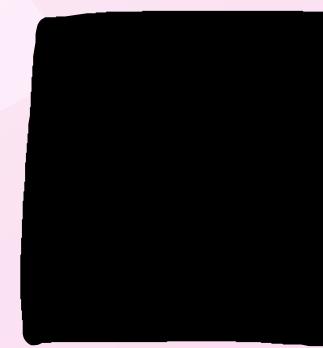


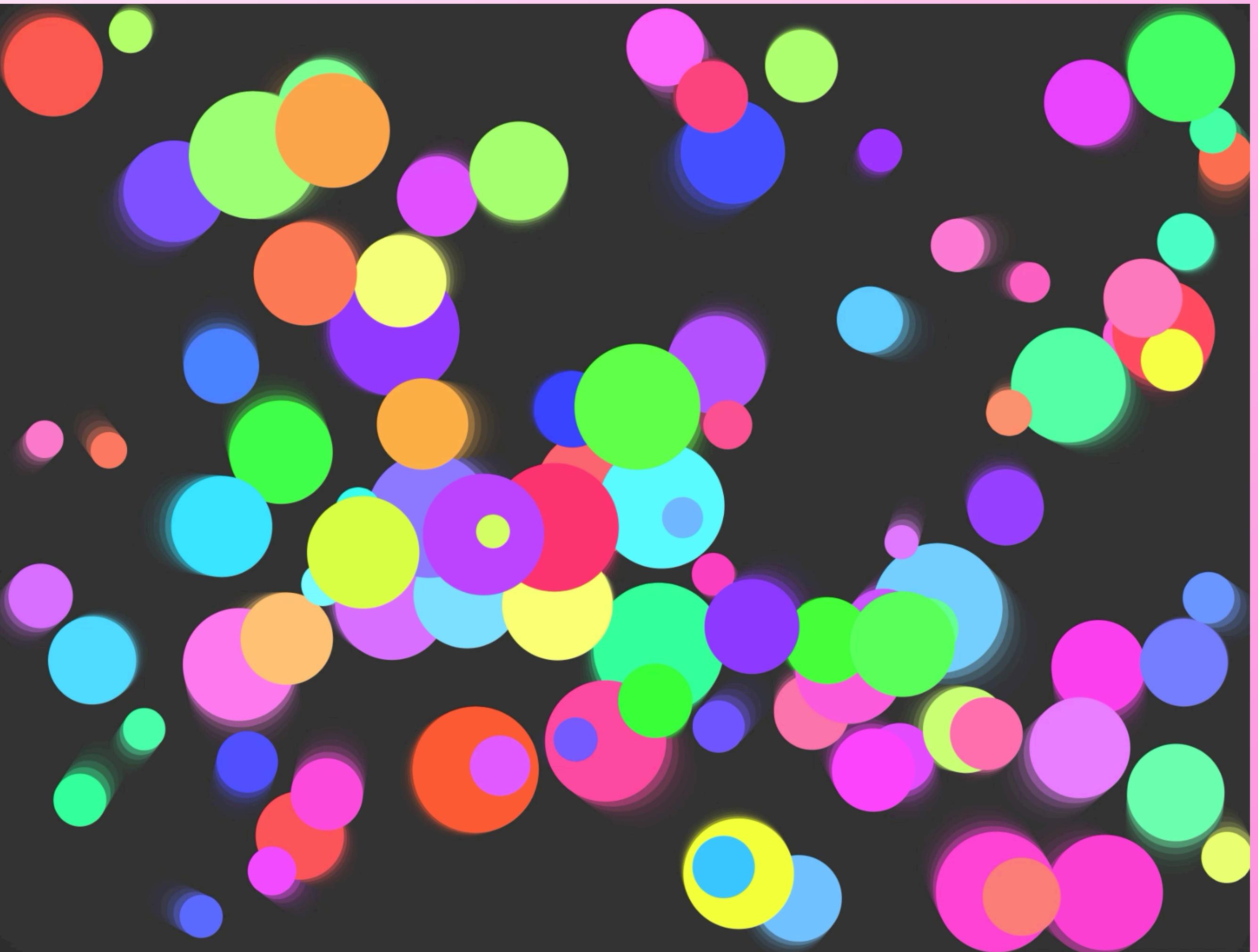
MediaArt Programming

20210730

本日のテーマ

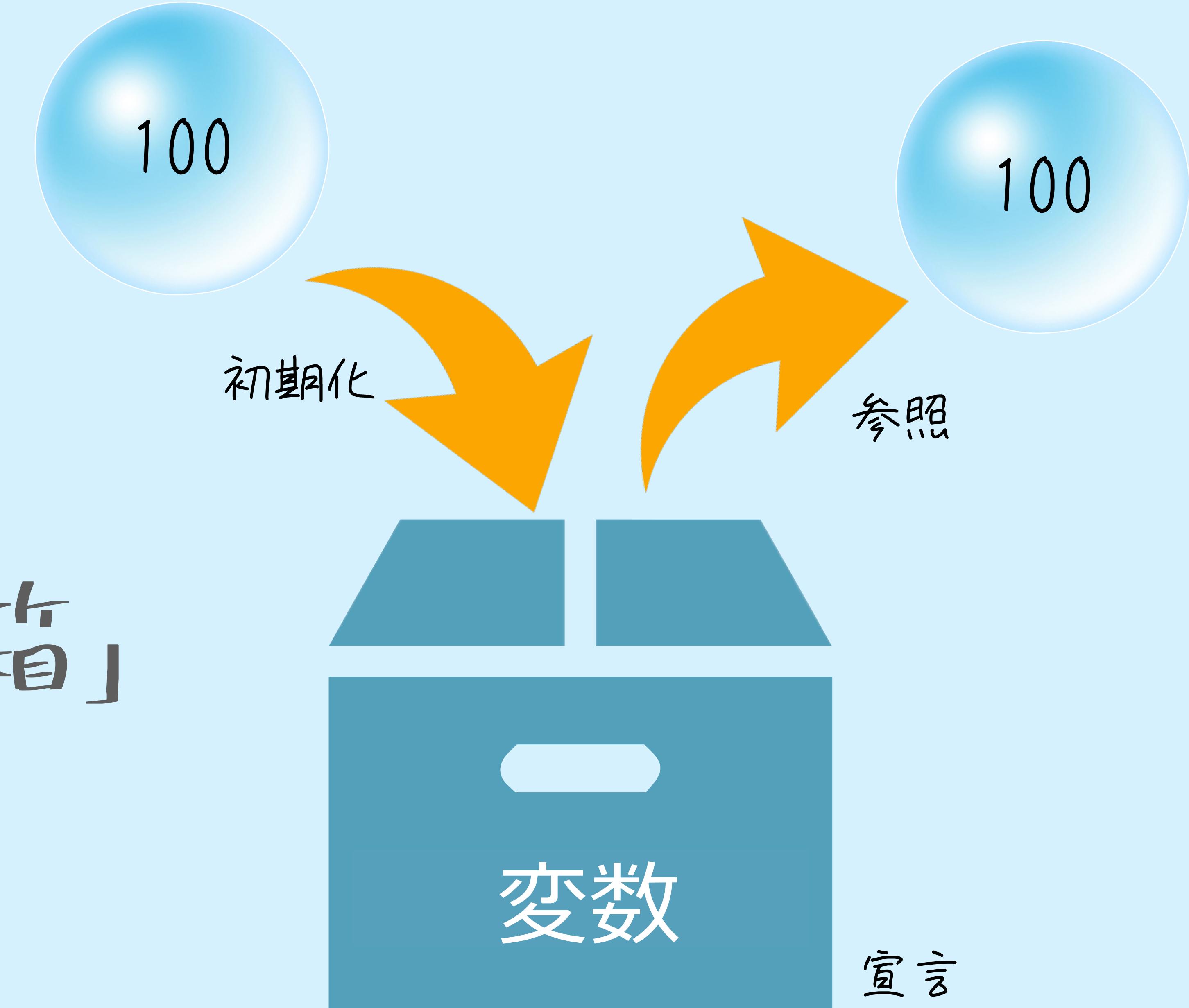


配列



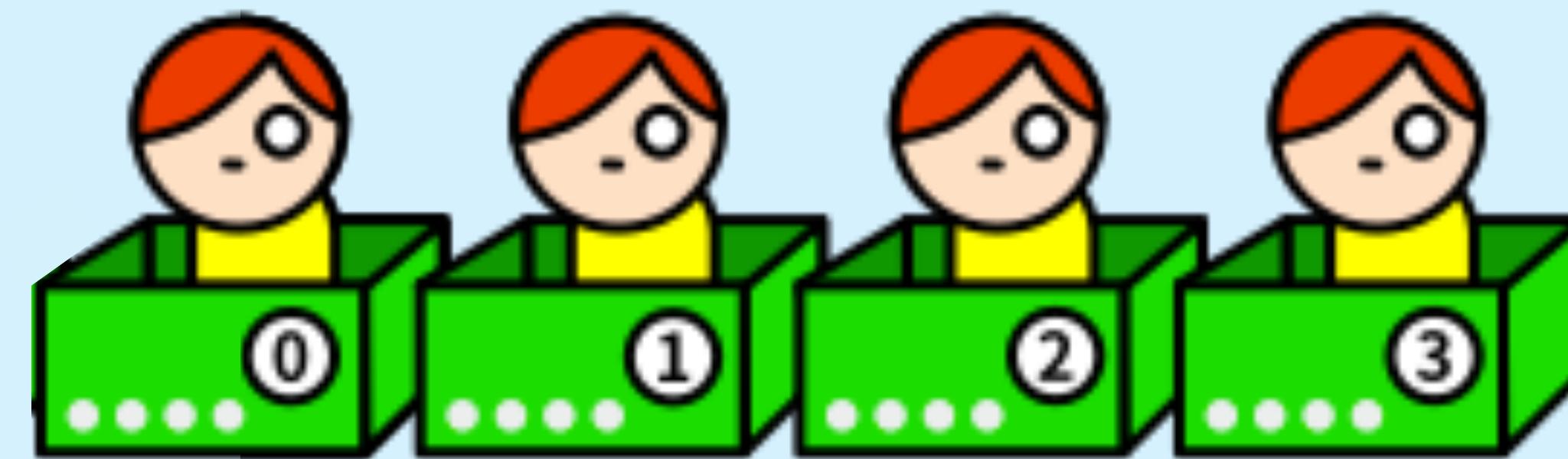
配列

変数は
「値を入れる箱」



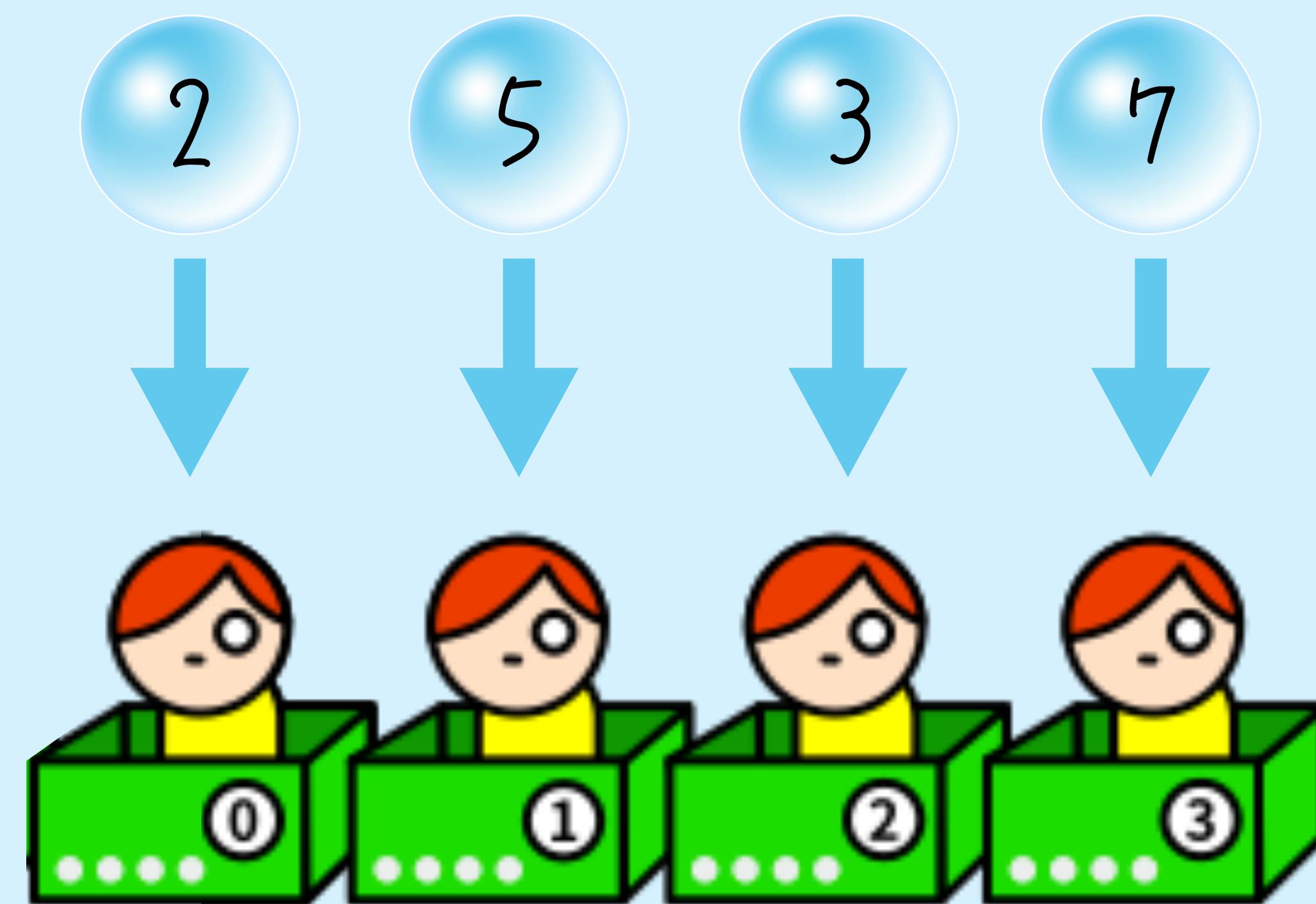
配列

```
let x = [];
```



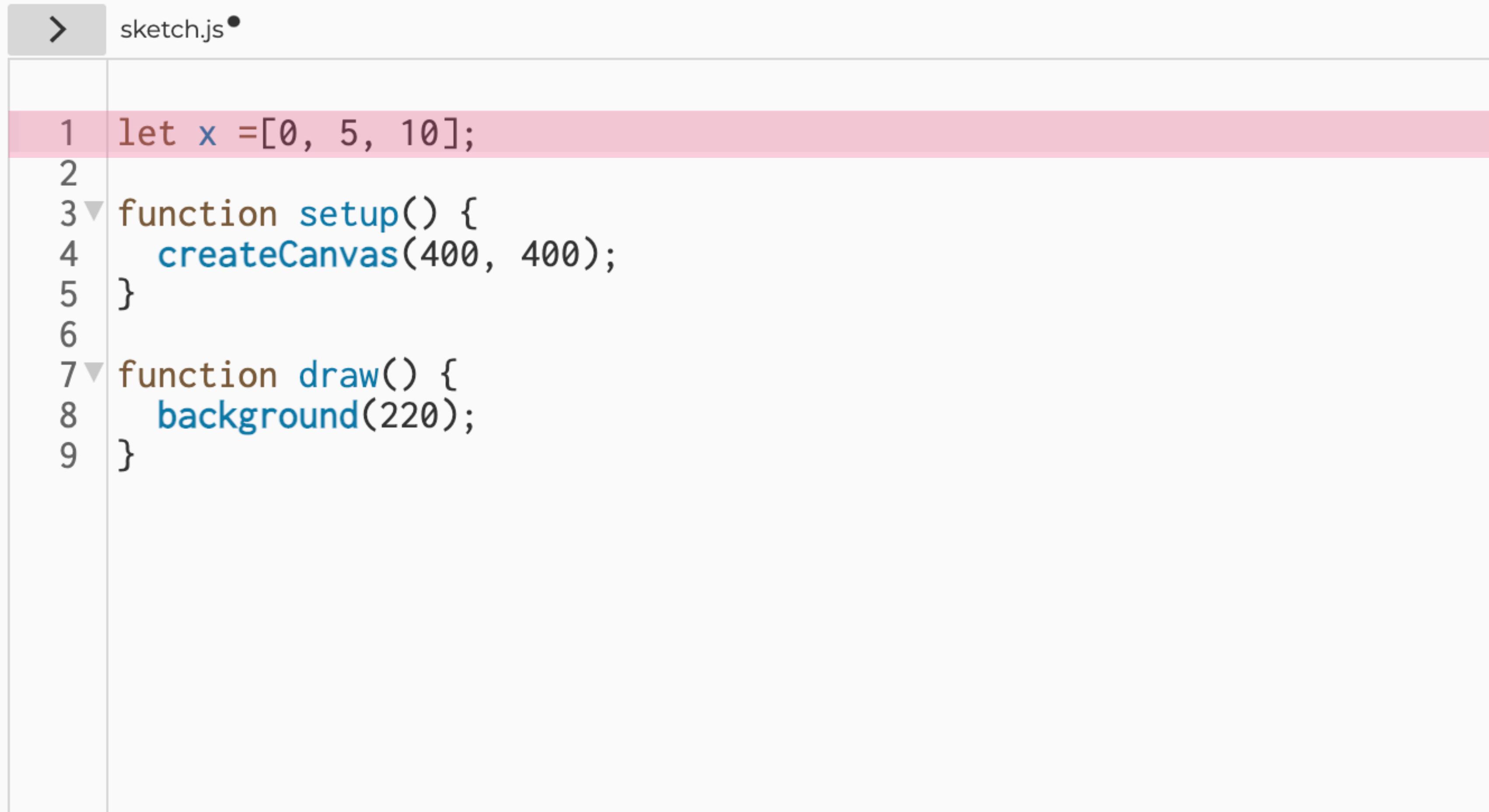
配列

```
let x = [2, 5, 3, 7];
```



画笔

```
let OO = [];
```



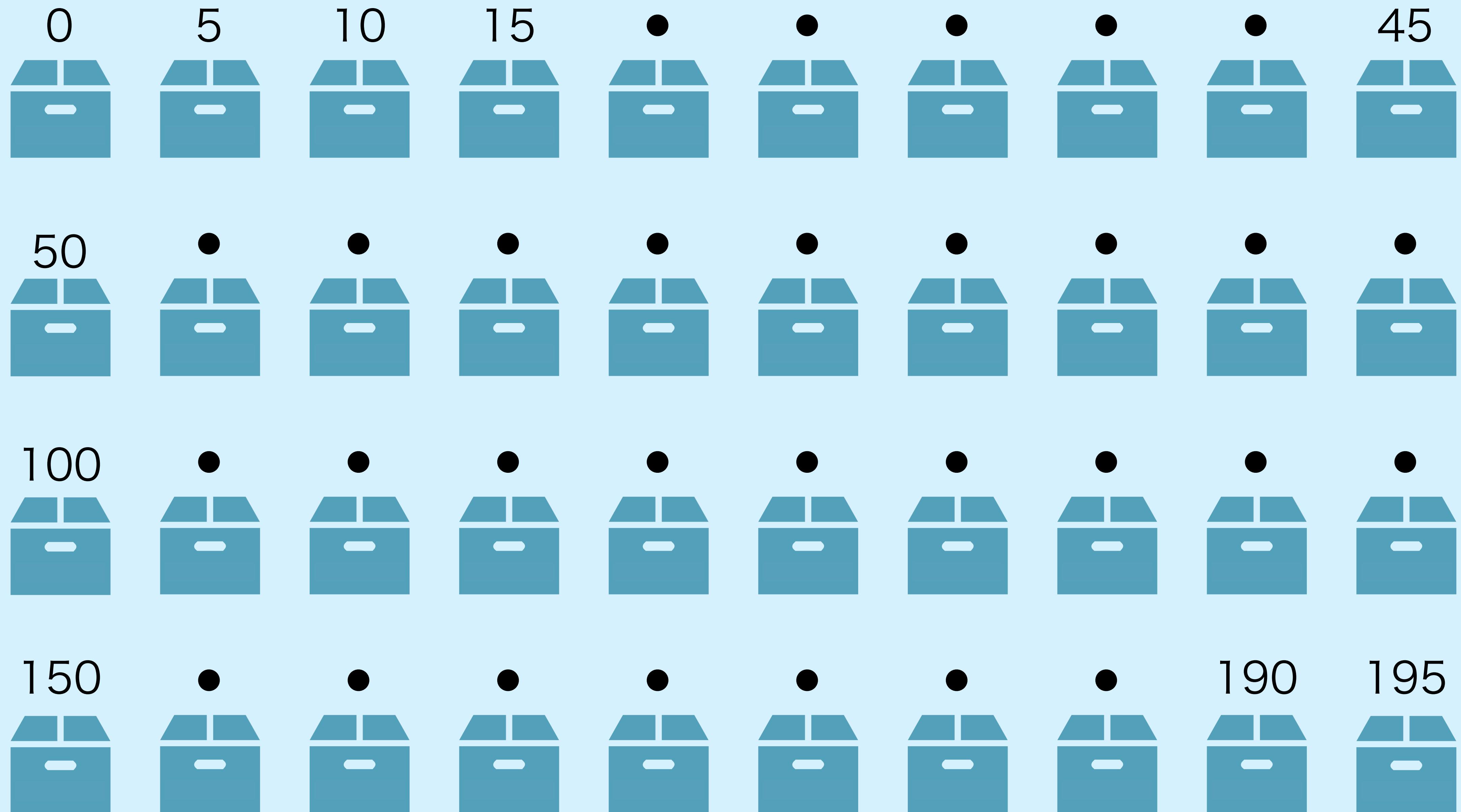
The screenshot shows a code editor window with a tab labeled "sketch.js". The code is a simple JavaScript sketch for a drawing application. It starts with a global variable declaration "let OO = [];" followed by a setup function and a draw function.

```
> sketch.js •
1 let x =[0, 5, 10];
2
3▼ function setup() {
4   createCanvas(400, 400);
5 }
6
7▼ function draw() {
8   background(220);
9 }
```

函數

```
let OO = [];
```

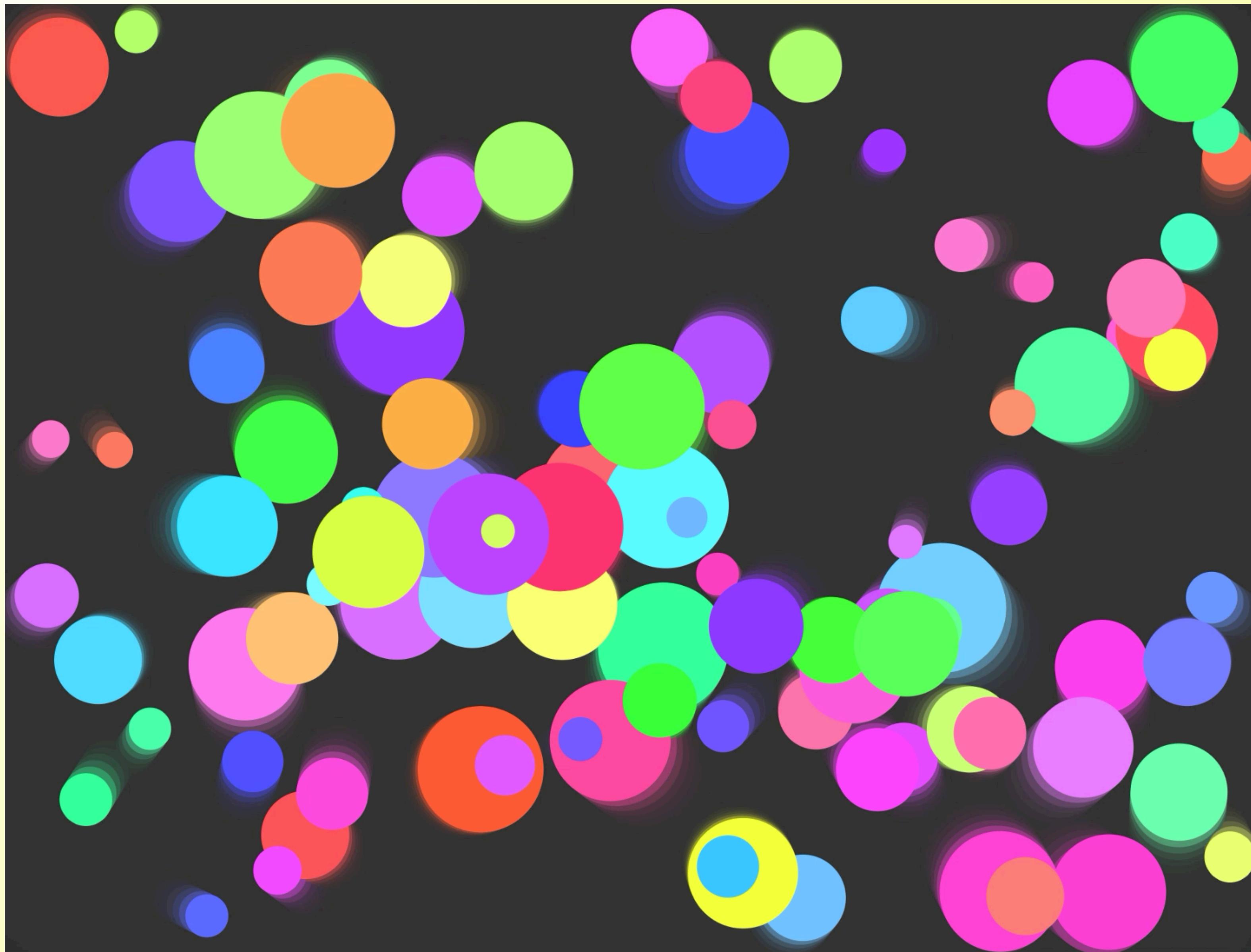
```
> sketch.js •  
1 let x =[0, 5, 10];  
2  
3▼ function setup() {  
4   createCanvas(400, 400);  
5  
6   background(220);  
7   text(x[1], 100, 100);  
8  
9 }  
10  
11▼ function draw() {  
12 }  
13
```



画笔

```
let OO = [];
```

```
> sketch.js •  
1 let x =[];  
2  
3▼ function setup() {  
4   createCanvas(400, 400);  
5  
6   background(220);  
7  
8▼   for(let i = 0; i < 40; i++){  
9     x[i] = i * 5;  
10    }  
11  
12   text(x[38], 100, 100);  
13  
14 }  
15  
16▼ function draw() {  
17 }
```



西口七四

変数の準備

```
> sketch.js •  
1 let x = [];
2 let y = [];
3 let vx = [];
4 let vy = [];
5 let diameter = [];
6
7 ▼ function setup() {
8   createCanvas(400, 400);
9 }
10
11 ▼ function draw() {
12   background(220);
13 }
```

西日本

初期設定

```
> sketch.js •  
1 let x = [];
2 let y = [];
3 let vx = [];
4 let vy = [];
5 let diameter = [];
6
7 function setup() {
8   createCanvas(windowWidth, windowHeight);
9
10  for (let i = 0; i < 100; i++) {
11    x[i] = width / 2;
12    y[i] = height / 2;
13    vx[i] = random(-5, 5);
14    vy[i] = random(-5, 5);
15    diameter[i] = random(25, 100);
16  }
17}
18
19 function draw() {
20   background(220);
21 }
```

書き方

円の描写

```
> sketch.js•  
6  
7  function setup() {  
8      createCanvas(windowWidth, windowHeight);  
9  
10     for (let i = 0; i < 100; i++) {  
11         x[i] = width / 2;  
12         y[i] = height / 2;  
13         vx[i] = random(-5, 5);  
14         vy[i] = random(-5, 5);  
15         diameter[i] = random(25, 100);  
16     }  
17 }  
18  
19  function draw() {  
20      background(220);  
21  
22     for (let i = 0; i < 100; i++) {  
23         x[i] = x[i] + vx[i];  
24         y[i] = y[i] + vy[i];  
25         noStroke();  
26         ellipse(x[i], y[i], diameter[i]);  
27     }  
28 }
```

西2七4

反射の処理

```
> sketch.js•  
18  
19  function draw() {  
20      background(220);  
21  
22  for (let i = 0; i < 100; i++) {  
23      x[i] = x[i] + vx[i];  
24      y[i] = y[i] + vy[i];  
25      noStroke();  
26      ellipse(x[i], y[i], diameter[i]);  
27  
28  
29  if (x[i] > width || x[i] < 0) {  
30      vx[i] = vx[i] * -1;  
31  }  
32  
33  if (y[i] > height || y[i] < 0) {  
34      vy[i] = vy[i] * -1;  
35  }  
36 }  
37 }  
38  
39  
40 }
```

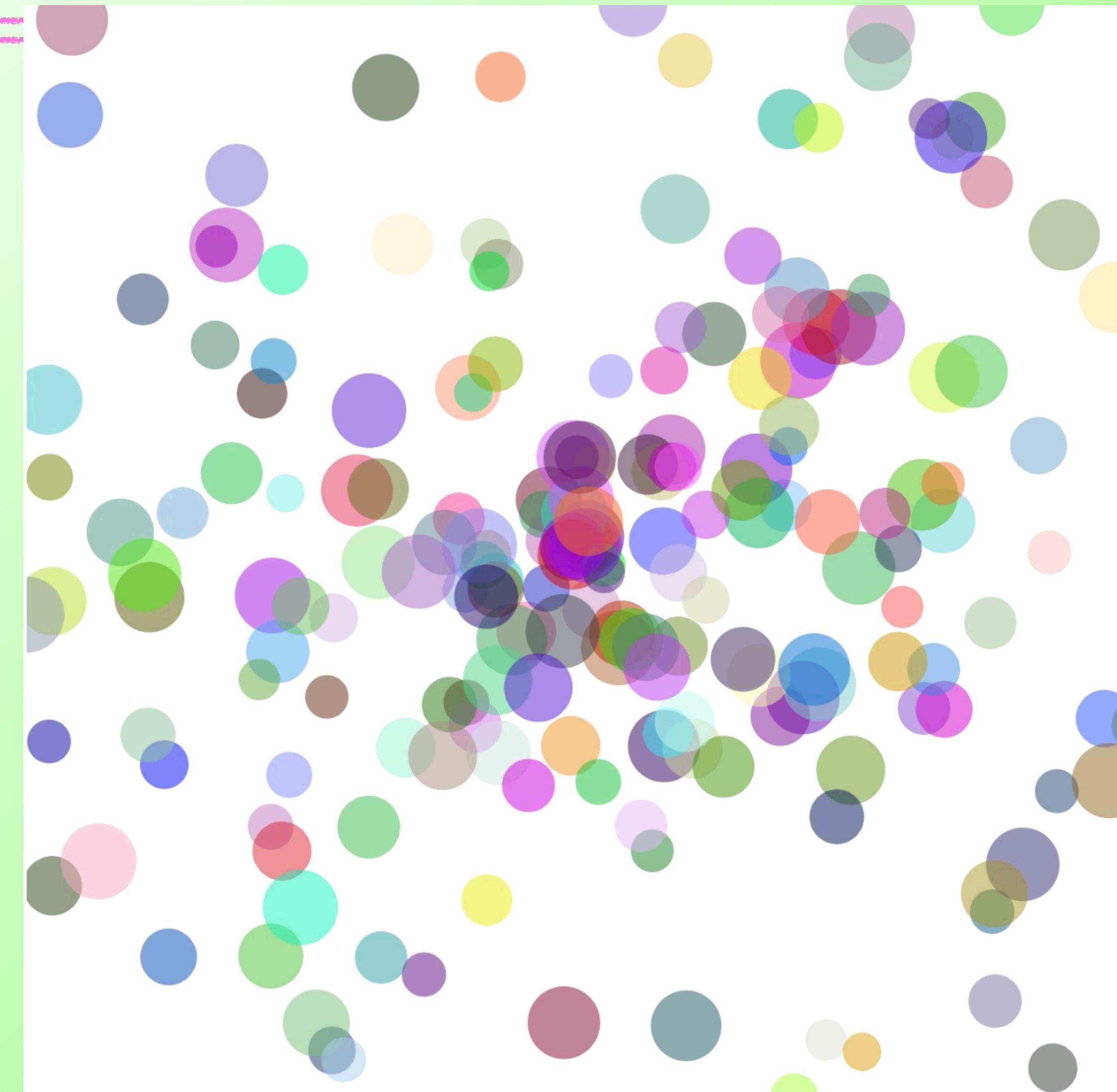
書き方

色の設定

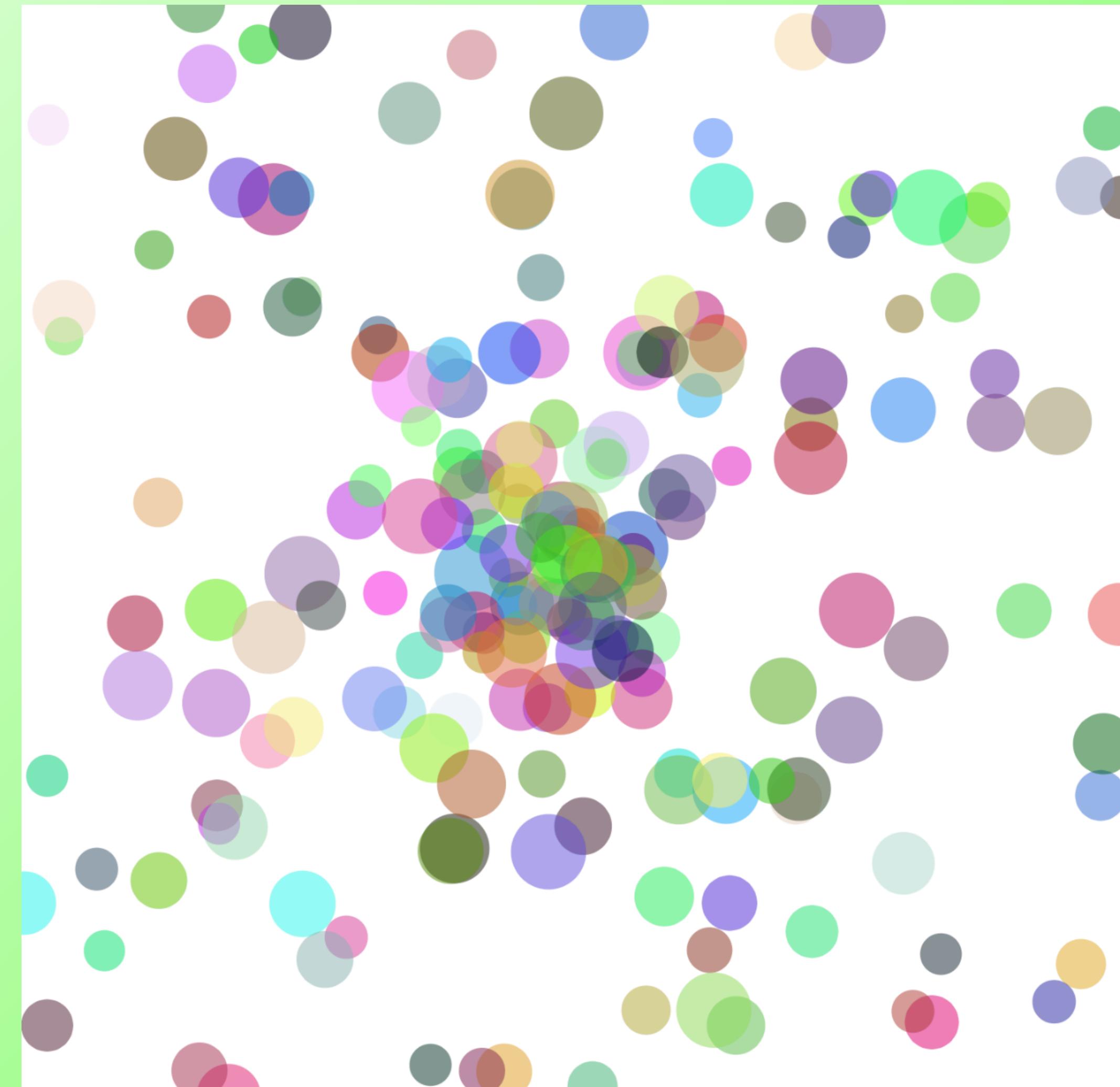
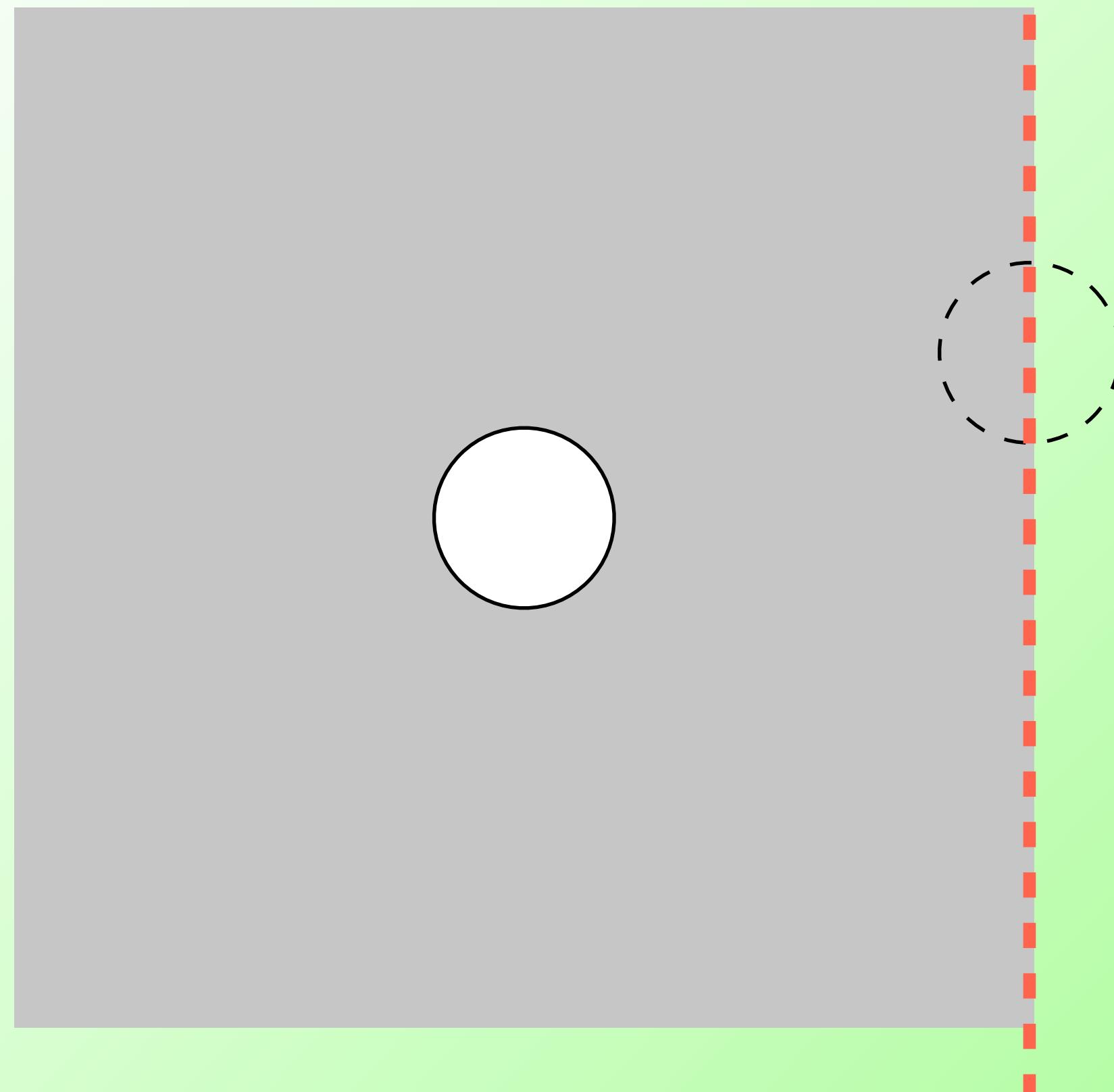
```
> sketch.js •
1  let vx = [];
2
3
4  let vy = [];
5  let diameter = [];
6  let r = [];
7  let g = [];
8  let b = [];

9
10 function setup() {
11   createCanvas(windowWidth, windowHeight);
12
13   for (let i = 0; i < 100; i++) {
14     x[i] = width / 2;
15     y[i] = height / 2;
16     vx[i] = random(-5, 5);
17     vy[i] = random(-5, 5);
18     diameter[i] = random(25, 100);
19     r[i] = random(255);
20     g[i] = random(255);
21     b[i] = random(255);
22   }
23 }
24
25 function draw() {
26   background(220);
27
28   for (let i = 0; i < 100; i++) {
29     x[i] = x[i] + vx[i];
30     y[i] = y[i] + vy[i];
31     noStroke();
32     fill(r[i], g[i], b[i]);
33     ellipse(x[i], y[i], diameter[i]);
34
35 }
```

チャレンジ



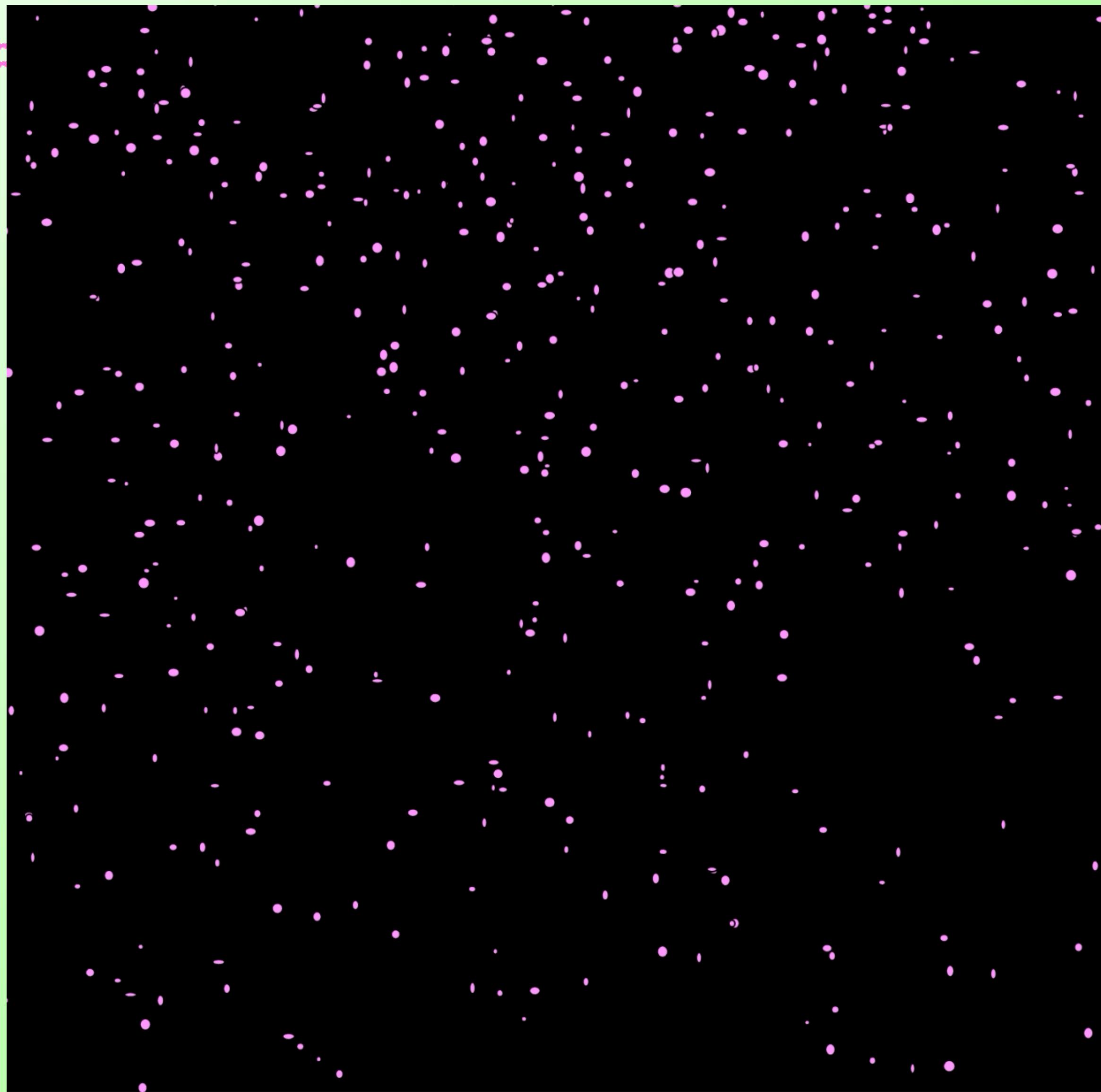
チャレンジ



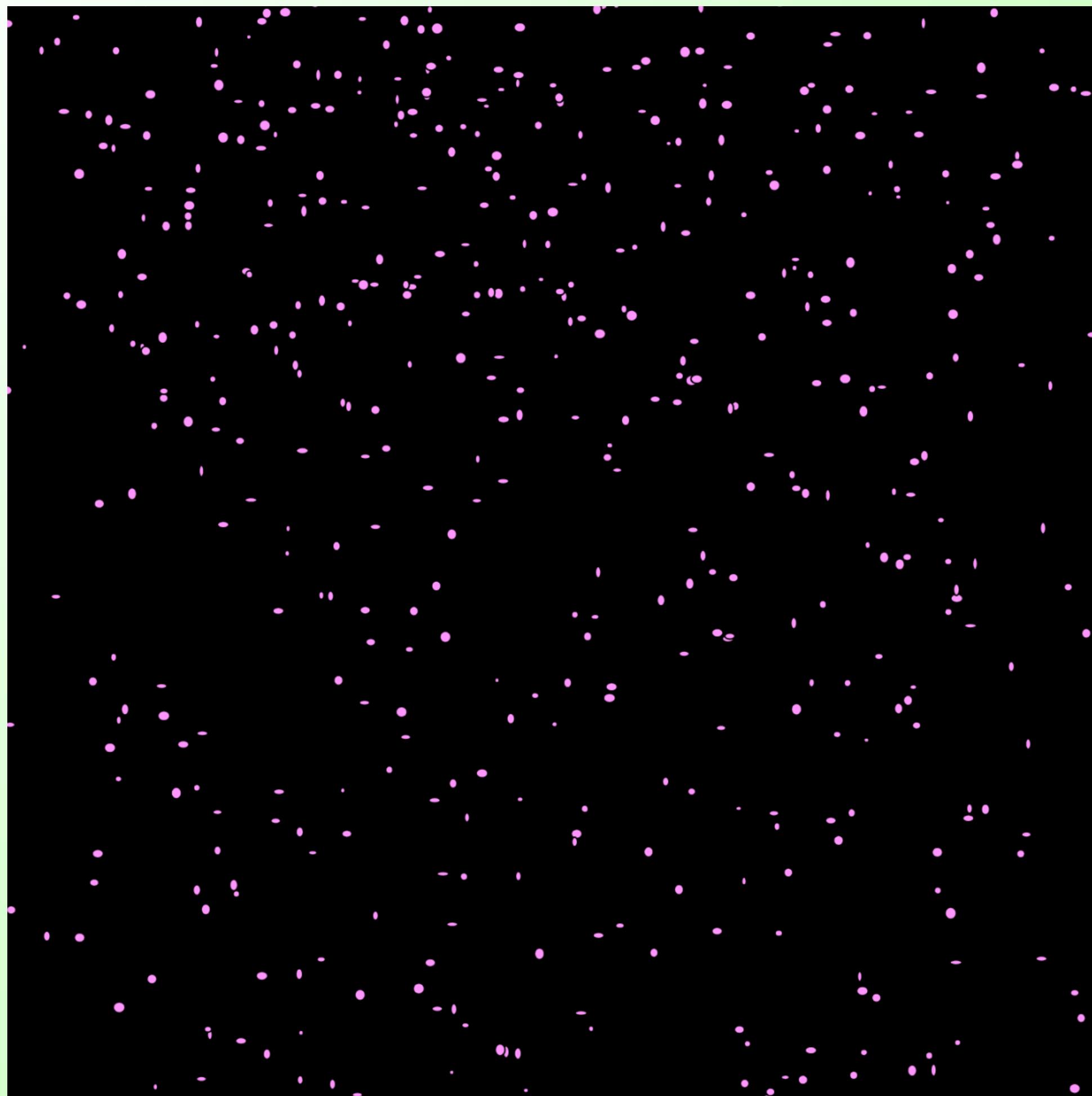
チャレンジ

```
> sketch.js•  
1 let x = [];
2 let y = [];
3 let vx = [];
4 let vy = [];
5 let diameter = [];
6 let r = [];
7 let g = [];
8 let b = [];
9
10 function setup() {
11   createCanvas(windowWidth, windowHeight);
12
13   for (let i = 0; i < 200; i++) {
14     x[i] = width / 2;
15     y[i] = height / 2;
16     vx[i] = random(-5, 5);
17     vy[i] = random(-5, 5);
18     diameter[i] = random(25, 50);
19     r[i] = random(255);
20     g[i] = random(255);
21     b[i] = random(255);
22   }
23 }  
24
25 function draw() {
26   background(255);
27
28   for (let i = 0; i < 200; i++) {
29     x[i] = x[i] + vx[i];
30     y[i] = y[i] + vy[i];
31     noStroke();
32     fill(r[i], g[i], b[i], 130);
33     ellipse(x[i], y[i], diameter[i]);
34
35   if(x[i] > width || x[i] < 0){
36     x[i] = width / 2;
37     y[i] = height / 2;
38   }
39   if(y[i] > height || y[i] < 0){
40     x[i] = width / 2;
41     y[i] = height / 2;
42   }
43 }
44 }
```

チャレンジ



千葉レーニング



```
> sketch.js•  
1 let x = [];  
2 let y = [];  
3 let vx = [];  
4 let vy = [];  
5  
6 function setup() {  
7   createCanvas(windowWidth, windowHeight);  
8  
9   for(let i = 0; i < 500; i++){  
10     x[i] = random(width);  
11     y[i] = random(height);  
12     vx[i] = random(-3,3);  
13     vy[i] = random(1,3);  
14   }  
15 }  
16  
17 function draw() {  
18   background(0);  
19   fill(255, 150, 255);  
20  
21   for(let i = 0; i < 500; i++){  
22     ellipse(x[i], y[i], random(3,8), random(3,8));  
23     x[i] += vx[i];  
24     y[i] += vy[i];  
25  
26     if(x[i] > width || x[i] < 0){  
27       x[i] = random(width);  
28       y[i] = 0;  
29       vx[i] *= -1;  
30     }  
31  
32     if(y[i] > height){  
33       y[i] = 0;  
34     }  
35   }  
36 }
```