randomGaussian()

Returns a random number fitting a Gaussian, or normal, distribution.

Normal distributions look like bell curves when plotted. Values from a normal distribution cluster around a central value called the mean. The cluster's standard deviation describes its spread.

By default, `randomGaussian()` produces different results each time a sketch runs. The randomSeed() function can be used to generate the same sequence of numbers each time a sketch runs.

There's no minimum or maximum value that `randomGaussian()` might return. Values far from the mean are very unlikely and values near the mean are very likely.

The version of `randomGaussian()` with no parameters returns values with a mean of 0 and standard deviation of 1.

The version of `randomGaussian()` with one parameter interprets the argument passed as the mean. The standard deviation is 1.

The version of `randomGaussian()` with two parameters interprets the first argument passed as the mean and the second as the standard deviation.

Examples

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

  background(200);

  describe('Three horizontal black lines are filled in randomly. The top line spans entire canvas. The middle line is very short. The bottom line spans two-thirds of the canvas.');
}

function draw() {
  // Style the circles.
  noStroke();
  fill(0, 10);

  // Uniform distribution between 0 and 100.
  let x = random(100);
  let y = 25;
  circle(x, y, 5);

  // Gaussian distribution with a mean of 50 and sd of 1.
  x = randomGaussian(50);
  y = 50;
  circle(x, y, 5);

  // Gaussian distribution with a mean of 50 and sd of 10.
  x = randomGaussian(50, 10);
  y = 75;
  circle(x, y, 5);
```

Syntax

```
randomGaussian([mean], [sd])
```

Parameters

mean	Number: mean.
sd	Number: standard deviation.

Returns

Number: random number.

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Related References

random
Returns a random number or a random element from an array.

randomGaussian
Returns a random number fitting a Gaussian, or normal, distribution.

randomSeed
Sets the seed value for the random() and randomGaussian() functions.