National Centre for Computing Education

Raspberry Pi
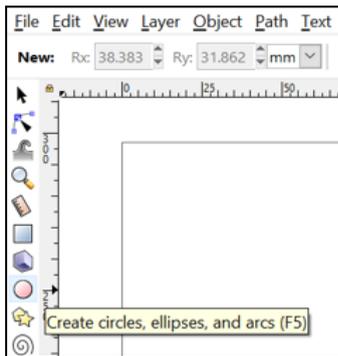
Create and manipulate ellipses

These instructions will guide you through creating and manipulating shapes in Inkscape, including altering the fill, stroke, and any shape-specific attributes.

The latest version of Inkscape was used at the time of creating this resource (Inkscape 0.92). Note that there may be differences between versions.

Task Create an ellipse

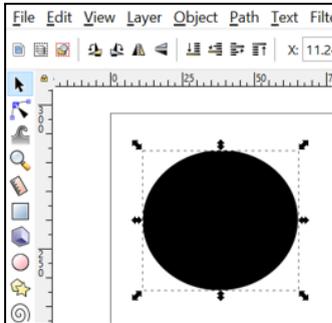| Steps	Instructions
1. **Drag** an ellipse shape onto the canvas.	Select the ellipse tool from the tool bar on the left side of the screen (the circle/ellipse icon).
	Click and hold the left mouse button on the canvas.
	Drag the mouse to draw an ellipse to the required size.
	Release the left mouse button to finish drawing your ellipse.

Task Alter the fill of an ellipse

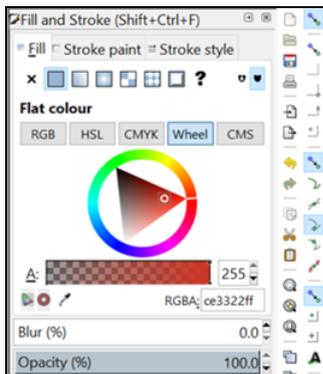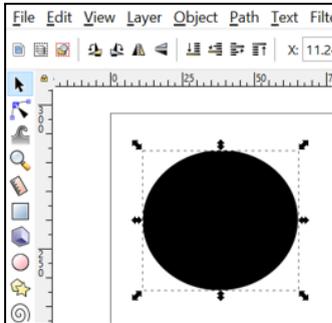| Steps	Instructions
1. **Select** the ellipse you wish to alter.	Select the selection tool from the tool bar on the left side of the screen (the black arrow icon). Click on the required ellipse to select it. Black double-ended arrows will appear around the selected ellipse.
2. **Select** the required fill colour.	Click on the fill tab from the fill and stroke window on the right side of the screen. Choose a paint type by clicking on one of the options shown as squares. Options include: No paint, Flat color, Linear gradient, Radial gradient, Pattern, Unset paint. Use flat colour for now. Below the text that reads 'flat colour', select the wheel option. Select a colour from the outer wheel. Select the required tone from the centre triangle. **Tip:** You can also choose a fill colour for a selected shape using the bar at the bottom of the page.

Task Alter the stroke of an ellipse

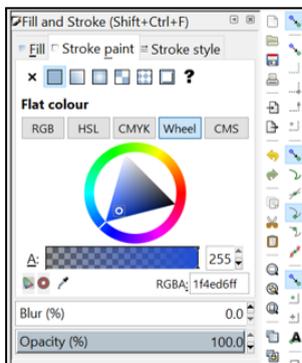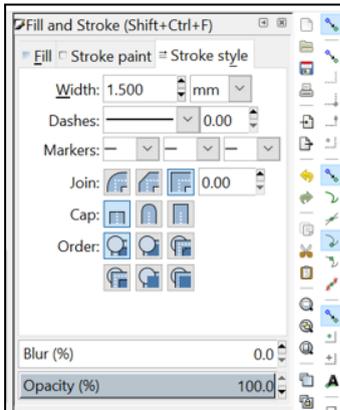| Steps	Instructions
1. **Select** the ellipse you wish to alter.	Select the selection tool from the tool bar on the left side of the screen (the black arrow icon). Click on the required ellipse to select it. Black double-ended arrows will appear around the selected ellipse.
2. **Select** the required stroke colour.	Click on the stroke paint tab from the fill and stroke window on the right side of the screen. Choose a paint type by clicking on one of the options shown as squares. Options include: No paint, Flat color, Linear gradient, Radial gradient, Pattern, Unset paint. Use flat colour for now. Below the text that reads 'flat colour', select the wheel option. Select a colour from the outer wheel. Select the required tone from the centre triangle. **Tip:** You can also choose a stroke colour for a selected shape using the bar at the bottom of the page, once a paint type has been selected.

3.	**Select** the required stroke style.	Click on the stroke style tab from the fill and stroke window on the right side of the screen.
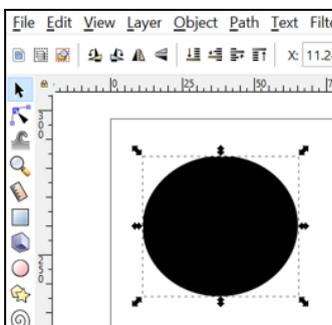
Change the width to the required size.

Select a suitable dash pattern. |

Task Alter the height and width of an ellipse

Steps	Instructions
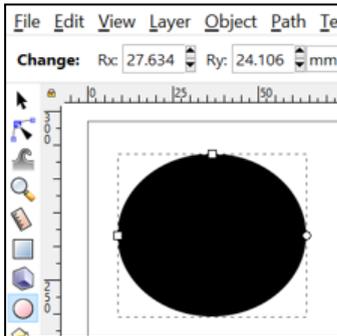| 1. **Select** the ellipse you wish to alter. | Select the selection tool from the tool bar on the left side of the screen (the black arrow icon).

Click on the required ellipse to select it.

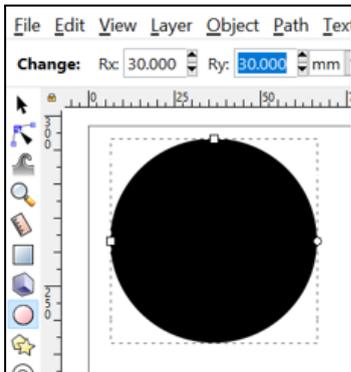Black double-ended arrows will appear around the selected ellipse. |

2. **Select** the ellipse tool.

Select the ellipse tool from the tool bar on the left side of the screen (the circle/ellipse icon).

White nodes will appear at the top, left side, and right side of the selected ellipse.

3. **Alter** the height and width of an ellipse.

There are two ways to alter the height and width of an ellipse.

Method 1:

Click and drag either of the nodes on the left side or top of the ellipse. These nodes alter the **Rx:** (horizontal radius) and **Ry:** (vertical radius) of the ellipse.
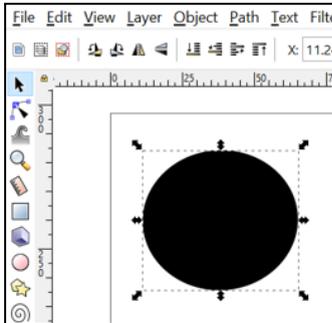
Method 2:

To alter the height and width nodes more accurately, change the **Rx:** (horizontal radius) and **Ry:** (vertical radius) dimensions at the top of the screen by using the up and down arrows or entering the required height and width.

Task Create a segment

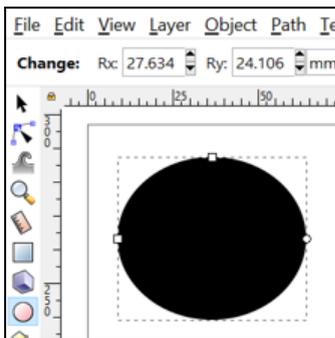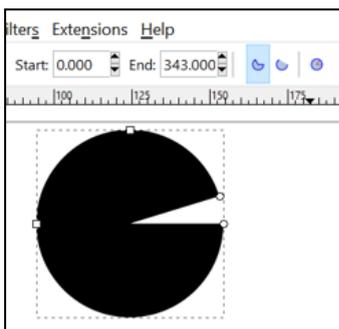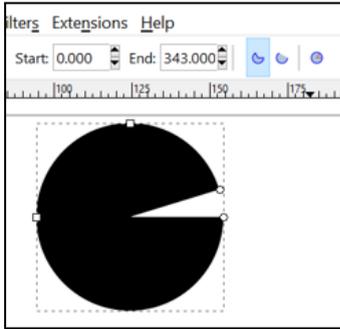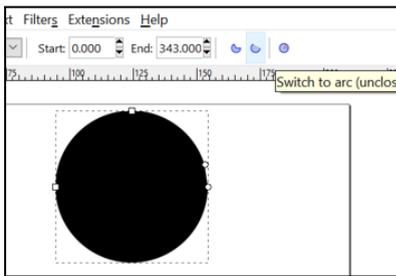| Steps	Instructions
1. **Select** the ellipse you wish to alter.	Select the selection tool from the tool bar on the left side of the screen (the black arrow icon). Click on the required ellipse to select it. Black double-ended arrows will appear around the selected ellipse.
2. **Select** the ellipse tool.	Select the ellipse tool from the tool bar on the left side of the screen (the circle/ellipse icon). White nodes will appear at the top, left side, and right side of the selected ellipse.
3. **Change** your ellipse to a segment.	There are two ways to create a segment. **Method 1:** Click and drag the node on the right side of the selected ellipse. As the ellipse changes to a segment, another node appears. These nodes alter the **Start:** and **End:** angles of the ellipse. **Method 2:** To alter the start and end angles more accurately, change the start and end angles at the top of the screen by using the up and down arrows or entering the required start and end angle. **Tip:** You can quickly switch between segments, arcs, and ellipses using the blue icons to the right of the end angle.

Task Create an arc

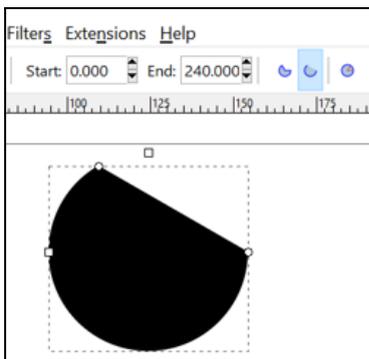| Steps	Instructions
1. **Create** a segment.	Follow all of the above instructions to create a segment.
2. **Switch** to an arc.	Click on the 'switch to arc' icon. The missing segment will close up, but the nodes will remain.
3. **Alter** the start and end of an arc.	There are two ways to alter the start and end of an arc. **Method 1:** Click and drag the nodes on the right side of the selected arc. These nodes alter the **Start:** and **End:** angles of the arc. **Method 2:** To alter the start and end angles more accurately, change the start and end angles at the top of the screen by using the up and down arrows or entering the required start and end angle. **Tip:**

You can quickly switch between segments, arcs, and ellipses using the blue icons to the right of the end angle.

Task Create a red ellipse with blue stroke

Paste your work here:

Explorer task Create a pink arc with red stroke

Paste your work here: