# FPS

3 min

Frames Per Second (FPS) specifies the number of frames displayed every second. When the FPS of animation is lower, it looks like it is in slow motion. When the frame rate is higher, the animation looks like it is being fast-forwarded.

p5.js will automatically run your code at 60 frames per second. However, you can manipulate the FPS by using the `frameRate()` function, which will change the number of frames shown per second to the number specified as the function's [argument](). For example, the code snippet below will cause the `draw()` function to run `numberOfFrames` times per second.

```
frameRate(numberOfFrames);
```

The `frameRate()` function will not go over 60 frames per second in p5.js. This is more than enough! A typical animation is between 24 to 30 frames per second.

FPS : 10 **FPS : 30** **FPS : 60**
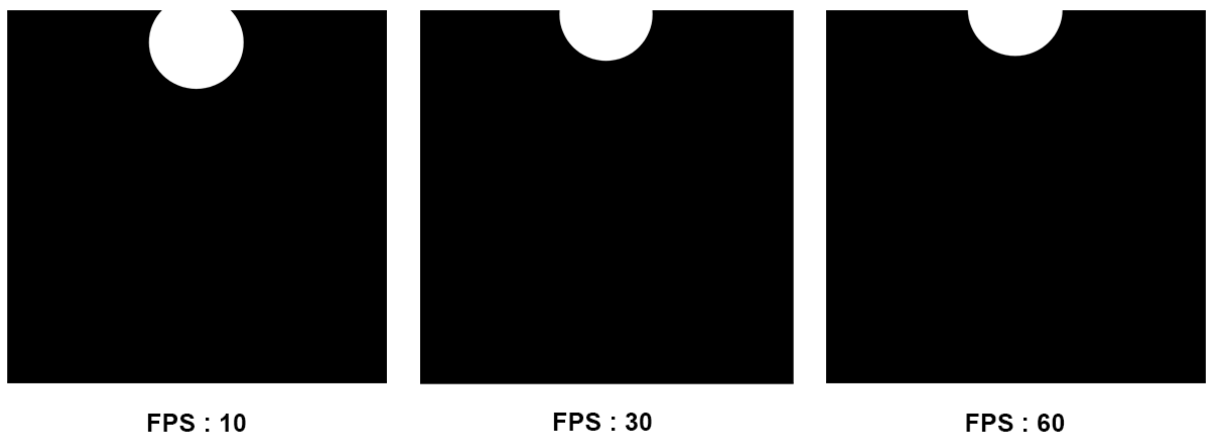
In the diagram above, you can see the ball dropping at ten frames per second (10 FPS), 30 frames per second (30 FPS), and 60 frames per second (60 FPS). Notice that when the animation has a lower frame rate, each frame is more distinct.

Instructions

1.

Let's play around with the frame rate to manipulate the speed the sketch is run at. Below the `createCanvas()` function, add a frame rate of 60 frames per second in the `setup()` function.

Hint

Use the `frameRate()` function in the `setup()` function to set the FPS of the sketch to 60.

2.

Below the line you just added, set the frame rate to 24 frames per second.

Remember that code runs from top to bottom, so this new frame rate will override the frame rate we set in the above instruction. Notice the change in animation speed.

Hint

Below the line you set the frame rate to 60 FPS, use the `frameRate()` function to set frame rate to 24.

3.

Below the line you just added, write a new `frameRate()` function and set it to run at 6 frames per second.

Notice how the animation has slowed down and now has a stop motion effect.

Hint

Below the line you set the frame rate to 24 FPS, use the `frameRate()` function to set the frame rate to 6.

sketch.js

```
let yPos = 0;
let ySpeed = 5;

function setup() {
  createCanvas(windowWidth, windowHeight);
  // TODO: Set the frame rate to be 60 FPS
  frameRate(60);
  // TODO: Set the frame rate to be 24 FPS
  frameRate(24);
  // TODO: Set the fram erate to be 6 FPS
  frameRate(6);
}

function draw() {
  background(0);
  fill(255);
  // Draws the ellipse
  ellipse(width/2, yPos, 100,100);
```

```
  // Moves the ellipse down the canvas
  yPos = yPos + ySpeed;
}
```