** on the **Application** bar. Rulers are placed along the top and right-hand side of the canvas. Notice that the origin (0,0) is the upper-left corner of the artboard. The default location of the ruler origin is the upper-left corner of the active artboard.

TIP

The origin can be moved to a different location by dragging the upper-left corner of the ruler to a new location.

118. Move the cursor around the artboard. Notice there is a hash mark in each ruler that corresponds to the cursor location.

119. Make the Copy artboard active. Notice how the ruler shifts so the origin is at the upper-left corner of this artboard.

120. Right-click anywhere on the top ruler. A shortcut menu is displayed that allows changing the units of measure for the ruler.

TIP

Changing the units of measure on the ruler does not change the overall units for the drawing.

121. Click **Centimeters** in the shortcut menu. Notice that the units of measure change on both rulers.

122. Click **View**>**Show Grid** on the **Application** bar. Notice how the grid is applied to all artboards.

123. Click **View**>**Hide Grid** to turn off the grid.

New artboard is added

Figure 4-21.

Artboards are rearranged
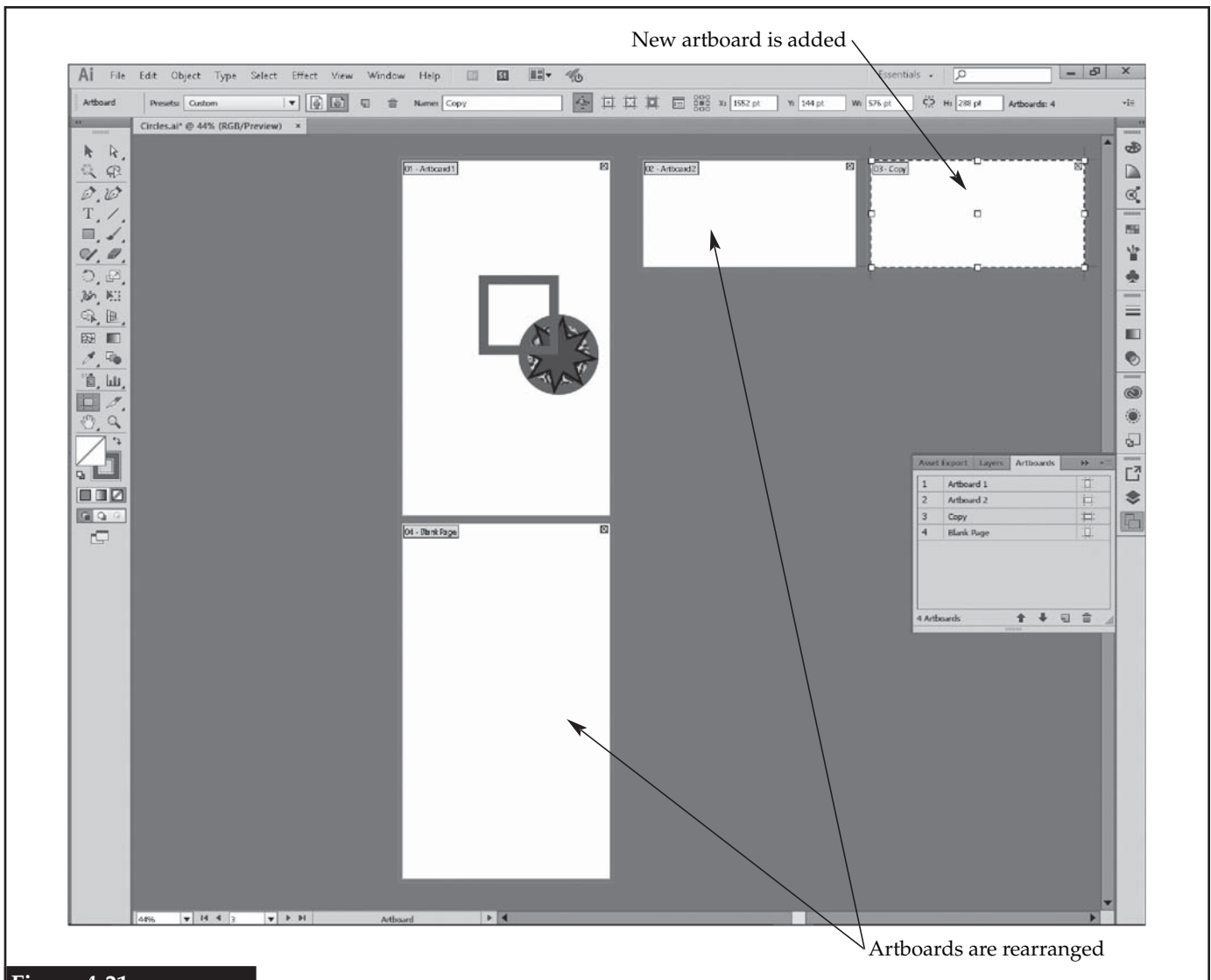
Artboards moved around and new artboards can be added.

**Line Segment
Tool**

TIP
The [Ctrl]['] key
combination can
be used to quickly
toggle the grid
display. The [Ctrl][R]
key combination
can be used to
quickly toggle the
ruler display.

124. Applying what you have learned, change the units of measure for the rulers to points.

125. Click the **Line Segment Tool** button on the **Tools** panel, and draw a horizontal line that starts on the left-hand edge of Artboard 1, extends through Artboard 2, and ends at the right-hand edge of the Copy artboard.

126. With the line selected, click **View**>**Guides**>**Make Guides** on the **Application** bar. The line is converted into a guideline. Any selected path, such as a circle, can be turned into a guideline using this method.

127. Click **View**>**Guides**>**Unlock Guides** on the **Application** bar. The guideline can now be moved. If this menu item appears as **Lock Guides**, the guidelines are already unlocked.

128. Select the guideline, and drag it up or down to the 144 point position on the left-hand ruler. As you drag, notice an indicator moves along the ruler to aid in alignment.

129. Hold down the [Alt] key, and drag the guideline to the 72 point position on the left-hand ruler. Holding down the [Alt] key while dragging the guideline will make a copy, leaving the original in place.

130. Applying what you have learned, lock the guidelines.

131. Try to select one of the guidelines and move it. Guidelines cannot be selected or moved when locked.

132. Applying what you have learned, unlock the guidelines.

133. Select the guideline at the 72 point position, and press the [Delete] or [Backspace] key. The selected guideline is removed, but all others are retained.

134. Click **View**>**Guides**>**Clear Guides** on the **Application** bar. All guidelines are removed, even if the guidelines are locked.

Shape Builder

It is common to combine shapes to form a single shape. The shape builder tool is used to do this.

135. Applying what you have learned, draw a rectangle of any size on the Blank Page artboard.

136. Applying what you have learned, transform the rectangle so it is 1 inch wide and 3 inches high. Also change the stroke to 5 points and black. What values did you enter for width and height?

_____

137. Applying what you have learned, draw a circle that is exactly 1 inch in diameter.

138. Applying what you have learned, move the circle so that its center intersects the midpoint of the top side of the rectangle, as shown in **Figure 4-22.**

139. Click the **Selection Tool** button in the **Tools** panel.

Selection Tool
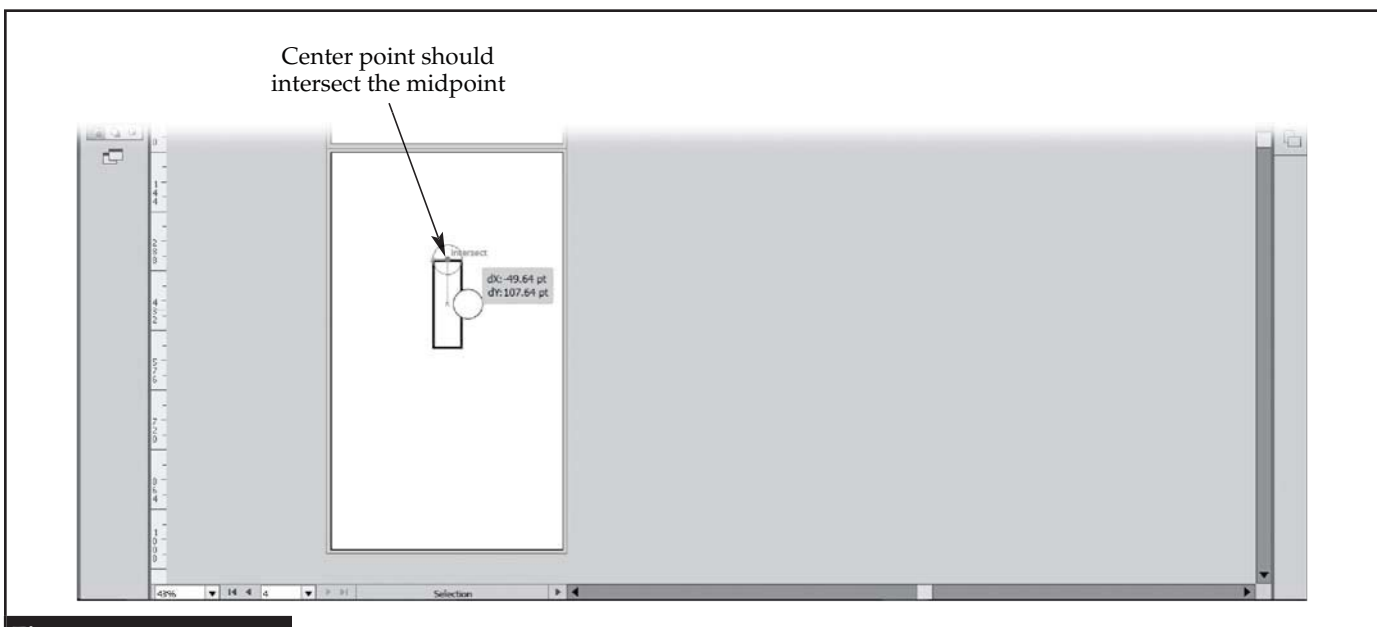
Figure 4-22.

Moving the circle shape to the top midpoint of the rectangle using smart guides.

Shape Builder Tool

140. Hold down the [Shift] key, and click the rectangle and then the circle to select both shapes. They can be selected in any order. When both shapes are selected, they will both be surrounded by a blue box. If you click a selected shape, it will be deselected.

141. Click the **Shape Builder Tool** button in the **Tools** panel.

142. Move the cursor inside the rectangle. Notice how part of the interior of the rectangle is highlighted.

143. Click inside the rectangle, drag into the circle, and release the mouse button once all of the circle's interior is highlighted. The shape builder permanently joins the two shapes into a single shape as soon as the mouse button is released, as can be seen by the removal of the overlapping parts of the circle and rectangle. Only the outline of the new shape is retained.

144. Applying what you have learned, add a new artboard named Heart, and move it below Artboard 2.

145. On the Heart artboard, draw a 3.5-inch square. What value did you enter for the square dimensions?

_____

_____

146. Applying what you have learned, display the **Transform** panel. Click in the **Rotate** text box, and enter 45.

147. Applying what you have learned, draw two 3.5-inch-diameter circles centered on the top edges of the square.

148. Applying what you have learned, join the two circles and the square into a single shape, and then fill the new shape with red to create a heart, as shown in **Figure 4-23.**

Heart shape created from one rectangle and two circles
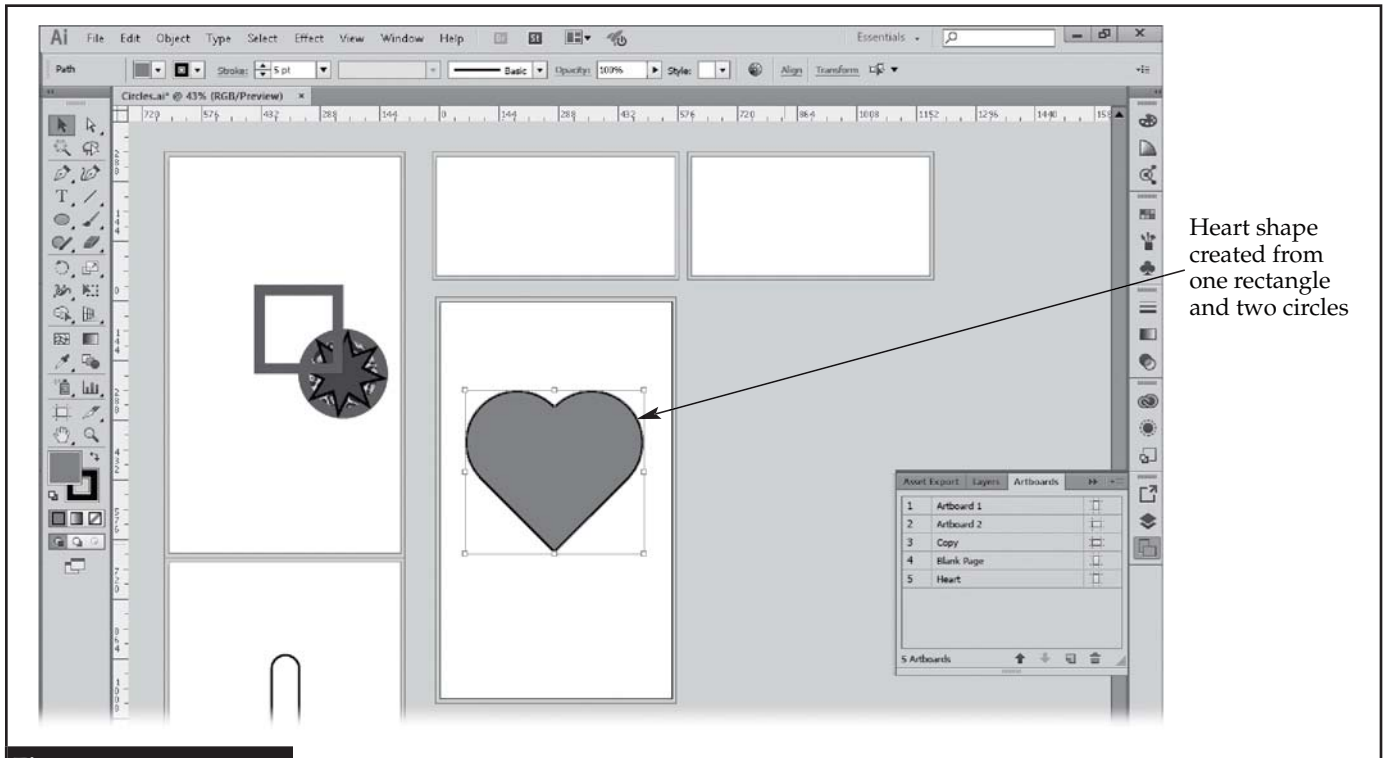
Figure 4-23.

A complex shape can be created from simple shapes.

Blend Tool

Rounded Rectangle Tool

Illustrator has some very powerful tools. For example, the designer can allow an image or shape to blend from one shape to another. This is done automatically using the blend tool.

149. Click the **Rounded Rectangle Tool** button in the **Tools** panel, and click and drag to create a rounded rectangle that covers Artboard 2.

150. With the rectangle still selected, notice the four circular handles, one near each corner. These are *live corner widgets* used to adjust the radius of the corners. Move the cursor over one of the widgets, click, and drag to change the radius of the corners to about 30 points, as shown in **Figure 4-24.** The radius value is displayed as help text near the cursor as you drag.

TIP

When transforming the width and height of a shape, make sure the **Constrain Width and Height Proportions** button (link) is off unless you want to lock the two values together so changing one automatically changes the other.

151. Applying what you have learned, use the live corner widgets to change the corner radius of each corner to 0.

152. Applying what you have learned, transform the rectangle to 1/2 inch wide by 1/2 inch high, and then move it to the top-right corner of the artboard. What values did you enter?

_____

153. With the rectangle selected, click the **Eyedropper Tool** button on the **Tools** panel, and click the heart shape. The eyedropper tool samples the color of a shape (the heart) and applies it to the selected shape (the rectangle).

Eyedropper Tool

154. Applying what you have learned, create a circle in the bottom right corner of Artboard 2 that is 1-1/2 inches in diameter. What value(s) did you enter and in what text box(es)?

_____

155. Change the fill color of the circle to blue.

Blend Tool

156. Double-click on the **Blend Tool** button to display the settings for the tool.

157. In the **Blend Options** dialog box, click the **Spacing:** drop-down arrow, and click **Specified Steps** in the drop-down list. This setting allows you to enter a set number of steps between shapes.

158. Click in the text box to the right of the **Spacing:** drop-down arrow, and enter 4. This is the number of steps that will be created in the blend. When the tool is used with these settings, four new shapes will be created to blend both in color and shape from the rectangle to the circle.

159. Click the **OK** button to close the **Blend Options** dialog box and save the settings for the tool.

Live corner widget; click and drag to adjust corner radius
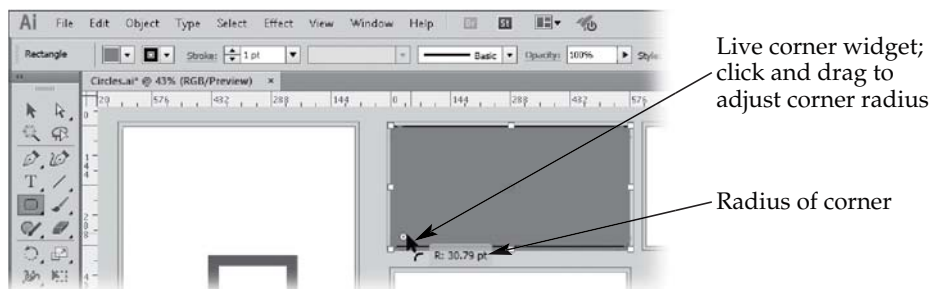
Radius of corner

Figure 4-24.

Adjusting the corner radius of a rounded rectangle shape.

Add Anchor Point Tool

Direct Selection Tool

160. With the blend tool active, click once on the rectangle and then click once on the circle. A series of four shapes is drawn between the rectangle and circle to create the blend. Notice how both the shape and color transform along the path, as shown in **Figure 4-25.**

161. Click the **Add Anchor Point Tool** button in the **Tools** panel.

162. Place the cursor between the rectangle and the circle. A path line is displayed when the cursor is over the path for the blend.

163. Click near the center of the path to add an anchor point at that location.

164. Click the **Direct Selection Tool** button in the **Tools** panel. The direct selection tool is used to select and modify paths within shapes, whereas the selection tool is used to select shapes.

165. Click the new anchor point, drag it to the lower-right corner of the artboard, and release. Notice how the steps in the blend are automatically moved to follow the path.

TIP
To select the rectangle in the blend shape, click in the interior of the rectangle (the fill color).

166. Click the **Direct Selection Tool** button in the **Tools** panel, and then click the rounded rectangle. Since the rectangle is now part of a blend shape, this tool must be used to select the rectangle instead of the selection tool.

167. Applying what you have learned, transform the width of the rectangle to 1-1/2 inches wide. Notice that the steps in the blend are automatically updated to reflect the change in the shape of the rectangle. What value did you enter for the width of the rectangle?

_____

Custom Workspace

To this point, you have used the default Essentials workspace. However, most users find they like to customize the workspace to have the tools and panels in locations that suit them best and how they work.

Swatches

168. Click and drag the **Swatches** button away from the **Panels** bar so it is somewhere on the canvas. The panel is now floating as a collapsed panel, as shown in **Figure 4-26.**

169. Click the **Expand Panels** button (**>>**) on the collapsed **Swatches** panel to expand the panel.

170. Click **Edit**>**Preferences**>**User Interface...** on the **Application** bar. The **Preferences** dialog box is displayed with the **User Interface** category selected.

Blend is created
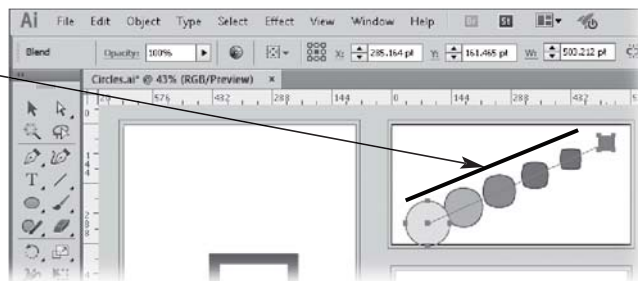
Figure 4-25.

A blend is a transition from one shape into another.

Collapsed **Swatches** panel is floating
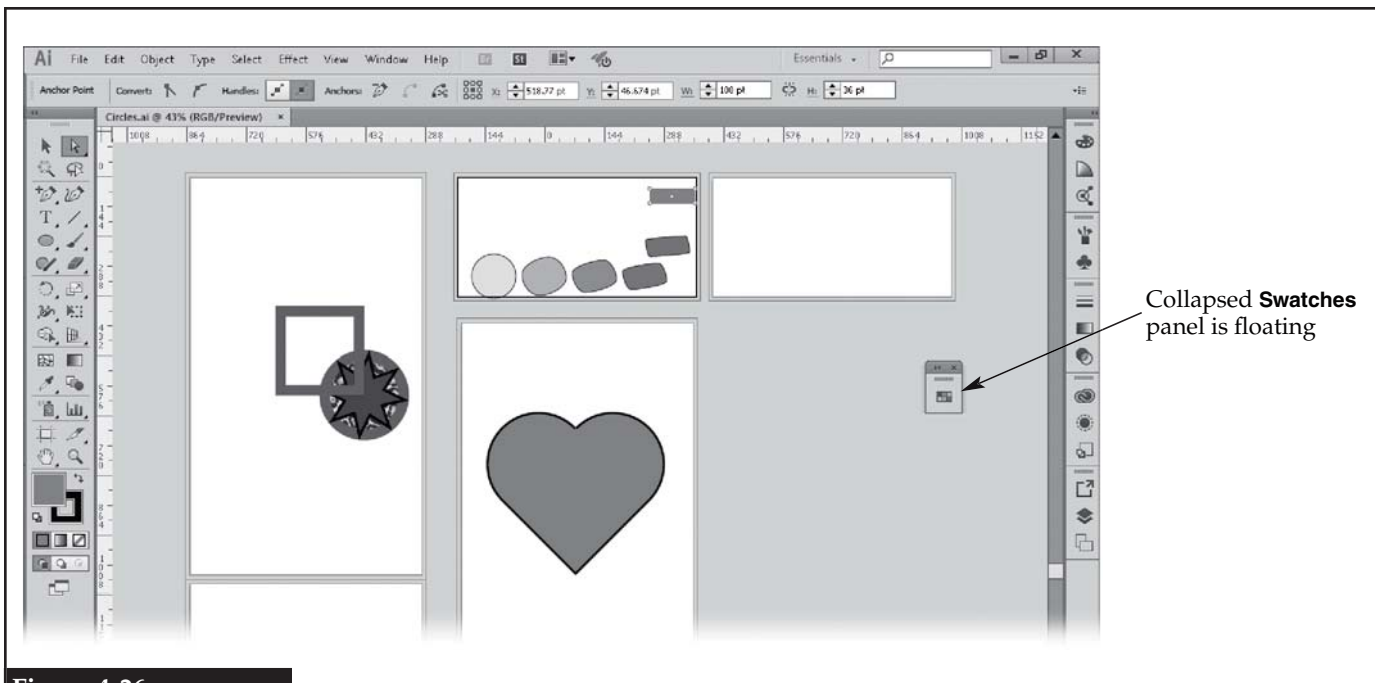
Figure 4-26.

Panels can be dragged from the **Panels** bar to make them floating.

171. Click the **Brightness:** drop-down arrow, and click **Light** in the drop-down list. With this setting, your Illustrator screen should match the screen captures shown in this certification guide.

TIP

The settings in the **Preferences** dialog box are not saved in the workspace.

172. Click the **OK** button to set the changes and close the dialog box.

173. Click the workspace switcher on the **Application** bar, and click **New Workspace…** in the drop-down menu.

174. In the **New Workspace** dialog box, enter the name Floating Swatches Panel, and click the **OK** button to save the current configuration as a new workspace. Notice that the new workspace is automatically set as the current workspace.

175. In the workspace switcher, click **Essentials**. Notice the **Swatches** panel is no longer floating and has been returned to the **Panels** bar.

176. Use the workspace switcher to set the Floating Swatches Panel workspace current. The **Swatches** panel is now floating.

177. Save the file.

Export Artboards

178. Click **File**>**Export**>**Export As…** on the **Application** bar. A standard save-type dialog box is displayed.

179. Navigate to your working folder.

180. Enter Artboards in the **File name:** text box.

181. Click the **Save as type:** drop-down arrow, and click **Photoshop (*.PSD)** in the drop-down list.

182. Check the **Use Artboards** check box below the **Save as type:** drop-down arrow.

183. Click the **Range:** radio button, and then enter 1-4 in the corresponding text box. This will export only the first four artboards.
184. Click the **Export** button.
185. Close Illustrator.

Lesson 4 Review

Vocabulary

In a word processing document or on a sheet of paper, list all of the *key terms* in this lesson. Place each term on a separate line. Then, write a definition for each term using your own words. You will continue to build this terminology dictionary throughout this certification guide.

Review Questions

Answer the following questions. These questions are aligned to questions in the certification exam. Answering these questions will help prepare you to take the exam.

1. Compare and contrast artboards and the canvas.

   _____
   _____
   _____
   _____

2. Describe workspaces.

   _____
   _____
   _____
   _____

3. What would happen to a shape if the stroke were changed from 1 point to 9 points?

   _____
   _____
   _____
   _____

4. After selecting a shape on the artboard, how is the weight of the stroke changed to 6 points?

   _____
   _____
   _____
   _____

5. What is the importance of the order in which layer names appear in the **Layers** panel?

_____

_____

_____

_____

6. How is a layer hidden?

_____

_____

_____

_____

7. How is the **Color** panel used to remove the fill color from a selected shape?

_____

_____

_____

_____

8. List the five default categories of brushes that are found in the panel menu on the **Brushes** panel.

_____

_____

_____

_____

_____

9. Where on the **Application** bar is the setting for enabling or disabling smart guides?

_____

10. What are harmony rules for colors, and in which panel are they used?

_____

_____

_____

_____

11. Compare and contrast shades and tints.

_____

_____

_____

_____

12. How is a pattern modified?

_____

_____

_____

_____

13. Briefly describe how to rearrange the artboards on the canvas.

_____

_____

_____

_____

14. When a new artboard is created using the **Artboards** panel, on what is the size of the new artboard based?

_____

_____

_____

_____

15. Where is the default location of the ruler origin?

_____

_____

_____

_____

16. Describe what the shape builder tool is used to do.

_____

_____

_____

_____

17. When using the blend tool, what does the steps setting control?

_____

_____

_____

_____

18. How are the settings for a specific tool accessed?

_____

_____

_____

_____

19. After a workspace has been customized, how can the configuration be saved?

_____

_____

_____

_____

20. Preferences are not saved in a workspace, but how are they set?

_____

_____

_____

_____

Answers

Lesson 1

1. Shape, form, line, color, value, space, and texture.
2. Regular shapes and objects that are used to assemble more complex shapes or objects.
3. The primary colors of red, blue, and yellow.
4. A complementary color is located opposite of the selected color on the color wheel, while an analogous color is located next to the selected color.
5. Positive space is the area or volume occupied by the primary objects, while negative space is the area or volume around or between the primary objects.
6. The point or points in a perspective drawing where receding parallel lines appear to meet.
7. Movement, emphasis, harmony, variety, balance, contrast, proportion, pattern, and unity.
8. Movement.
9. Emphasis.
10. Balance.
11. An image is divided into three sections horizontally and three sections vertically to create nine areas, and where the lines cross are the focal points for a scene.
12. Contrast.
13. Unity.
14. To achieve site-wide consistency.
15. Shorter development time, easier maintenance, and improved usability.

Lesson 2

1. PNG-24
2. GIF, PNG-8, PNG-24, JPEG, BMP, and RAW or CIFF. (There are other file types.)
3. CGM, AI, and EPS. (There are other file types.)
4. RGB color model at a resolution of 72 or 96 dpi.
5. The alpha channel allows for a masking color, which is a single shade of a color that determines areas of transparency in the image.
6. Vector.
7. The process of converting a vector image into a raster image.
8. Raster images are composed of colored dots at specified locations, while vector images are composed of elements recorded by their mathematical definitions.
9. Applying the most appropriate resolution and file compression, which is a process known as optimizing.
10. Download it from a digital camera.
11. The image is dithered, and the software creates a color through interpolation.
12. 576

13. Bicubic for enlargement.

14. A serif font has decorations called serifs at the ends of letters, while a sans serif font lacks these decorations.

15. Sans serif.

Lesson 3

1. Preproduction, production, testing, and publication.

2. Selecting the best team members for the job, identifying the tasks, and determining deadlines for that project.

3. Client goals and target market.

4. Using little or no text, including fantasy characters, and applying bright colors.

5. Demographics help segment the population into smaller groups that have similarities, which allows the designer to create items to appeal to the target market.

6. A drive-through restaurant will likely have a medium to low formality; examples will vary.

7. Raster images, because each point of color is recorded.

8. Working CMYK

9. Adobe Creative Cloud, CS Review, and Adobe Bridge.

10. A linked image maintains a connection to the original image file, whereas an embedded image is a copy of the image with no link to the original file.

Lesson 4

Figure 4-7

1. **Selection Tool**
2. **Direct Selection Tool**
3. **Group Selection Tool**
4. **Magic Wand Tool**
5. **Lasso Tool**
6. **Pen Tool**
7. **Add Anchor Point Tool**
8. **Curvature Tool**
9. **Type Tool**
10. **Type on a Path Tool**
11. **Line Segment Tool**
12. **Spiral Tool**
13. **Rectangle Tool**
14. **Polygon Tool**
15. **Flare Tool**
16. **Paintbrush Tool**
17. **Blob Brush Tool**
18. **Shaper Tool**
19. **Join Tool**
20. **Eraser Tool**
21. **Rotate Tool**
22. **Scale Tool**
23. **Width Tool**
24. **Crystallize Tool**
25. **Free Transform Tool**
26. **Shape Builder Tool**
27. **Perspective Grid Tool**
28. **Mesh Tool**
29. **Gradient Tool**
30. **Eyedropper Tool**
31. **Measure Tool**
32. **Blend Tool**
33. **Symbol Sprayer Tool**
34. **Line Graph Tool**
35. **Artboard Tool**
36. **Slice Tool**
37. **Print Tiling Tool**
38. **Zoom Tool**

Figure 4-8

1. **Color**
2. **Color Guide**
3. **Color Themes**
4. **Swatches**
5. **Brushes**
6. **Symbols**
7. **Stroke**
8. **Gradient**
9. **Transparency**
10. **Libraries**
11. **Appearance**
12. **Graphic Styles**
13. **Asset Export**
14. **Layers**
15. **Artboards**

68. 288 points wide, 216 points high

107. 576 points high, 288 points wide

136. 72 points high, 216 points wide

145. 252 points

152. 36 points wide, 36 points high

154. 108 points in both **H:** and **W:** text boxes

167. 108 points

Review Questions

1. An artboard is where the images you create will be placed. All of the artboards in a document are placed on the canvas. You can also draw on the canvas, but only the content of an artboard can be saved as an image or printed.

2. A workspace is the layout of the toolbars, panels, and document on the screen.

3. The weight, or width, of the stroke is increased from 1 point to 9 points.

4. Click in the **Stroke Weight:** text box on the **Control** panel, and enter 6 pt.

5. The list in the **Layers** panel represents the stack of layers. The layers at the top of the list appear above the layers at the bottom of the list.

6. Click the **Toggle Visibility** button (eye) to the left of the layer name in the **Layers** panel.

7. Click the None swatch located in the upper-left corner of the panel.

8. Calligraphic, scatter, art, bristle, and pattern.

9. **View**>**Smart Guides**

10. Harmony rules are defined in the software to determine which will provide the best complement to a selected color. The harmony rules are used in the **Color Guide** panel.

11. Shades are darker than the active color, while tints are lighter.

12. Double-click the pattern swatch in the **Swatches** panel, and then use the tools available in the **Pattern Options** panel in pattern-editing mode to alter the pattern.

13. Click the **Artboard Tool** button to enable editing of the artboards, and then drag the artboards around the canvas as needed.

14. The new artboard will be the same size as the artboard that was selected in the panel.

15. The upper-left corner of the active artboard.

16. It is used to join multiple shapes into a single shape with only the outline of the new shape retained.

17. The number of shapes created between the selected objects to create the blend.

18. By double-clicking the button for the tool in the **Tools** panel.

19. By clicking the workspace switcher on the **Application** bar, clicking **New Workspace…** in the drop-down menu, and entering a name in the **New Workspace** dialog box.

20. In the **Preferences** dialog box accessed by clicking **Edit**>**Preferences** and then a submenu option in the **Application** bar.

Lesson 5

20. 1 inch wide by 1-2/3 inches high

Review Questions

1. Primitives are basic shapes, while a composite shape is a shape composed of multiple primitives that are arranged and stacked to form a complex shape.
2. (answers will vary) The viewer will combine the shape of the mouth with other visual cues, such as the positions of the eyelids, to determine the overall expression of the character; thus the whole face is greater than the sum of its parts.
3. Create a symbol from the group.
4. Select the symbol, and click the **Edit Symbol** button on the **Control** panel. Then modify the symbol as needed. Finally, click the **Exit Symbol Editing Mode** button to save the changes.
5. By clicking the **Break Link** button on the **Control** panel when the symbol is selected.
6. Adobe Flash
7. A dialog box is displayed in which the parameters of the shape can be set. When the dialog box is closed, the shape is automatically drawn based on the parameters.
8. By anchor points or nodes and control points. The location of these points and the distance control points are from the curve determine the shape of the curve.
9. The Bézier curve will have fewer anchor points and the shape will have smooth curves, whereas the line segment tool can only approximate a smooth curve with straight line segments.
10. In Illustrator, an ellipse is a type of Bézier curve. Its shape can be modified by using the **Direct Selection Tool** button and changing the positions of its anchor point and control points.
11. They show where the printed page should be trimmed (cut).
12. It creates a filled-in shape where the designer moves the cursor and then adds a stroke around the fill.
13. By using the stroke drop-down arrow on the **Control** panel when the compound path is selected.
14. Select all shapes to be mirrored, and then click **Object**>**Transform**>**Reflect…** on the **Application** bar. In the **Reflect** dialog box, select the axis about which to mirror the shapes.
15. Display the panel menu in the **Swatches** panel, and click **Select All Unused** in the menu. Then, click the **Delete Swatch** button at the bottom of the panel.

Lesson 6

81. Two inches (144 points ÷ 72 points per inch = 2 inches)

Review Questions

1. Click any color swatch in the RGB color group in the **Swatches** panel, and then click the **New Swatch** button to display the **New Swatch** dialog box. Define the new color in the dialog box.
2. Each gradient stop defines a color in the gradient. The position of each stop controls the transition from one color to another.
3. An artistic technique in which the value of shadow and light are changed without regard for color along a shape to create the illusion of three dimensions.
4. To provide separation between the background and the object.
5. It provides a visual cue of where an object is in relation to a surface.
6. A linear gradient has the color transition in a straight line, while in a radial gradient the transition is in a circular pattern similar to the ripples created by dropping a pebble into a pond.

7. In the **Gradient** panel, click the **Type:** drop-down arrow, and click **Radial** in the drop-down list.

8. Apply an extrude effect to the circle, change the **Position:** setting, and enter 4 inches (or the equivalent in the current units of measure) for the **Extrude Depth:** setting.

9. X, Y, and Z

10. Z

11. In the **Appearance** panel, click the **Toggle Visibility** icon next to the name of the effect.

12. The effect must be accessed using the **Appearance** panel.

13. It simulates a realistic view by representing receding lines converging at a vanishing point or points.

14. Click the **Perspective Grid Tool** button in the **Tools** panel.

15. Click **View**>**Proof Setup**>**Working CMYK** on the **Application** bar.

16. A proof for printing must represent the four process colors of cyan, magenta, yellow, and black, while a proof for screen display must represent the colors used by monitors, which are red, green, and blue.

17. In the dialog box displayed for setting JPEG options, click the **Color Model:** drop-down arrow, and click **CMYK** in the drop-down list.

18. Click **File**>**Export**>**Export As…** on the **Application** bar, and set the **Save as type:** to **BMP**. In the dialog box that is displayed for setting BMP options, click the **Color Model:** drop-down arrow, and click **Grayscale** in the drop-down list. Also, click the **Resolution:** drop-down arrow, and click **Screen (72 ppi)** in the drop-down list.

19. Click **File**>**Export**>**Export for Screens…** on the **Application** bar, and make the appropriate settings in the **Export for Screens** dialog box.

20. It is in JPEG image format at the highest quality setting. The JPEG image format is a compressed file type that is suitable for use on websites.

Lesson 7

Review Questions

1. Placing

2. The pen tool because it allows both freehand curves and straight lines to be drawn in a single session of the tool.

3. Use the direct selection tool to select the anchor point, and then click the **Convert anchor points to corner** button on the **Control** panel.

4. Click the drop-down arrow to the right of the **Image Trace** button on the **Image Tracing** panel on the **Control** panel, and select the number of colors to use for the tracing in the drop-down list.

5. Place the photograph, draw the star shape over the image using black fill and no stroke, select the image and the shape, and click **Object**>**Clipping Mask**>**Make** on the **Application** bar.

6. A gradient mesh is like a net placed over the shape, and color transitions from each mesh point to its neighboring mesh points, whereas a standard gradient is applied in one direction only.

7. Use the direct selection tool to select and drag the mesh point.

8. To create smaller files that will load faster on a website.

9. As soon as the work is in tangible form.

10. The file can be freely used without asking permission from the owner; the copyright has been removed or has expired.

Lesson 8

Review Questions

1. Greeked text, or *Lorem Ipsum*, is dummy text not composed of real English words. It is used so attention is focused on reviewing the design instead of reading the words on the page.

2. Placeholder text that is intended to be used as is without alteration.

3. Kerning is the spacing between pairs of letters, such as A and V, while tracking is the spacing between all characters.

4. Select the text, and click **Type**>**Outlines** on the **Application** bar.

5. Select the graphic, and click **Object**>**Text Wrap**>**Make** on the **Application** bar.

6. These are printer marks that show the printer where to fold and trim the printed sheet.

7. Display the **Brushes** panel, click the **Brush Libraries Menu** drop-down arrow in the panel, and click the brush library to open in the drop-down menu.

8. The stroke color is changed to None and the path is no longer visible.

9. An Illustrator template file.

10. Click **File**>**New from Template…** on the **Application** bar, and then browse to and select the template file.

11. Save the Illustrator document as a package, including the typeface.

12. Place the image, draw the oval over the top of it filled with white, select the image and the shape, and click the **Make Mask** button in the **Transparency** panel.

13. White fully reveals and black fully hides.

14. It enables a particular color model to ensure the Illustrator document matches it.

15. The **Save As** function or command, and save the file in the New Document Profile folder.