

# saturation()

Gets the saturation value of a color.

`saturation()` extracts the saturation value from a `p5.Color` object, an array of color components, or a CSS color string.

Saturation is scaled differently in HSB and HSL. By default, `saturation()` returns a color's HSL saturation in the range 0 to 100. If the `colorMode()` is set to HSB or HSL, it returns the saturation value in the given mode.

## Examples



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

  background(50);

  // Use HSB color.
  colorMode(HSB);

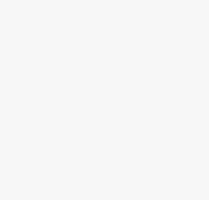
  // Create a p5.Color object.
  let c = color(0, 50, 100);

  // Draw the left rectangle.
  noStroke();
  fill(c);
  rect(15, 15, 35, 70);

  // Set 'satValue' to 50.
  let satValue = saturation(c);

  // Draw the right rectangle.
  fill(satValue);
  rect(50, 15, 35, 70);

  describe('Two rectangles. The left one is salmon pink and
the right one is dark gray.');
}
```



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

  background(50);

  // Use HSB color.
  colorMode(HSB);

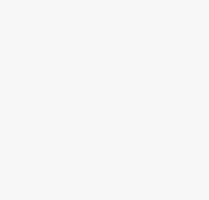
  // Create a color array.
  let c = [0, 50, 100];

  // Draw the left rectangle.
  noStroke();
  fill(c);
  rect(15, 15, 35, 70);

  // Set 'satValue' to 100.
  let satValue = saturation(c);

  // Draw the right rectangle.
  fill(satValue);
  rect(50, 15, 35, 70);

  describe('Two rectangles. The left one is salmon pink and
the right one is gray.');
}
```



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

  background(50);

  // Use HSB color.
  colorMode(HSB);

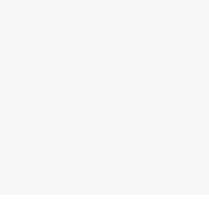
  // Create a CSS color string.
  let c = 'rgb(255, 128, 128)';

  // Draw the left rectangle.
  noStroke();
  fill(c);
  rect(15, 15, 35, 70);

  // Set 'satValue' to 100.
  let satValue = saturation(c);

  // Draw the right rectangle.
  fill(satValue);
  rect(50, 15, 35, 70);

  describe('Two rectangles. The left one is salmon pink and
the right one is gray.');
}
```



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

  background(50);

  // Use HSL color with values in the range 0-255.
  colorMode(HSL, 255);

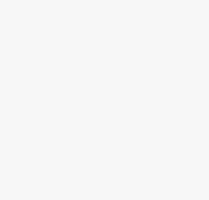
  // Create a p5.Color object.
  let c = color(0, 255, 191.5);

  // Draw the left rectangle.
  noStroke();
  fill(c);
  rect(15, 15, 35, 70);

  // Set 'satValue' to 255.
  let satValue = saturation(c);

  // Draw the right rectangle.
  fill(satValue);
  rect(50, 15, 35, 70);

  describe('Two rectangles. The left one is salmon pink and
the right one is white.');
}
```



## Syntax

`saturation(color)`



## Parameters

`color` `p5.Color|Number[]|String`: `p5.Color` object, array of color components, or CSS color string.

## Returns

Number: the saturation value

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

## Related References

`setAlpha`  
Sets the alpha (transparency) value of a color.

`setBlue`  
Sets the blue component of a color.

`setGreen`  
Sets the green component of a color.

`setRed`  
Sets the red component of a color.