equals()

Checks whether all the vector's components are equal to another vector's.

`equals()` returns `true` if the vector's components are all the same as another vector's and `false` if not.

The version of `equals()` with one parameter interprets it as another p5.Vector object.

The version of `equals()` with multiple parameters interprets them as the components of another vector. Any missing parameters are assigned the value 0.

The static version of `equals()`, as in `p5.Vector.equals(v0, v1)`, interprets both parameters as p5.Vector objects.

Examples

```
function setup() {
  // Create p5.Vector objects.
  let v0 = createVector(10, 20, 30);
  let v1 = createVector(10, 20, 30);
  let v2 = createVector(0, 0, 0);

  // Prints "true" to the console.
  print(v0.equals(v1));

  // Prints "false" to the console.
  print(v0.equals(v2));
}
```

```
function setup() {
  // Create p5.Vector objects.
  let v0 = createVector(5, 10, 20);
  let v1 = createVector(5, 10, 20);
  let v2 = createVector(13, 10, 19);

  // Prints "true" to the console.
  print(v0.equals(v1.x, v1.y, v1.z));

  // Prints "false" to the console.
  print(v0.equals(v2.x, v2.y, v2.z));
}
```

```
function setup() {
  // Create p5.Vector objects.
  let v0 = createVector(10, 20, 30);
  let v1 = createVector(10, 20, 30);
  let v2 = createVector(0, 0, 0);

  // Prints "true" to the console.
  print(p5.Vector.equals(v0, v1));

  // Prints "false" to the console.
  print(p5.Vector.equals(v0, v2));
}
```

Syntax

```
equals([x], [y], [z])
```

```
equals(value)
```

```
equals(v1, v2)
```

Parameters

x	Number: x component of the vector.
y	Number: y component of the vector.
z	Number: z component of the vector.
value	p5.Vector|Array: vector to compare.
v1	p5.Vector|Array: the first vector to compare
v2	p5.Vector|Array: the second vector to compare

Returns

Boolean: whether the vectors are equal.

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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.