

# cross()

Calculates the cross product of two vectors.

The cross product is a vector that points straight out of the plane created by two vectors. The cross product's magnitude is the area of the parallelogram formed by the original two vectors.

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

## Examples

```
function setup() {
  // Create p5.Vector objects.
  let v1 = createVector(1, 0);
  let v2 = createVector(3, 4);

  // Calculate the cross product.
  let cp = v1.cross(v2);

  // Prints "p5.Vector Object : [0, 0, 4]" to the console.
  print(cp.toString());
}
```

```
function setup() {
  // Create p5.Vector objects.
  let v1 = createVector(1, 0);
  let v2 = createVector(3, 4);

  // Calculate the cross product.
  let cp = p5.Vector.cross(v1, v2);

  // Prints "p5.Vector Object : [0, 0, 4]" to the console.
  print(cp.toString());
}
```

## Syntax

`cross(v)`

`cross(v1, v2)`

## Parameters

<code>v</code>	p5.Vector: <a href="#">p5.Vector</a> to be crossed.
<code>v1</code>	p5.Vector: first <a href="#">p5.Vector</a> .
<code>v2</code>	p5.Vector: second <a href="#">p5.Vector</a> .

## Returns

p5.Vector: cross product as a [p5.Vector](#).

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.

