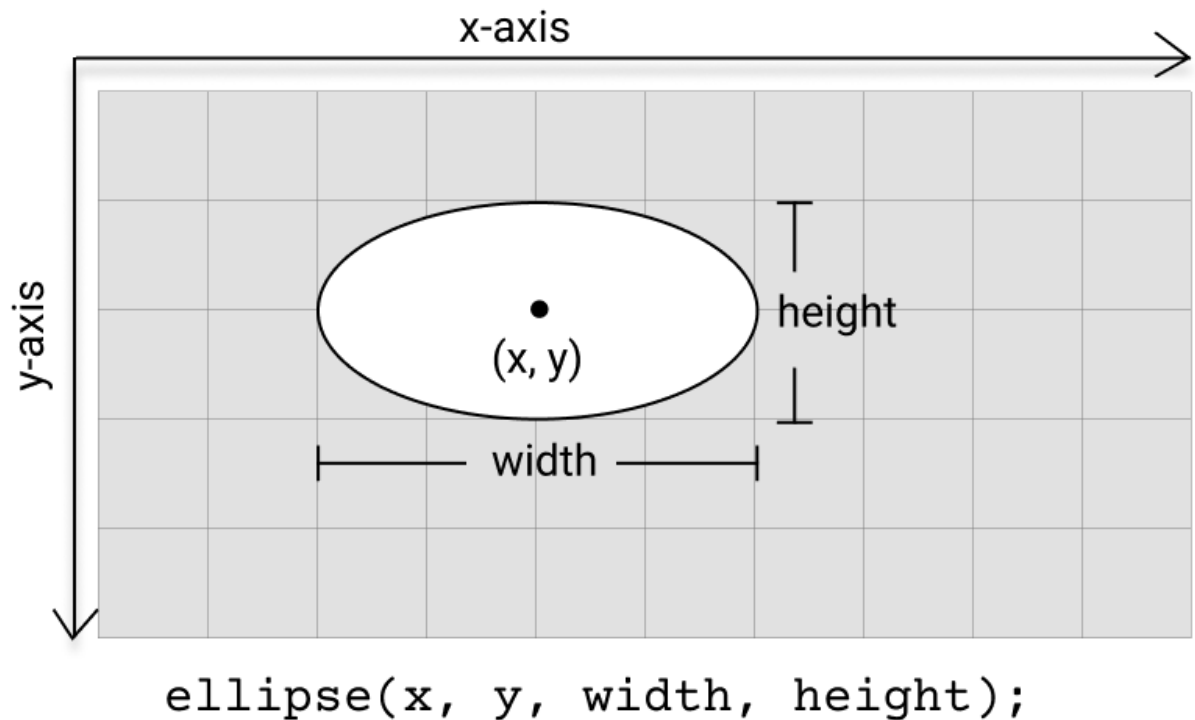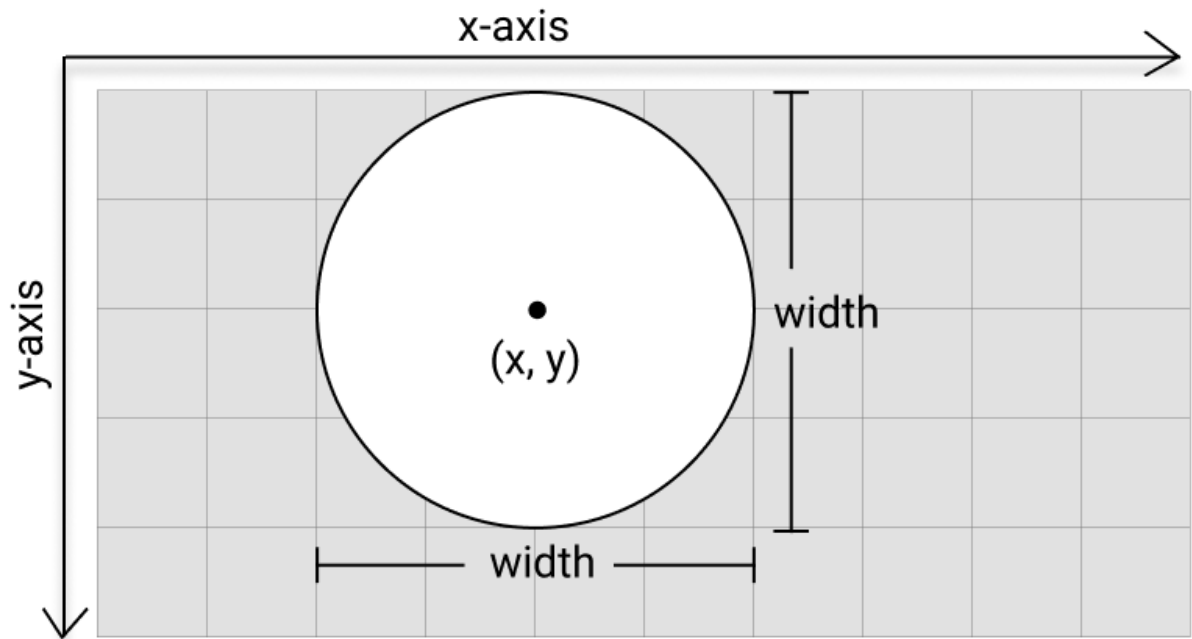**Circle and Ellipse**

3 min

The next shapes that we'll look at are some of the most popular shapes in modern architecture—ellipses and circles!

The `ellipse()` function is similar to the `rect()` function in requiring four parameters when called. The first and second parameters are the x and y location of where the ellipse is drawn to, but instead of the corner, ellipses are positioned by their center! The third [parameter](#) sets the width or the diameter along the x-axis of the canvas, and the fourth parameter is the diameter along the y-axis.


```
ellipse(x, y, width, height);
```

A circle is a special case of ellipse where the height is equal to the width of the circle. The `circle()` function has three parameters: the x and y coordinates for the center, and the width, or the diameter of the circle.

x-axis

y-axis

(x, y)

width

width

circle(x, y, width);

The way that the parameters for the `circle()` and `ellipse()` functions are interpreted can also be changed with the `ellipseMode()` function, which will be covered in detail in the Grouping and Transforming Shapes lesson.

Instructions

1.

Use the `ellipse()` function to draw an ellipse to the sketch with the center position at (150, 200) and the width of 150 pixels, and the height of 100 pixels.

Hint

Ellipses are drawn to the p5.js sketch using the center of the ellipse as the anchor point. The syntax of the `ellipse()` function is:

```
ellipse(x, y, ellipseWidth, ellipseHeight);
```

To draw an ellipse at (100, 50) where width is 200 pixels and height is 300 pixels, you would write:

```
ellipse(100, 50, 200, 300);
```

2.

Next to the ellipse that you just drew, draw a circle with a width of 75px and positioned at (300, 150).

Hint

The `circle()` function uses the following syntax:

```
circle(x, y, circleWidth);
```

To draw a circle at (100, 50) where width and height are 300 pixels, your code would look like this:

```
circle(100, 50, 300);
```

sketch.js

```
function setup(){
  createCanvas(400, 400);
  background(200);
}

function draw(){
  // Your drawing code goes here
  // TODO: Draw an ellipse at (150, 200), 150px width and 100px height
  ellipse(150, 200, 150, 100);
  // TODO: Draw a circle at (300, 150) and 75px width
  circle(300, 150, 75);
}
```