

# set()

Sets the color of a pixel or draws an image to the canvas.

`set()` is easy to use but it's not as fast as `pixels`. Use `pixels` to set many pixel values.

`set()` interprets the first two parameters as x- and y-coordinates. It interprets the last parameter as a grayscale value, a [R, G, B, A] pixel array, a `p5.Color` object, or a `p5.Image` object. If an image is passed, the first two parameters set the coordinates for the image's upper-left corner, regardless of the current `imageMode()`.

`updatePixels()` must be called after using `set()` for changes to appear.

## Examples

```
function setup() {
  createCanvas(100, 100);

  background(200);

  // Set four pixels to black.
  set(30, 20, 0);
  set(85, 20, 0);
  set(85, 75, 0);
  set(30, 75, 0);

  // Update the canvas.
  updatePixels();

  describe('Four black dots arranged in a square drawn on a gray background.');
}
```

```
function setup() {
  createCanvas(100, 100);

  background(200);

  // Create a p5.Color object.
  let black = color(0);

  // Set four pixels to black.
  set(30, 20, black);
  set(85, 20, black);
  set(85, 75, black);
  set(30, 75, black);

  // Update the canvas.
  updatePixels();

  describe('Four black dots arranged in a square drawn on a gray background.');
}
```

```
function setup() {
  createCanvas(100, 100);

  background(255);

  // Draw a horizontal color gradient.
  for (let x = 0; x < 100; x += 1) {
    for (let y = 0; y < 100; y += 1) {
      // Calculate the grayscale value.
      let c = map(x, 0, 100, 0, 255);

      // Set the pixel using the grayscale value.
      set(x, y, c);
    }
  }

  // Update the canvas.
  updatePixels();

  describe('A horizontal color gradient from black to white.');
}
```

```
let img;

// Load the image.
function preload() {
  img = loadImage('/assets/rockies.jpg');
}

function setup() {
  createCanvas(100, 100);

  // Use the image to set all pixels.
  set(0, 0, img);

  // Update the canvas.
  updatePixels();

  describe('An image of a mountain landscape.');
}
```

## Syntax

```
set(x, y, c)
```

## Parameters

x	Number: x-coordinate of the pixel.
y	Number: y-coordinate of the pixel.
c	Number Number[] Object: grayscale value   pixel array   <code>p5.Color</code> object   <code>p5.Image</code> to copy.

This page is generated from the comments in `src/image/pixels.js`. Please feel free to edit it and submit a pull request!

## Related References

[blend](#)

Copies a region of pixels from one image to another.

[copy](#)

Copies pixels from a source image to a region of the canvas.

[filter](#)

Applies an image filter to the canvas.

[get](#)

Gets a pixel or a region of pixels from the canvas.



Donate Today! Support p5.js and the Processing Foundation.

