CHAPTER 9   # GRADIENTS

INFOCUS

Gradients are a type of fills that can be applied to objects with enclosed paths. A gradient is a graduated blend of two or more colours that extends from one side to the other (*linear*) or radiates from the centre to the outermost edges of the gradient (*radial*).

It is important to understand the range of tools available to help you to apply and edit gradients and patterns, as well as how to adjust the *opacity* (transparency) of gradient and pattern fills.

In this session you will:

✓ gain an understanding of gradients and patterns and their respective tools
✓ learn how to apply a linear gradient
✓ learn how to change the direction of a linear gradient
✓ learn how to change colours in a gradient
✓ learn how to add colours to a gradient
✓ learn how to apply a radial gradient
✓ learn how to save a gradient
✓ learn how to apply a gradient to a stroke.

UNDERSTANDING GRADIENTS

Gradients and *patterns* are types of fill that can be applied to objects with enclosed paths. Illustrator has several default gradient swatches available as well as hundreds of default pattern swatches that you can apply and edit as required. Here we provide an overview of the gradient and pattern tools available in Illustrator to help you to achieve the desired results.

Understanding Gradients

A gradient is a graduated blend (or transition) of two or more colours. There are two types of gradients that you can apply in Illustrator: *linear* and *radial*.

- A *linear* gradient is the graduated blend of two or more colours from left to right or top to bottom (or corner to corner).

- A *radial* gradient is the transition of two or more colours that radiates from the centre of a filled object to the outside (or from the outside to the centre).
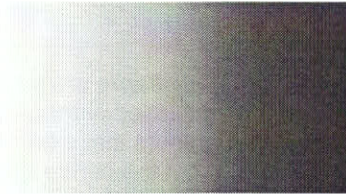
Example of a linear gradient with five colours applied
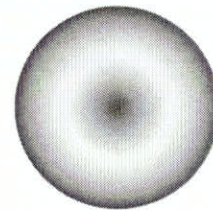
Example of a radial gradient with three colours applied

Gradient Swatches and Libraries

Illustrator has several default gradient swatches that appear on the *Swatches* panel that you can apply and then modify as required. You can also access one of the many gradient swatch libraries packaged with Illustrator.
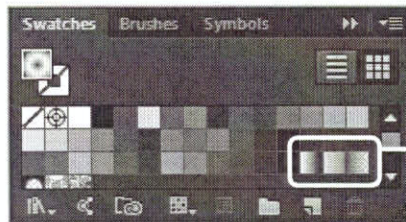
The Swatches panel contains several default gradient swatches

The Gems and Jewels panel is one of the many gradient swatch libraries available in Illustrator. It can be accessed by clicking on Swatch Libraries in the Swatches panel and selecting Gradients

The Gradient Panel and Tool

You can apply a default linear or radial gradient and then change and/or add colours as required to create your own gradient fills. You can also create custom gradient swatches. The *Gradient* panel provides the tools you will need to apply and work with gradient fills.

Select a default gradient swatch

Select the gradient type

Change gradient direction (angle)

Diamonds set midpoints between colours

Reverse gradient

Gradient slider

Select a colour point position on the gradient slider

Colour stops can be added and removed

APPLYING A LINEAR GRADIENT

The easiest way to apply a linear gradient to an object is to first apply the default *linear gradient* swatch and then modify the gradient as required. There are several ways to apply the default linear gradient to the selected object. In this exercise, you will apply the default linear gradient as a starting point to build a gradient effect that appears as a dusk sky behind a city skyline.

Try This Yourself:

Open File
Before starting this exercise you MUST open the file IL1408 Gradients And Patterns_1.ai...

1 On *Artboard 1*, draw a rectangle that extends from the top left corner to the bottom right corner of the artboard

The rectangle will cover the city skyline object...

2 In the *Tools* panel click on the *Gradient* tool, then select **Window** > **Gradient** to display the *Gradient* panel

Let's arrange the object to sit behind the city skyline...

3 Select **Object** > **Arrange** > **Send to Back**

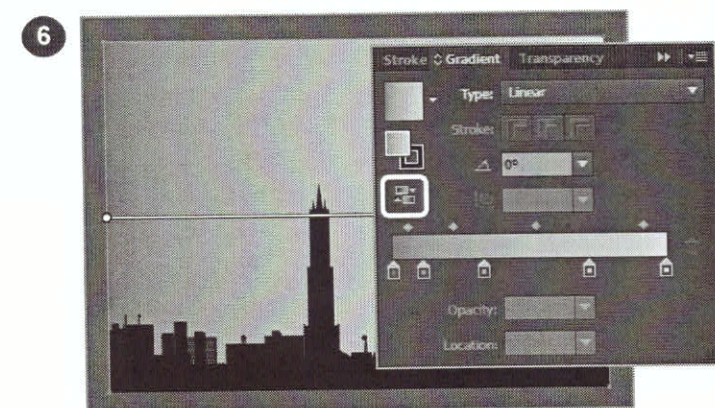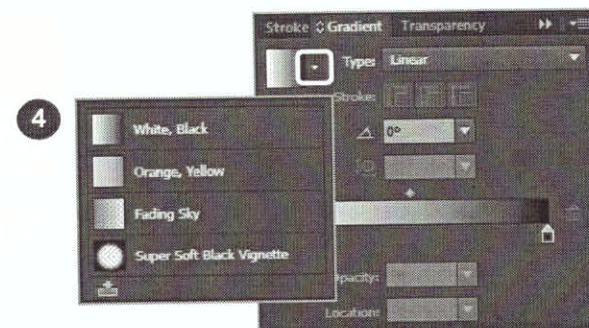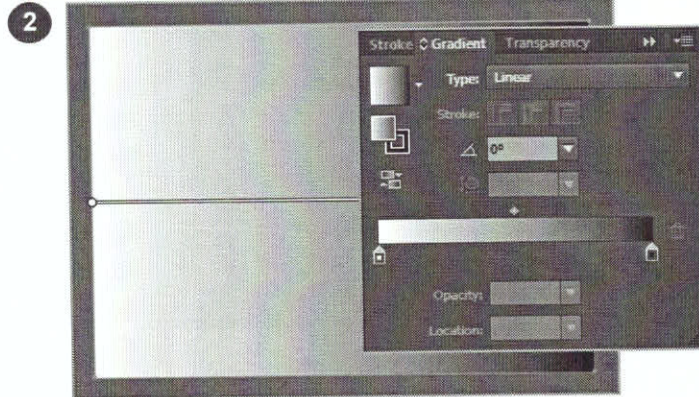**4** In the *Gradient* panel, click on the drop arrow for *Gradient* to display the gradient swatches

5 Click on *Orange, Yellow* to apply this gradient

6 In the *Gradient* panel, click on **Reverse Gradient**

The gradient colours are now reversed...

7 Repeat steps *4* and *5* to apply the *White, Black* gradient (default)

The artboard should now look like the one shown in step 3

For Your Reference...

To *apply* a *linear gradient*:

- Select the object, then click on *Gradient* in the *Tools* panel, or
  Select a default gradient from *Gradient* in the *Gradient* panel, or
  Select a gradient from the *Swatches* panel

Handy to Know...

- The default gradients that appear in the *Gradient* menu of the *Gradient* panel are also available on the *Swatches* panel.

- Gradients are generally not effective for web-based art as gradients viewed on the web tend to *band*, or appear as streaks of colour rather than a graduated blend.

CHANGING THE DIRECTION OF A GRADIENT

By default, the linear gradient extends horizontally across the fill. In many cases, you may want to change the direction of the gradient. For example, you might want to apply a vertical gradient, or you might want the gradient to extend from the top left to the bottom right corner of the object. Fortunately can use the *Gradient* panel tools to easily change the direction of a gradient.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1408 Gradients And Patterns_2.ai...

1 Ensure the rectangle containing the gradient is selected and that the *Gradient* panel is displayed

Let's adjust the gradient angle...

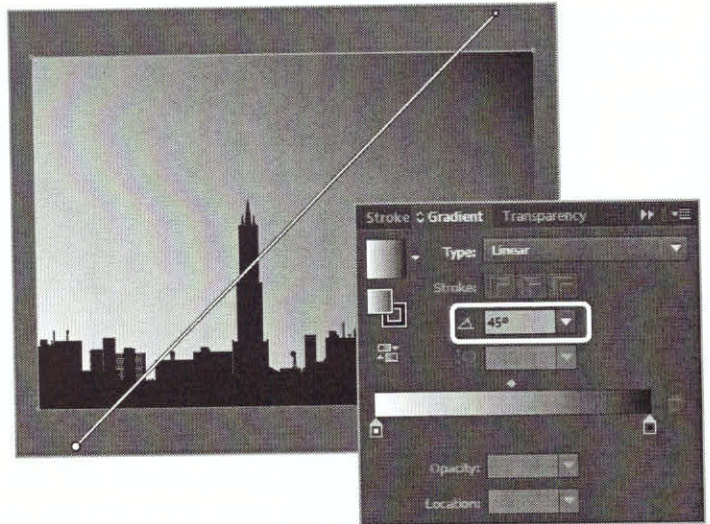**2** In the *Gradient* panel, click on the drop arrow for *Angle* to display a list of options

3 Select **45**

The gradient will now extend from the top right corner to the bottom left corner...
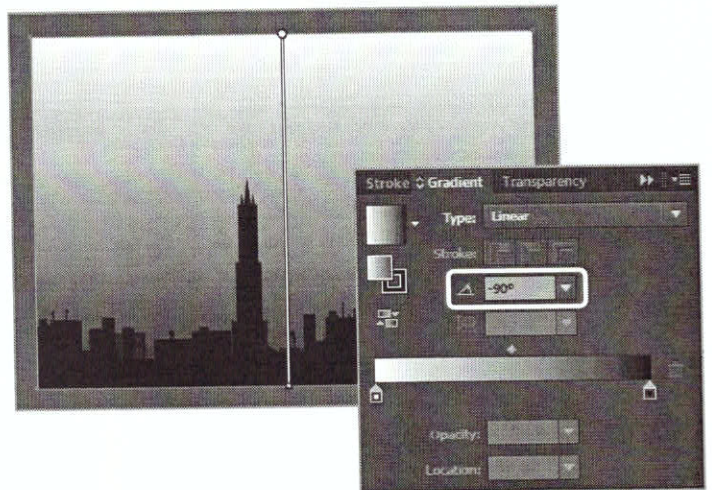
4 Repeat step **2** and select **-90**

This will apply a -90° angle to the gradient so that it is white at the top and black at the bottom

For Your Reference...

To *change* the *direction* of a *gradient*:

1. Select the object
2. Click on the drop arrow for *Angle* in the *Gradient* panel and select or type in a value

Handy to Know...

* To swap the gradient, click on *Reverse Gradient* in the *Gradient* panel.

CHANGING COLOURS IN A GRADIENT

Once you have applied a gradient you can then refine the gradient to achieve customised results. In this exercise we will look at changing the colours in the gradient. You can do this by double-clicking on the *colour stops* in the gradient bar of the *Gradient* panel and selecting colours from the *Swatches* or *Colour* panels that appear below the gradient bar.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1408 Gradients And Patterns_3.ai...

1. Ensure that the rectangle containing the gradient is selected and that the *Gradient* panel is displayed

2. In the *Gradient* panel, double-click on the left colour stop in the *Gradient slider* to display the *Colour* panel

3. Type the following *CMYK* values: *C = 40%, M = 65%, Y = 0%, K = 15%*

   This will apply a deep purple to the gradient...

4. Repeat steps *2* and *3* to apply the following *CMYK* values to the right colour stop: *C = 0%, M = 55%, Y = 90%, K = 5%*

   This will create a dusk effect with several shades of colour. You can change the location of the colour stops to adjust the endpoint of the colours...

5. In the *Gradient* panel, click and drag the right colour stop until *Location* shows about *75%* or type the value in the *Location* box

   This will increase the amount of orange in the gradient
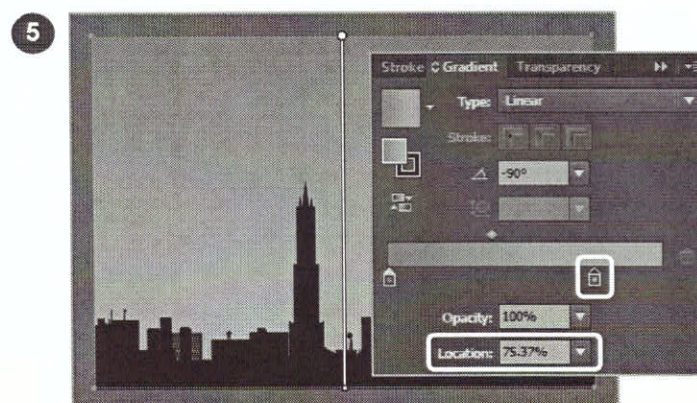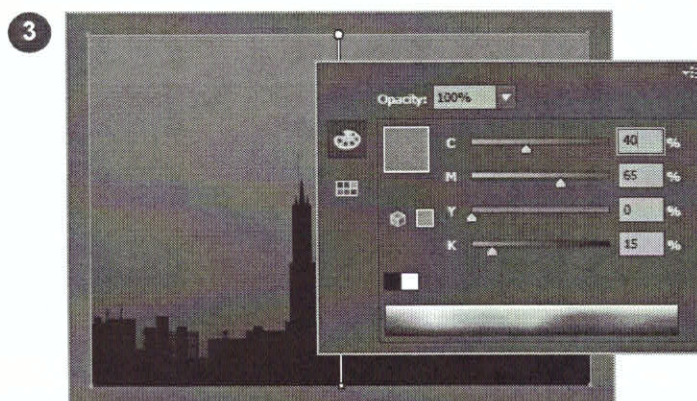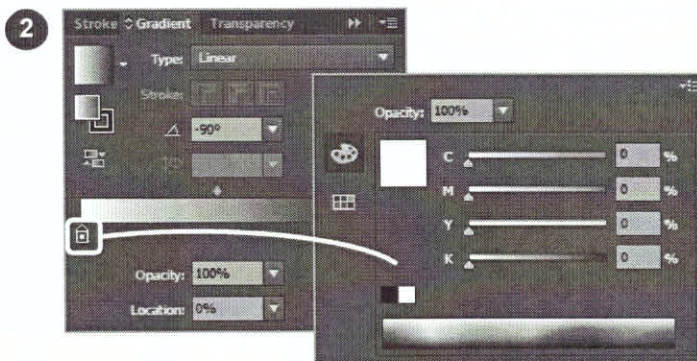
For Your Reference...

To *change* the *colours* in a *gradient*:

1. Select the object and display the *Gradient* panel
2. Double-click on a colour stop and select a new colour from the *Swatches* or *Colour* panel
3. Drag the colour stop to adjust the endpoint

Handy to Know...

- In the *Gradient* panel, the percentage value in *Location* reflects the position of the selected colour stop on the gradient slider.

ADDING COLOURS TO A GRADIENT

You can add colours to an applied gradient by adding colour stops to the gradient slider, then selecting colours from the *Swatches* or *Colour* panels to apply to those stops. You can add as many colours (colour stops) as you can fit in the gradient slider; however, it is not recommended to use more colours than needed as you risk making your artwork look confusing and cluttered.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1408 Gradients And Patterns_4.ai...

1 Ensure that the rectangle containing the gradient is selected and that the *Gradient* panel is displayed

2 In the *Gradient* panel, click just below the gradient slider, as shown, to add a colour stop

3 Double-click on the new colour stop to display the *Colour* panel

4 Type the *CMYK* values: *C = 0%, M = 55%, Y = 20%, K = 5%*

This will add pink to the gradient...

5 Drag the new colour stop until its *Location* is about *25%*

This will increase the amount of purple and reduce the amount of pink...

6 Click just below the gradient slider about halfway along (*Location = 50%*) to add a fourth colour stop as shown

7 Repeat steps *3* and *4* to apply the *CMYK* values: *C = 0%, M = 30%, Y = 60%, K = 5%*, then click on the canvas to deselect the rectangle

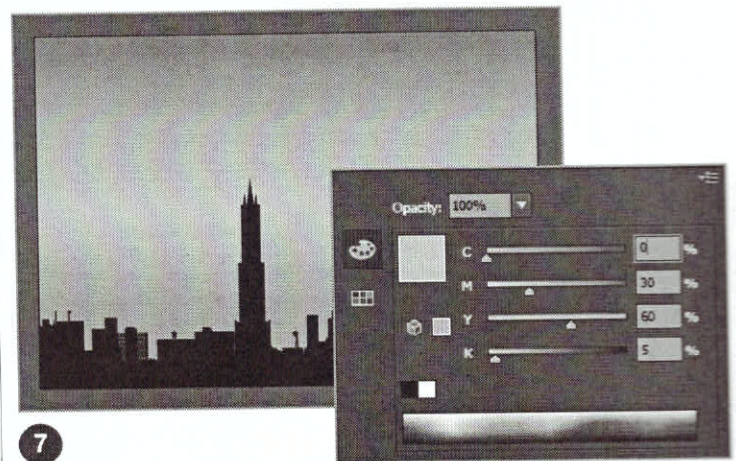*This will add a lighter shade of orange into the centre of the gradient*
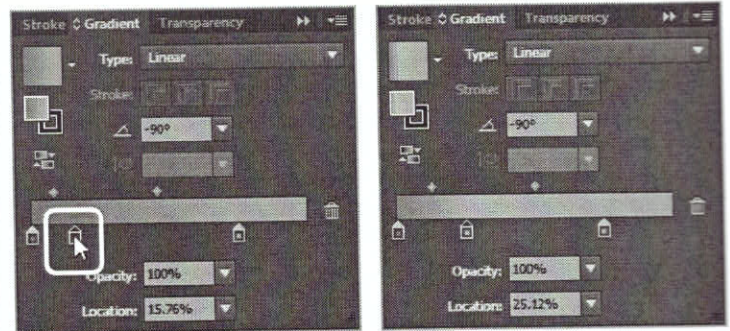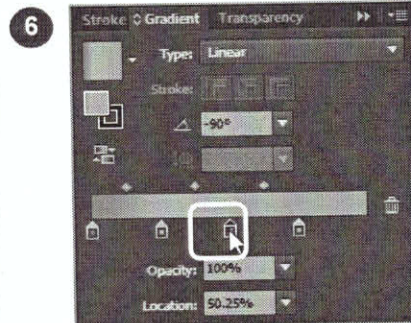
For Your Reference...

To *add colours* to a *gradient*:

1. Select the object and display the *Gradient* panel
2. Click just below the *gradient slider* at the desired point to add a colour stop
3. Double-click on the colour stop to select a colour from the *Swatches* or *Colour* panel

Handy to Know...

- To remove a colour stop, click and drag the colour stop off the *Gradient* panel.
- Diamond icons appear above the gradient slider and, by default, are midway between two colour stops. This is called the colour's *midpoint* and you can drag the diamonds to increase or decrease the amount of colour.

APPLYING A RADIAL GRADIENT

A *radial gradient* is a fill made up of two or more colours that radiate from the centre to the outermost point of the gradient (or filled object). Many of the tools and options available to work with linear gradients also apply to radial gradients. In this exercise you will create a circle and then apply a default radial gradient.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1408 Gradients And Patterns_5.ai...

1 Navigate to *Artboard 2*, ensure that no objects are selected, then press `L` to select the *Ellipse* tool

2 In the *Tools* panel, click on *Default Fill and Stroke* (or press `D`) to ensure that the default fill and stroke are applied

3 Point to the intersection of the two guides so that the label *intersect* appears

4 Hold down `Alt`, then click on the intersection to display the *Ellipse* dialog box

By holding [Alt] we indicate where to position the centre of the shape...

5 Type in a *Width* and *Height* of *4.5 cm*, then click on [OK]

6 In the *Gradient* panel, click on the drop arrow for *Gradient*, then select **White, Black**

7 Click on the drop arrow for *Type*, then select **Radial**
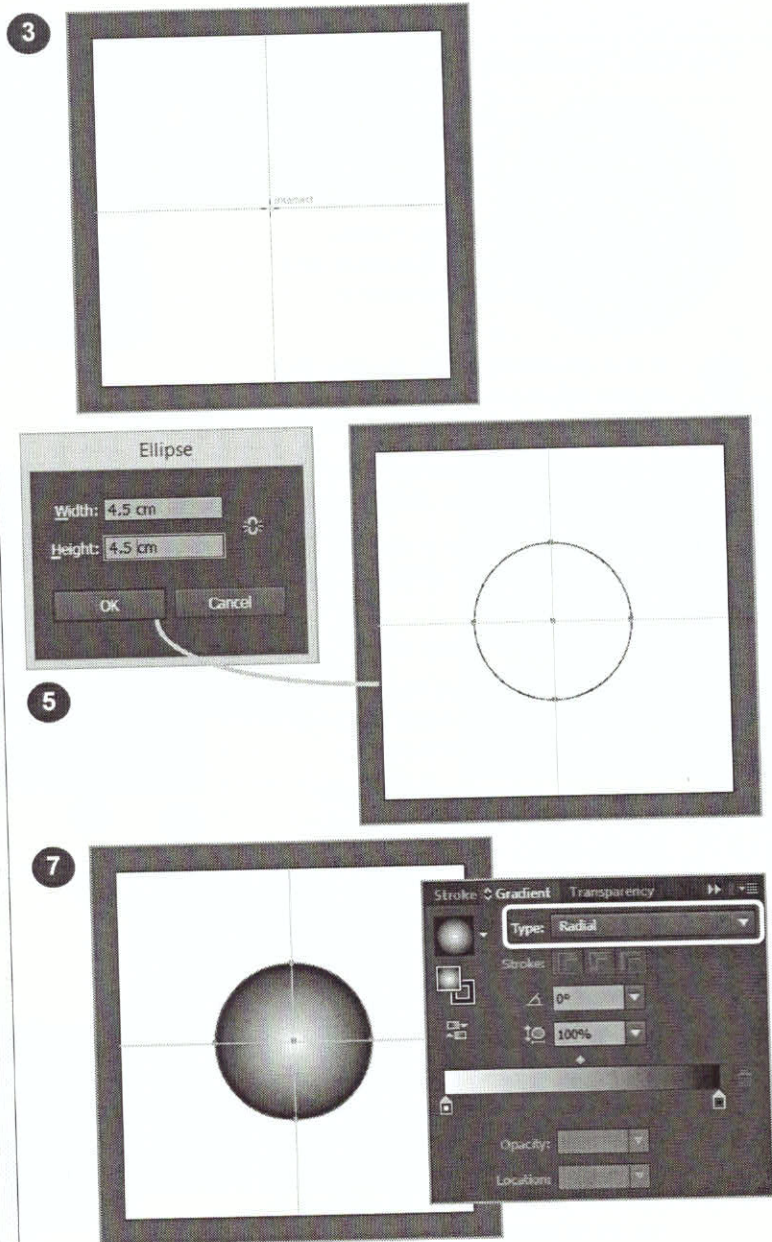
For Your Reference...

To *apply* a *radial gradient*:

1. Select the object, then click on *Gradient* in the panel dock
2. Click on the drop arrow for *Type*, then select **Radial**

Handy to Know...

- You can switch between a radial and linear gradient. To do this, select the object, display the *Gradient* panel, click on the drop arrow for *Type*, then select either **Radial** or **Linear**.

SAVING A GRADIENT

If you have created a gradient that you want to use in the future, you can save the gradient as a swatch. Once saved, the gradient swatch will appear in the *Swatches* panel – but only for the current document. In this exercise you will change the gradient colours as well as add colours. You will then save the gradient as a swatch.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1408 Gradients And Patterns_6.ai...

1. Select **View** > **Guides** > **Hide Guides**, then select the circle and ensure the *Gradient* panel is displayed

2. In the *Gradient* panel, double-click on the left colour stop in the gradient slider, then click on *Swatches*

3. Click on **CMYK Cyan** (or a pale blue) the apply this colour, then press Esc

4. Repeat steps *2* and *3* to apply **CMYK Yellow** (or another yellow) to the right colour stop

   Let's add more colour stops...

5. Add six colour stops, then adjust the stops to create an equal distance between each, as shown

6. Adjust the colours so that each colour stop alternates between **CMYK Cyan** and **CMYK Yellow** (or the blue and yellow you selected)

7. With the circle still selected, press X to select *Stroke*, press / to remove the stroke (apply *None*), then deselect the circle to view the result

   Now let's save the gradient...

8. In the *Gradient* panel, click on the drop arrow for *Gradient*, then click on *Add to Swatches*

   The new swatch will now appear in the list of gradients
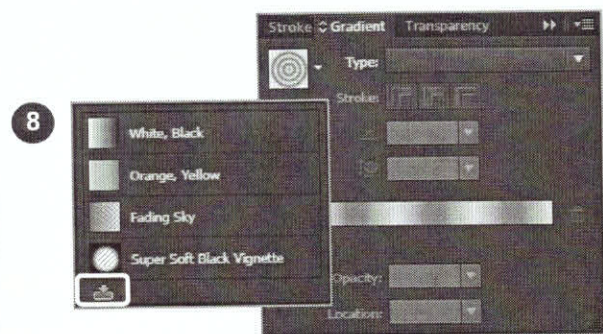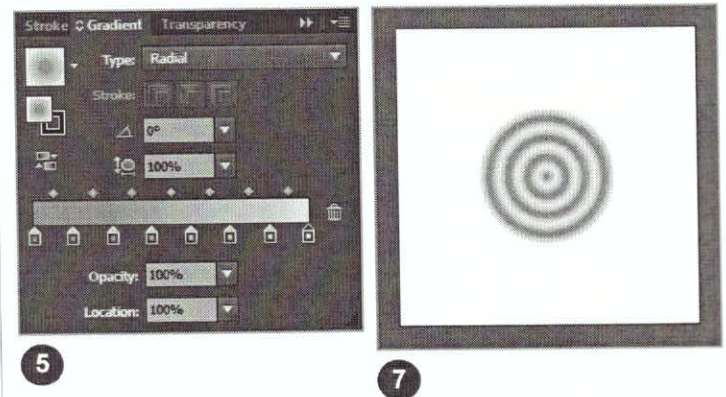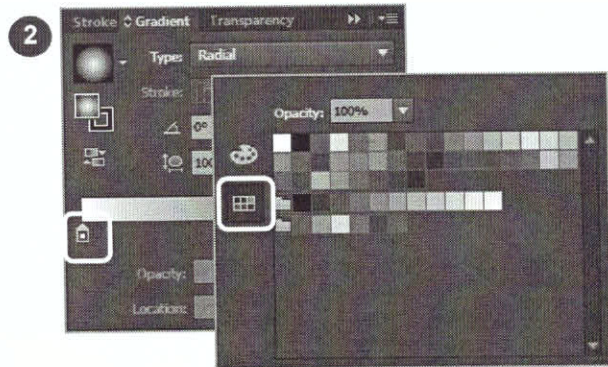
For Your Reference...

To *save* a *gradient*:

1. Apply a gradient to the object, then add and adjust colours and stop locations as required

2. Click on the drop arrow for *Gradient* in the *Gradient* panel, then click on *Add to Swatches*

Handy to Know...

- Clicking on *Gradient* in the *Tools* panel will apply the gradient most recently used.

- You can adjust the *opacity* (transparency) of a gradient colour in the *Gradient* panel by clicking on the required colour stop, then typing the value in *Opacity*.

APPLYING A GRADIENT TO A STROKE

As well as applying gradients to fills, you can apply a gradient to a stroke. In principle, the technique is the same as that used when applying a gradient to a fill, but you will need to ensure the stroke is thick enough to display the effect of the gradient – applying a gradient to a stroke with a width of *1 px* will not be very effective.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1408 Gradients And Patterns_7.ai...

1 Select the circle, press Ctrl + 0 , then press X until **Stroke** is selected in the **Tools** panel

There is currently no stroke applied to the circle...

2 In the panel dock, click on **Swatches**, then click on **White, Black** to apply this gradient to the stroke

As the stroke is currently 1 px thick, it is difficult to see the effect...

3 In the **Control** panel, increase **Stroke** to **8 px**, then click on the artboard to see the effect
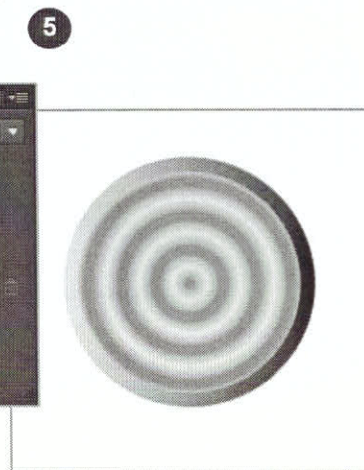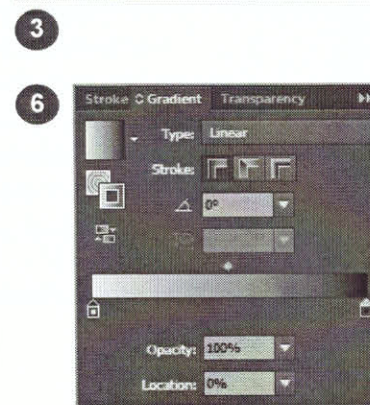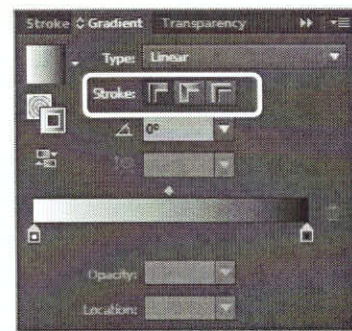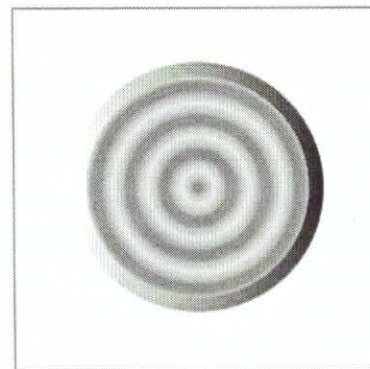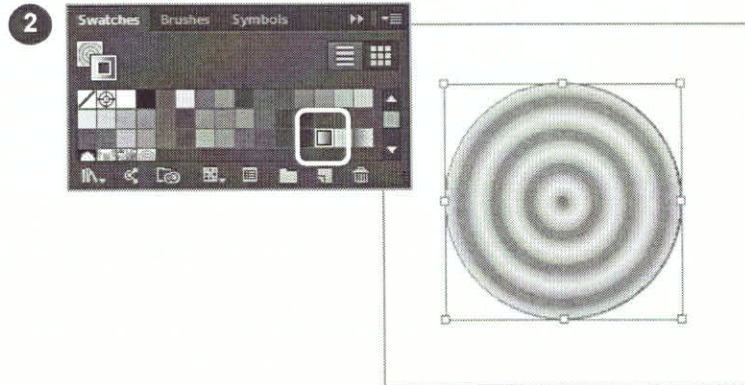
4 Select the circle, then display the **Gradient** panel

5 Click on each of the three options for **Stroke** to see the effect, then reset **Stroke** to **Apply gradient within stroke** (the first option)

6 Double-click on the left colour stop in the **Gradient** panel, then click on **CMYK Yellow**

Yellow now replaces white in the gradient...

7 Click elsewhere to see the effect

For Your Reference...

To **apply** a **gradient** to a **stroke**:
1. Select the object, then click on the **Stroke** box
2. Display the **Swatches** panel, then click on a gradient swatch
3. In the **Gradient** panel, select a **Stroke** option and other gradient formatting

Handy to Know...

- The three stroke options in the **Gradient** panel are **Apply gradient within stroke**, **Apply gradient along stroke** and **Apply gradient across stroke**. Each option changes the direction of the gradient, from left to right, right to left and inside to outside.

NOTES:

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