

## CHAPTER 12

## INTRODUCTION TO DRAWING

## INFOCUS

You can create drawings in Illustrator using a variety of different tools. The tool you choose depends on what kind of line you wish to draw. For instance the **Pen** tool in Illustrator can be a very difficult tool to master but it also has the potential to be one of the most useful tools you can use in Illustrator. The **Pen** tool allows you to draw straight and curved paths by positioning paths between anchor points. You can also use the **Pencil** tool which allows you to draw freeform lines or the **Curvature** tool which allows you to draw curved lines

**In this session you will:**

- ✓ gain an understanding of the drawing tools that are available in *Illustrator*
- ✓ learn how to draw a straight path with the **Pen** tool
- ✓ learn how to draw closed paths with the **Pen** tool
- ✓ learn how to draw curved paths with the **Pen** tool
- ✓ gain an understanding of how to work with and modify curved lines
- ✓ gain an understanding of how to adjust the curves created by the **Pen** tool
- ✓ learn how to draw paths using the **Curvature** tool
- ✓ learn how to draw paths with the **Pencil** tool
- ✓ learn how to apply colour to closed paths.

# UNDERSTANDING DRAWING IN ILLUSTRATOR

There are a number of tools in Illustrator that you can use for drawing, depending on what kind of line you wish to produce and how you prefer to work. You can use these tools to create lines

(open paths) or shapes (closed paths). Some of the tools available include the **Pen** and **Pencil** and curvature tools.

## Anchor Points

There are two kinds of anchor points – **corner** anchor points and **smooth** anchor points. A corner anchor point is used when drawing straight lines and a smooth anchor point is used when drawing curved lines. Both smooth and corner anchor points are created with the **Pen** tool - whether the anchor point is smooth or corner simply depends on the way you place it. For instance, if you click once on an artboard with the **Pen** tool selected, a corner anchor point will be created. If you click on the artboard, hold the mouse button down and drag, a smooth anchor point is created.

## Paths

A path is the line between two or more anchor points. There are two kinds of paths – **closed paths** and **open paths**. An open path is a line whereas a closed path is a shape as it means that the path ends where it began. To close a path you must click on the first anchor point that you defined. A circle (o) will appear next to the cursor when you point to the first anchor point, indicating that clicking on the anchor point will close the path.

## Drawing A Curve

To define a smooth anchor point and build a curve, select the **Pen** tool then click on the artboard, ensuring you hold down the mouse button and drag in any direction. As you drag, control handles will appear. The direction that you drag the control handle will determine the direction, slope and height of the curve.

## The Pen Tool

When creating a path with the **Shapes**, **Pencil** and **Paintbrush** tools, you click and drag to create a path and Illustrator adds anchor points as the path is drawn. However when using the **Pen** tool, you click to place anchor points and Illustrator creates a path between the anchor points. This allows you to create a more specific path and it also makes it easier to edit and modify the path by manipulating the anchor points after the path is created.

## The Pencil Tool

The **Pencil** tool allows you to draw open and closed paths in a way that mimics drawing with a pencil on paper. Anchor points are created automatically as you draw with the pencil tool and you are not able to manually select where they are located on a path. However once the path is complete, you can adjust them as required. The **Pencil** tool is particularly useful when sketching quickly or creating a rough representation of an idea. You may find that it is easier to use a graphics tablet or some kind of digital device with a touch screen so you can use your hand or a stylus rather than a mouse which can be difficult to use when drawing.

## The Curvature Tool

The **Curvature Tool** provides a way to draw precise curved paths in a way that is easy and more intuitive than the **Pen** tool. To begin using the tool, create two anchor points (as you would when using the **Pen** tool) by clicking on the artboard. Point to various parts of the artboard display a preview of the path that could be drawn between the two anchor points. This preview is called a **rubber band** preview. You can turn off the rubber band preview by selecting **Preferences > Selection & Anchor Display > Enable Rubber Band for Pen tool**.

# DRAWING A STRAIGHT PATH WITH THE PEN TOOL

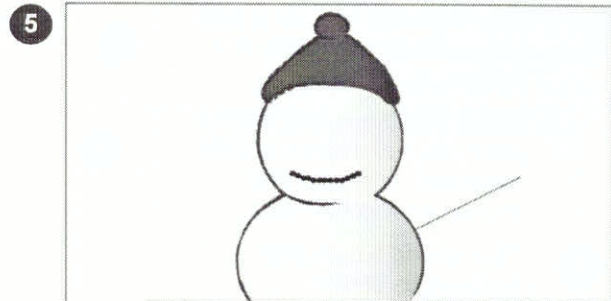
When using the **Pen** tool to draw straight lines or straight path segments you need to click to place **corner** anchor points. Illustrator will then draw the lines between each corner anchor point that

you place. In this exercise you will plot a series of corner anchor points to draw an open path shape.

## Try This Yourself:

Before starting this exercise you **MUST** open the file *IL1419 Drawing\_1.ai...*

- 1 In the **Tools** panel click on the **Pen** tool to select it  
*Notice the cursor now appears with a pen nib icon and an asterisk which means it is ready to draw paths...*
- 2 In the **Tools** panel ensure the **Stroke** is set to black and the **Fill** is set to **None**
- 3 Click once to insert an anchor point, as shown  
*A minus sign (-) next to the pointer means that it will remove the anchor point if you click on it...*
- 4 Move the mouse pointer diagonally to the right, then click once to position a second anchor point  
*A path is now created between these two anchor points...*
- 5 Hold down **Ctrl** then click on the artboard to deselect the path  
*The Pen tool displays an asterisk again, indicating it is ready to begin a new path...*
- 6 Press **V** to activate the **Selection** tool, then click on the path you drew in steps 3 to 5 to select it
- 7 In the **Control** panel click on the up spinner arrow for **Stroke** until it displays **7px**
- 8 Repeat step 3 to 5 to draw the other arm



## For Your Reference...

To **draw a straight path**:

1. Select the **Pen** tool in the **Tools** panel
2. Click once to position an anchor point
3. Click somewhere else on the page to insert a second anchor point and draw a straight path between the two anchor points

## Handy to Know...

- If you make a mistake while drawing, press **Ctrl** + **Z** to delete the last-defined anchor point and path segment.
- Pressing **Del** while drawing a path will also delete the last defined anchor point and path segment.

# DRAWING CLOSED PATHS WITH THE PEN TOOL

When you draw open path shapes with the **Pen** tool and click or select the object or another tool, Illustrator assumes that you have finished drawing the object. However if you want to create

an object with a closed path (such as a square) you must signify that you wish to close the path. This is achieved by clicking on the first anchor point that you defined.

## Try This Yourself:

Same  
File

Continue using the previous file with this exercise, or open the file IL1419 Drawing\_2.ai...

1 Ensure the **Pen** tool is selected, then zoom in on the snowman's head

2 Set **Stroke** to **Black**, **Fill** to **None** and **Stroke Weight** to **2 px**

3 Click to place an anchor in the lower half of the snowman's face then click to draw a path and create the first side of a triangle, as shown

*Notice that the corner anchor point you just defined is solid (selected), while the first anchor point is hollow...*

4 Click to add a new path segment as shown

5 Point to the first anchor point and notice that the cursor displays a circle (o)

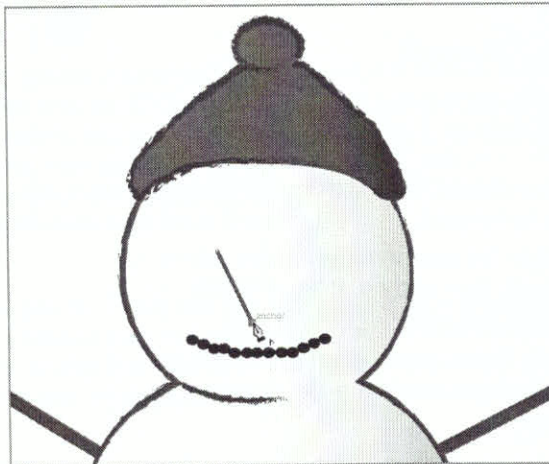
*The circle indicates that clicking will close the path...*

6 Click on the first anchor point to close the path

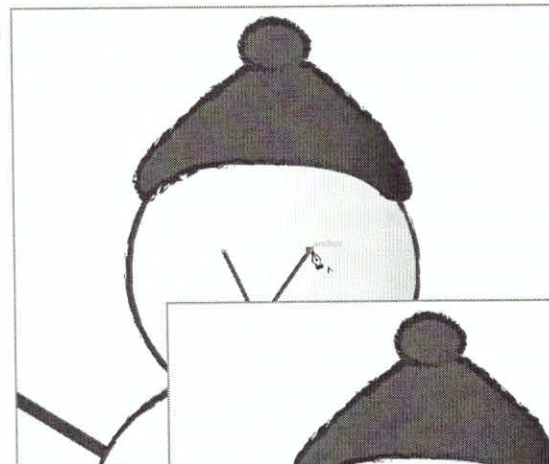
7 Point to another part of the screen

*As the path is now closed, the pointer displays an asterisk as it's ready to begin a new path*

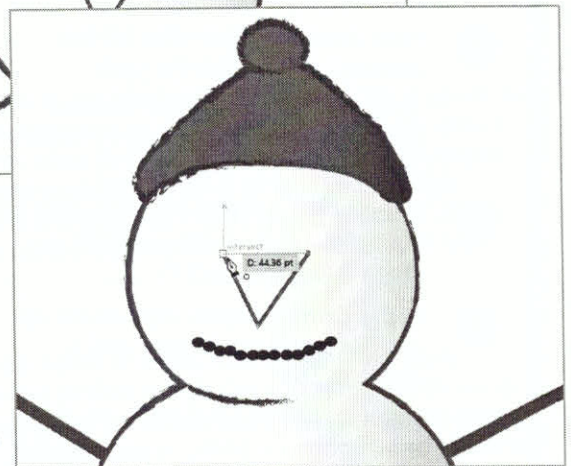
3



4



5



## For Your Reference...

To **close a path** using the **Pen** tool:

1. Press **P** to select the **Pen** tool
2. Point to the first anchor point that you defined
3. When a circle (o) appears beside the pointer, click on the anchor point to close the path

## Handy to Know...

- If you deselect a path while still drawing you can continue drawing the path by selecting the **Pen** tool and clicking on the last defined anchor point.

# DRAW CURVED PATHS WITH THE PEN TOOL

The **Pen** tool can be used to draw both straight and curved paths. To create a curved path, you must click, drag and point then click to place the next anchor point. One of the most common

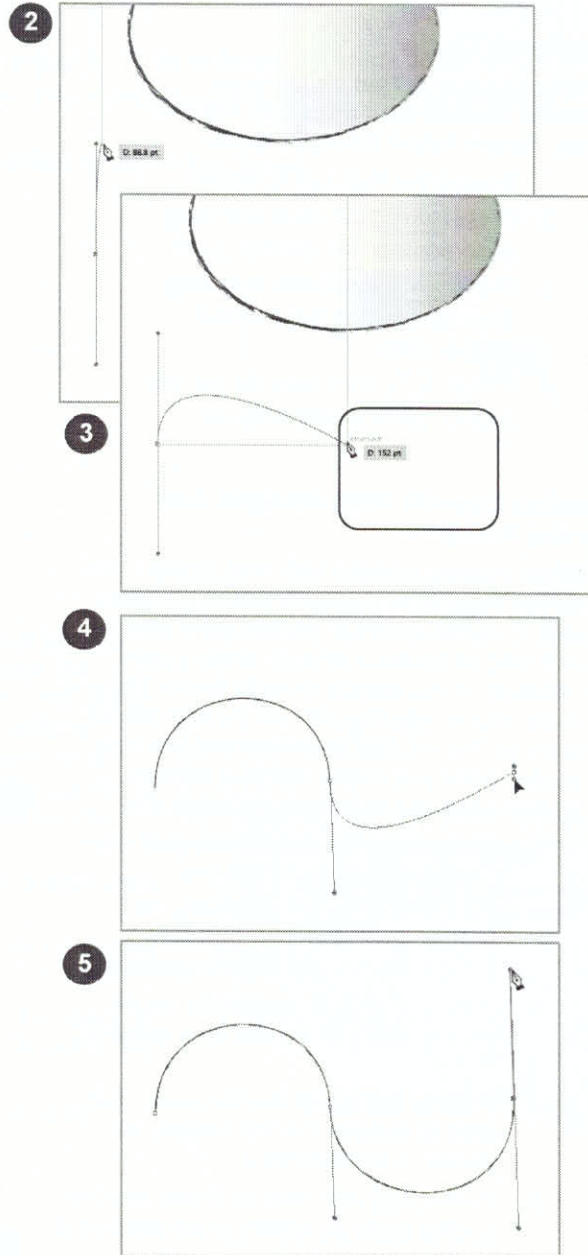
types of curves created using the pen tool is a **Bezier** curve which is a parametric curve that looks like an **S** on it's side.

## Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1419 Drawing\_3.ai...

- 1 Ensure the **Pen** tool is selected in the **Tools** panel, then navigate to the bottom of the artboard
- 2 Press **Shift**, click and drag upwards, then release the mouse button and release **Shift**, to create a curved anchor point as shown  
*Pressing **Shift** forces the control handle to be straight; dragging upwards defines an upwards curve...*
- 3 Point to where you will position the second anchor point, as shown, then click and drag down  
*Dragging down completes the upwards curve and indicates the next curve will be a downwards curve; if you dragged upwards the curve would twist...*
- 4 Release the mouse button and the **Shift** key, then click to position the third anchor point, as shown
- 5 Press **Shift**, then click and drag upwards to create a curved line as shown
- 5 Press **Shift** point to the position for the next anchor point, as shown then click and drag upwards to create a curve
- 6 Press **Ctrl** and click on the artboard to deselect the object
- 7 Press **V** to activate the selection tool, select the curved line, then press **Del**



## For Your Reference...

To **draw curved paths with the pen tool**:

1. Select the **Pen** tool in the **Tools** panel
2. Click hold and drag on the artboard
3. Click to position the anchor point

## Handy to Know...

- To adjust a curved line, select it using the direct select tool then click and drag the handles to change the direction of the curve.
- To modify a curved line, select the curved line then press the **-** and **+** keys to reduce or increase the curve.

# DRAWING OBJECTS WITH CURVED PATHS

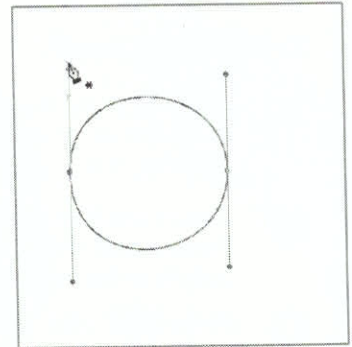
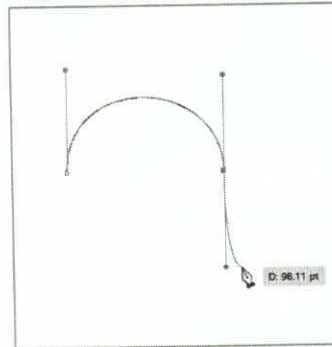
With a basic understanding of how to close paths with the **Pen** tool as well as how to create curves, you can now draw curved closed path objects such as circles. Although you can draw a circle

using the Ellipse tool, the **Pen** tool allows for greater control over the shape of the circle. It also allows you to easily manipulate the shape once you have drawn it.

## Drawing A Circle

You can use the **Pen** tool to draw curved shapes such as circles and the like. Simply follow the steps below:

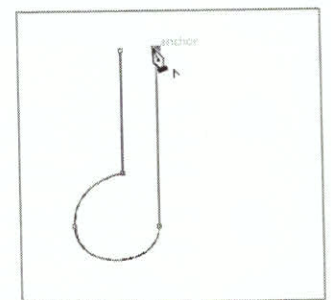
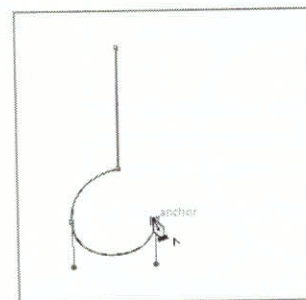
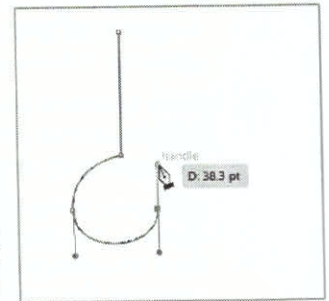
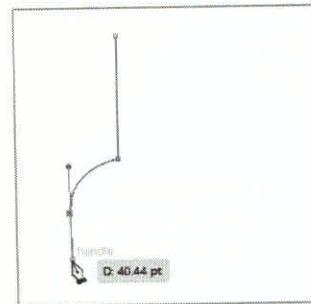
1. Ensure the Pen tool is active
2. Press **Shift**, then click and drag up to position the anchor point
3. Press **Shift**, then click and drag down to position the second anchor point
4. Press **Shift**, then click on the first anchor point to and drag up



## Drawing Objects With Straight And Curved Paths

When drawing objects with both straight and curved segments the same principles apply – click to define a corner anchor point and click and drag to create a smooth anchor point. However, if you want a straight line to follow a curve you need to click on the last anchor point as this informs Illustrator that the next anchor point you define will be a corner anchor point and therefore a straight line.

1. Ensure the **Pen** tool is selected, then create a straight vertical line
2. Click and hold to position the third anchor point and drag to create a curved line, as shown in screenshot 2
3. Click and drag to create the fourth anchor point, as shown in screenshot 3
4. Point to the fourth anchor point, then click to remove the top handle, as shown in screenshot 4
5. Press **Shift** and click to create another anchor point as shown in screenshot 5



# ADJUSTING CURVES CREATED BY THE PEN TOOL

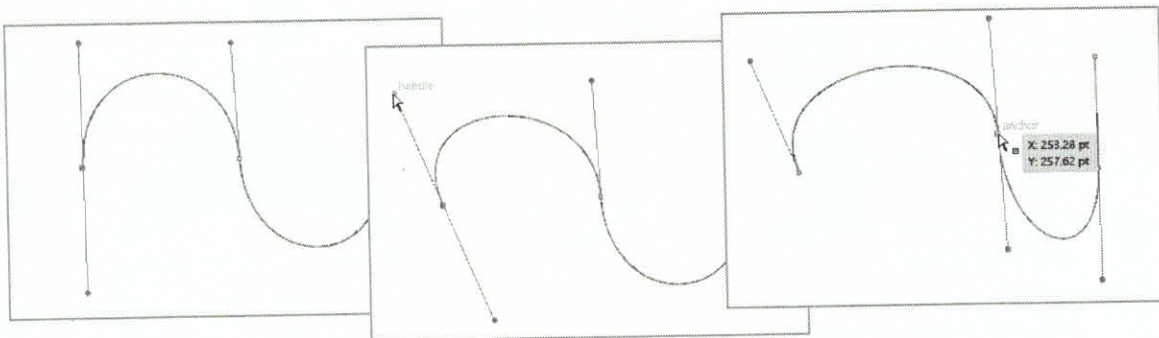
Once you have defined the smooth anchor points and created the required curves you may need to edit the curve(s) by moving the anchor points clicking and dragging on the control handles to

change the shape and height of the curve. You may also need to change the direction of a curve.

## Adjusting The Height And Slope Of A Curve

Once you have created a curve you may need to adjust it. To do so follow the steps below:

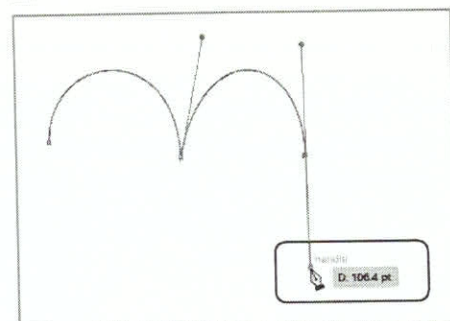
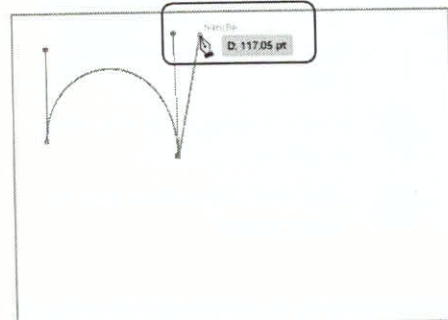
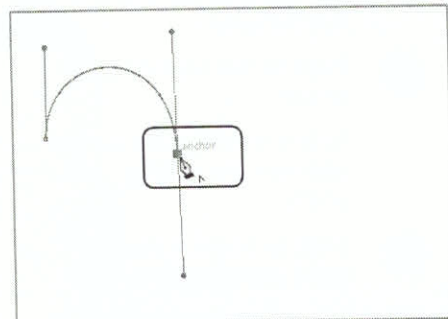
1. Ensure the **Direct Selection** tool is active, then select the curve so that the anchor points (handles) are displayed
2. Click and drag on the anchor points or handles to adjust the curves



## Defining The Direction Of A Curve

By default when you build curves with the **Pen** tool you are creating a **Bezier** curve. Each curve follows on from the previous to keep lines and anchor points smooth. This useful for some things but other times you may wish to build an upwards curve followed by a second upwards curve, or a downwards curve followed by a second downwards curve. To do this you need to change direction of the control handle using the following steps:

1. Ensure the **Pen** tool is active then create a downward curve
2. Point to the second anchor point as shown in the first screenshot
3. Hold down **Alt**, then click and drag up to complete a second upwards curve anchor point, as shown to the right
4. Click to position the next anchor point then drag down, as shown to the right



# DRAWING PATHS WITH THE CURVATURE TOOL

The **Curvature** tool allows you to perform a multitude of different drawing techniques (including curved and straight line). Many find it easier to create curved lines with the **Curvature**


tool rather than the **Pen** tool as it is more intuitive and precise.

## Try This Yourself:

Same  
File

Continue using the previous file with this exercise, or open the file IL1419 Drawing\_4.ai...

- 1 In the **Tools** panel click on the **Curvature** tool to select it

Alternatively you can press **Shift** +  ...

- 2 Click to position two anchor points as shown

At the moment it looks as if we have drawn a straight path but you will see this is not the case...

- 3 Point to the position as shown

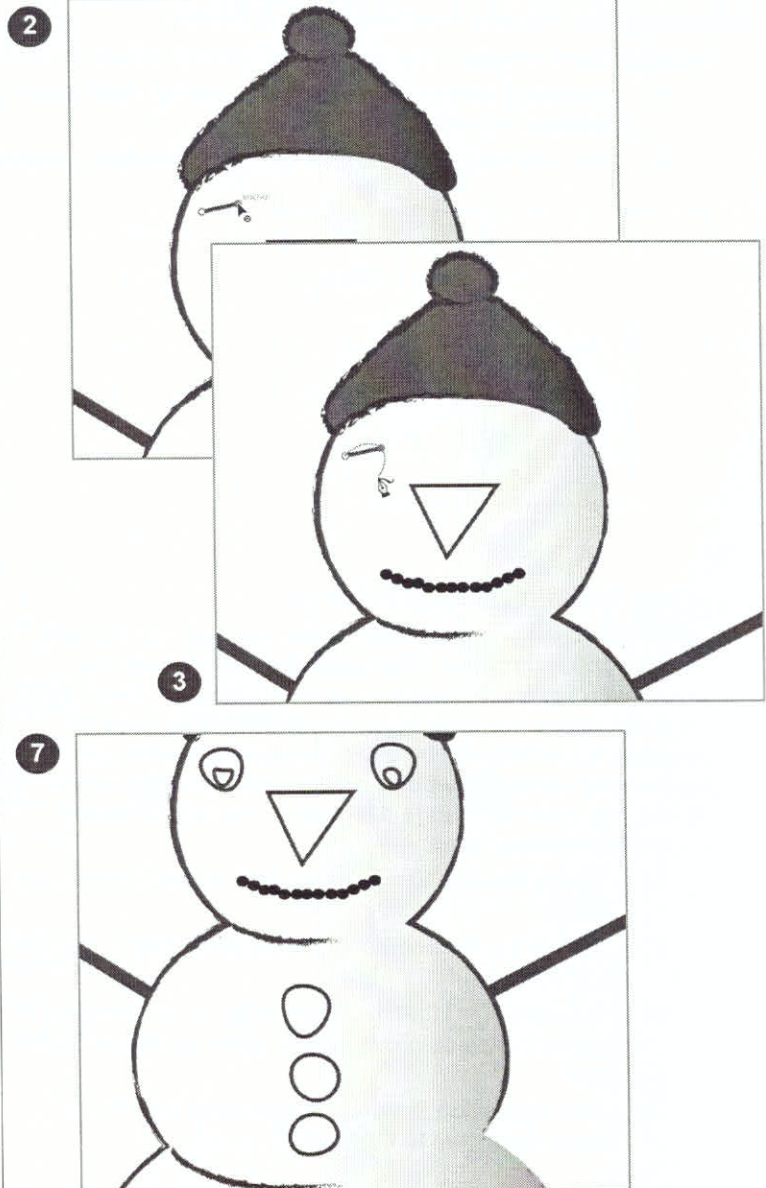
Notice how the line curves between the anchor points...

- 4 Click to position anchor point and close the path

- 5 Repeat the above steps to draw another eye at approximately the same size

- 6 Repeat steps 1 to 4 to draw buttons

- 7 Use the **Curvature** tool to draw pupils



## For Your Reference...

To **draw paths** with the **Curvature tool**:

1. Click to create an anchor point
2. Click to create another anchor point
3. Point then click

## Handy to Know...

- If you wish to draw a straight line using the **Curvature** tool, hold down **Shift** before you position the anchor point.
- You can modify the curves in a line drawn with the **Curvature** tool by activating the **Selection** tool, clicking on a path and dragging it.



# DRAWING PATHS WITH THE PENCIL TOOL

The **Pencil** tool allows you to draw paths with great fluidity and precision. It is different to the **Pen** tool and the **Curvature** tool in that once you have created the first anchor point you can

simply click and drag to draw paths. If you release the mouse button down, it will stop drawing.

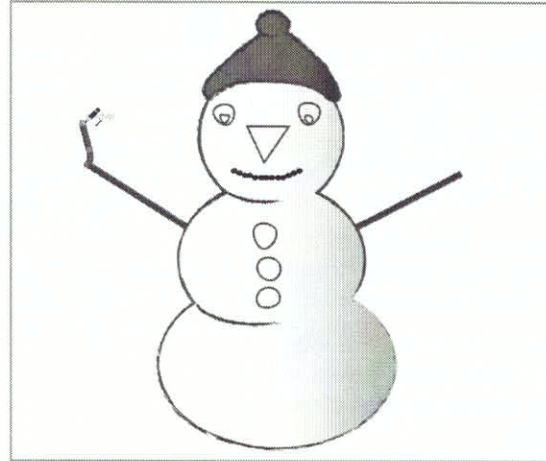
## Try This Yourself:

Same  
File

Continue using the previous file with this exercise, or open the file *IL1419 Drawing\_5.ai...*

- 1 In the **Tools** panel select the **Pencil** tool, then zoom out to see the whole snowman
  - 2 Ensure the stroke is set to 7
- Let's draw hands...
- 3 Click and drag to draw a slightly curved line at the end of the left arm, as shown
  - 4 Press **Ctrl** and click on the pasteboard
  - 5 Draw another two fingers
  - 6 Draw the other hand
  - 7 Change the stroke to 2 pt then draw the scarf
  - 8 Draw lines on the carrot nose

2



8



## For Your Reference...

To **draw paths** with the **Pencil tool**:

1. Select the **Pencil** tool
2. Click and drag on the artboard

## Handy to Know...

- If you double-click on the **Pencil** tool in the **Tools** panel, the **Pencil Options** dialog box will display with a number of options you can choose from for how the **Pen** tool will work.

## ADD FILL TO CLOSED PATHS

Adding colour to closed paths is very simple and is performed in much the same way as you would apply any kind of fill to a shape. You can add all kinds of fill including colour, patterns and

gradients. When your closed paths are part of a graphic it help to enhance the appearance of your artwork.

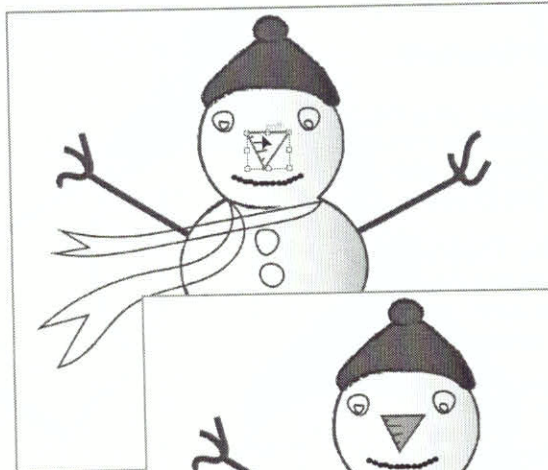
### Try This Yourself:

Same  
File

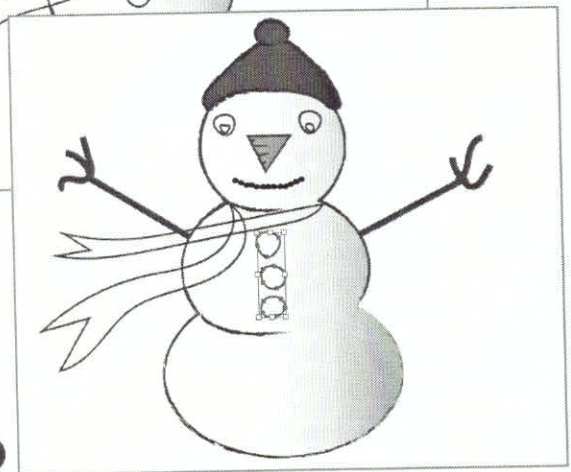
Continue using the previous file with this exercise, or open the file *IL1419 Drawing\_5.ai...*

- 1 Ensure the **Selection** tool is active, then click on the carrot nose to select it
- 2 Double-click on the **Fill** icon in the **Tools** panel, select a shade of orange, then click on [OK]
- 3 Click on the first button, hold down **Shift**, then click on the other two buttons to select all three buttons
- 4 Repeat step 2 to apply black to the buttons
- 5 Select the two large eye shapes and make them black
- 6 Select both sections of the scarf, then repeat step 2 to apply a shade of pink

1



3



6



### For Your Reference...

To **add colour to closed paths**:

1. Ensure the **Selection** tool is active
2. Click on the required closed path
3. Double-click on the **Fill** icon in the **Tools** panel
4. Select a colour, then click on [OK]

### Handy to Know...

- Using the **Live Paint Bucket** tool you can add fill to closed paths.