sin()

Calculates the sine of an angle.

`sin()` is useful for many geometric tasks in creative coding. The values returned oscillate between -1 and 1 as the input angle increases. `sin()` calculates the sine of an angle, using radians by default, or according to if angleMode() setting (RADIANS or DEGREES).

Examples

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

  describe('A white ball on a string oscillates up and down.');
}

function draw() {
  background(200);

  // Calculate the coordinates.
  let x = 50;
  let y = 30 * sin(frameCount * 0.05) + 50;

  // Draw the oscillator.
  line(50, y, x, y);
  circle(x, y, 20);
}
```

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

  background(200);

  describe('A series of black dots form a wave pattern.');
}

function draw() {
  // Calculate the coordinates.
  let x = frameCount;
  let y = 30 * sin(x * 0.1) + 50;

  // Draw the point.
  point(x, y);
}
```

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

  background(200);

  describe('A series of black dots form an infinity symbol.');
}

function draw() {
  // Calculate the coordinates.
  let x = 30 * cos(frameCount * 0.1) + 50;
  let y = 10 * sin(frameCount * 0.2) + 50;

  // Draw the point.
  point(x, y);
}
```

Syntax

```
sin(angle)
```

Parameters

angle	Number: the angle, in radians by default, or according to if angleMode() setting (RADIANS or DEGREES).

Returns

Number: sine of the angle.

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Related References

acos
Calculates the arc cosine of a number.

angleMode
Changes the unit system used to measure angles.

asin
Calculates the arc sine of a number.

atan
Calculates the arc tangent of a number.