constrain()

Constrains a number between a minimum and maximum value.

Examples

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

  describe('A black dot drawn on a gray square follows the mouse from left to right. Its movement is constrained to the middle third of the square.');
}

function draw() {
  background(200);

  let x = constrain(mouseX, 33, 67);
  let y = 50;

  strokeWeight(5);
  point(x, y);
}
```

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

  describe('Two vertical lines. Two circles move horizontally with the mouse. One circle stops at the vertical lines.');
}

function draw() {
  background(200);

  // Set boundaries and draw them.
  let leftWall = 25;
  let rightWall = 75;
  line(leftWall, 0, leftWall, 100);
  line(rightWall, 0, rightWall, 100);

  // Draw a circle that follows the mouse freely.
  fill(255);
  circle(mouseX, 33, 9);

  // Draw a circle that's constrained.
  let xc = constrain(mouseX, leftWall, rightWall);
  fill(0);
  circle(xc, 67, 9);
}
```

Syntax

```
constrain(n, low, high)
```

Parameters

n	Number: number to constrain.
low	Number: minimum limit.
high	Number: maximum limit.

Returns

Number: constrained number.

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Related References

abs
Calculates the absolute value of a number.

ceil
Calculates the closest integer value that is greater than or equal to a number.

constrain
Constrains a number between a minimum and maximum value.

dist
Calculates the distance between two points.