dist()

Calculates the distance between two points represented by vectors.

A point's coordinates can be represented by the components of a vector that extends from the origin to the point.

The static version of `dist()`, as in `p5.Vector.dist(v1, v2)`, is the same as calling `v1.dist(v2)`.

Use dist() to calculate the distance between points using coordinates as in `dist(x1, y1, x2, y2)`.

Examples

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

  background(200);

  // Create p5.Vector objects.
  let v1 = createVector(1, 0);
  let v2 = createVector(0, 1);

  // Calculate the distance between them.
  let d = v1.dist(v2);

  // Prints "1.414..." to the console.
  print(d);
}
```

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

  background(200);

  // Create p5.Vector objects.
  let v1 = createVector(1, 0);
  let v2 = createVector(0, 1);

  // Calculate the distance between them.
  let d = p5.Vector.dist(v1, v2);

  // Prints "1.414..." to the console.
  print(d);
}
```

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

  describe('Three arrows drawn on a gray square. A red and a
blue arrow extend from the top left. A purple arrow extends
from the tip of the red arrow to the tip of the blue arrow.
The number 36 is written in black near the purple arrow.');
}

function draw() {
  background(200);

  let origin = createVector(0, 0);

  // Draw the red arrow.
  let v1 = createVector(50, 50);
  drawArrow(origin, v1, 'red');

  // Draw the blue arrow.
  let v2 = createVector(20, 70);
  drawArrow(origin, v2, 'blue');

  // Purple arrow.
  let v3 = p5.Vector.sub(v2, v1);
  drawArrow(v1, v3, 'purple');

  // Style the text.
  textAlign(CENTER);
```

Syntax

```
dist(v)
```

```
dist(v1, v2)
```

Parameters

v	p5.Vector: x, y, and z coordinates of a p5.Vector.
v1	p5.Vector: The first p5.Vector
v2	p5.Vector: The second p5.Vector

Returns

Number: distance.

This page is generated from the comments in src/math/p5.Vector.js . Please feel free to edit it and submit a pull request!

Related References

add
Adds to a vector's x, y, and z components.

angleBetween
Calculates the angle between two vectors.

array
Returns the vector's components as an array of numbers.

clampToZero
Replaces the components of a p5.Vector that are very close to zero with zero.