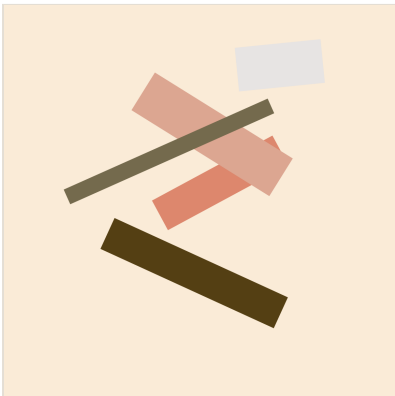


Make your first generative artwork

In less than 15 lines of code



Adapted, with thanks,
from this 2022 thread
by Adam genlight
(@generativelight)

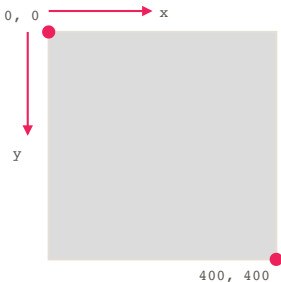
0 Open the editor

In a web browser go to **<https://editor.p5js.org>**

Delete the **draw()** function, leaving just this:

```
function setup() {  
  createCanvas(400, 400);  
}
```

Press the  button. You'll see a grey square:



The coordinate system starts at the top-left corner.

1 Prepare the canvas

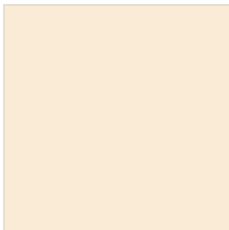
Add this line below `createCanvas()`:

```
background("antiquewhite");
```

Your code should look like this:

```
function setup() {  
  createCanvas(400, 400);  
  background("antiquewhite");  
}
```

Now press the  button again.



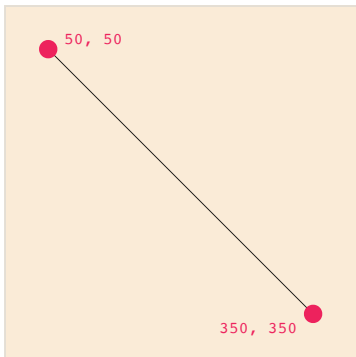
Your canvas is ready.

2 Draw one line

Next, add the following code just below the **background()** line:

```
line(50, 50, 350, 350);
```

line() is a function. It takes four arguments describing the start and end points of a line.



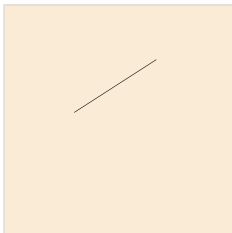
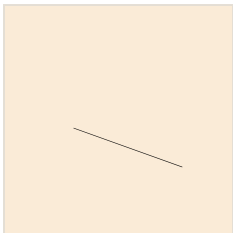
3 Leave it to chance

Swap all four numbers for **random()**:

```
line(random(50, 350), random(50, 350),  
      random(50, 350), random(50, 350));
```

random(50, 350) returns a different number between 50 and 350 every time it is called.

Keep pressing  and get a different line each time.



Same rules, different results.

4 Give it a body

Then add these lines immediately *above* the `line()`:

```
colorMode(HSL);  
strokeCap(SQUARE);  
strokeWeight(25);  
stroke(random(0, 50), // hue  
        random(0, 100), // saturation  
        random(0, 100)); // lightness
```



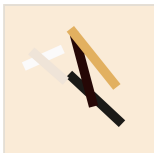
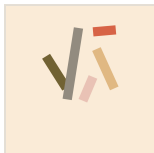
YOUR TURN

Go to the p5.js reference and look up `strokeCap()` and `strokeWeight()`. Try different values for each.

5 Say it five times

Wrap the four lines from `strokeCap()` to `line()` in a `while()` loop:

```
let countDown = 5;
while (countDown > 0) {
  // your four lines go here
  countDown = countDown - 1;
}
```



YOUR TURN

Change the `countDown` number to make **10** lines, or **25**, or **200**! Use whole numbers only.

The whole sketch

```
function setup() {  
  createCanvas(400, 400);  
  background("antiquewhite");  
  colorMode(HSL);  
  let countDown = 5;  
  while (countDown > 0) {  
    strokeCap(SQUARE);  
    strokeWeight(25);  
    stroke(random(0, 50), // hue  
           random(0, 100), // saturation  
           random(0, 100)); // lightness  
    line(random(50, 350), random(50, 350),  
         random(50, 350), random(50, 350));  
    countDown = countDown - 1;  
  }  
}
```



scan to run it

YOUR TURN

Can you spot the small difference? Try editing the code to make the output look more like the one on the cover.

Hint: it has to do with the stroke weight.

printed & folded by _____

Solution: use strokeWeight(random(10, 50));