

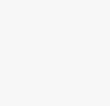
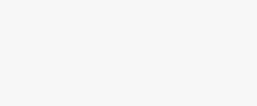
# random2D()

Creates a new 2D unit vector with a random heading.

## Examples

```
function setup() {
  // Create a p5.Vector object.
  let v = p5.Vector.random2D();

  // Prints "p5.Vector Object : [x, y, 0]" to the console
  // where x and y are small random numbers.
  print(v.toString());
}
```



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

  // Slow the frame rate.
  frameRate(1);

  describe('A black arrow extends from the center of a gray square. It changes direction once per second.');
}
```

```
function draw() {
  background(200);

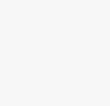
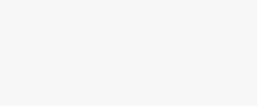
  // Create a p5.Vector to the center.
  let v0 = createVector(50, 50);

  // Create a random p5.Vector.
  let v1 = p5.Vector.random2D();

  // Scale v1 for drawing.
  v1.mult(30);

  // Draw the black arrow.
  drawArrow(v0, v1, 'black');
}
```

```
// Draws an arrow between two vectors.
function drawArrow(base, vec, myColor) {
  push();
  stroke(myColor);
  strokeWeight(3);
  fill(myColor);
```



## Returns

p5.Vector: new [p5.Vector](#) object.

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.

p5.js

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