

1

```

1 background("tomato");
2
3 randomNumber(1, 10);
4
5

```

randomNumber(min, max)
Returns a random number in the closed range from min to max.
See examples

Toolbox

Drawing Math

background(color)

fill(color)

rect(x, y, w, h)

ellipse(x, y, w, h)

```

1 background("tomato");
2
3 fill("orange");
4 ellipse(randomNumber(0, 200), 200, 50, 50);
5

```

2

```

1 background("tomato");
2 fill("orange");
3 ellipse(randomNumber(0, 400), randomNumber(0, 400), 50, 50);
4

```

3

```

1 var eyeSize = randomNumber(10, 100);
2
3 noStroke();
4 background("green");
5
6 // Face
7 fill("yellow");
8 ellipse(200, 200, 200, 200);
9
10 // Eyes
11 fill("black");
12 ellipse(160, 170, eyeSize, eyeSize);
13 ellipse(240, 170, eyeSize, eyeSize);
14
15 // Mouth
16 fill("white");
17 rect(160, 240, 80, 20);
18

```

4

```

1 var petalSize;
2 background("green");
3
4 petalSize = randomNumber(30, 60);
5 // petals
6 fill("purple");
7 ellipse(75, 100, petalSize, petalSize);
8 ellipse(125, 100, petalSize, petalSize);
9 ellipse(100, 75, petalSize, petalSize);
10 ellipse(100, 125, petalSize, petalSize);
11 // center
12 fill("yellow");
13 ellipse(100, 100, 50, 50);
14
15 petalSize = randomNumber(30, 60);
16 // petals
17 fill("purple");
18 ellipse(275, 300, petalSize, petalSize);
19 ellipse(325, 300, petalSize, petalSize);
20 ellipse(300, 275, petalSize, petalSize);
21 ellipse(300, 325, petalSize, petalSize);
22 // center
23 fill("yellow");
24 ellipse(300, 300, 50, 50);
25

```

5a

```

1 background("black");
2 fill("yellow");
3 ellipse(0, randomNumber(0, 100));
4 fill("salmon");
5 ellipse(80, randomNumber(0, 150));
6 fill("cyan");
7 ellipse(160, randomNumber(0, 200));
8 fill("lavender");
9 ellipse(240, randomNumber(0, 250));
10 fill("crimson");
11 ellipse(320, randomNumber(0, 300));
12 fill("orchid");
13 ellipse(400, randomNumber(0, 350));
14

```

5b

```

1 var xPosition = randomNumber(0, 150);
2 fill("pink");
3 rect(xPosition, 100, 250, 50);
4 fill("purple");
5 rect(xPosition, 150, 250, 50);
6 fill("firebrick");
7 rect(xPosition, 200, 250, 50);
8

```

6

```

1 background(▼"skyBlue");
2
3 fill(▼"red");
4 ellipse(100, randomNumber(190,210), 50, 50);
5
6 fill(▼"orange");
7 ellipse(140, randomNumber(190,210), 50, 50);
8
9 fill(▼"yellow");
10 ellipse(180, randomNumber(190,210), 50, 50);
11 fill(▼"green");
12 ellipse(220, randomNumber(190,210), 50, 50);
13 fill(▼"blue");
14 ellipse(240, randomNumber(190,210), 50, 50);
15 fill(▼"purple");
16 ellipse(280, randomNumber(190,210), 50, 50);
17

```

7a

```

1 background( rgb(5, 55, 255) );
2 fill( rgb( randomNumber(0, 255), 102, 102) );
3 ellipse(200, 200, 400, 400);
4 fill( rgb(255, randomNumber(0, 255), 102) );
5 ellipse(200, 200, 340, 340);
6 fill( rgb(255, 255, randomNumber(0, 255)) );
7 ellipse(200, 200, 280, 280);
8 fill( rgb( randomNumber(0, 255), 255, 102) );
9 ellipse(200, 200, 220, 220);
10 fill( rgb(51, randomNumber(0, 255), 255) );
11 ellipse(200, 200, 160, 160);
12 fill( rgb(153, 153, randomNumber(0, 255)) );
13 ellipse(200, 200, 100, 100);
14 fill( rgb( randomNumber(0, 255), 204, 255) );
15 ellipse(200, 200, 40, 40);
16 fill( rgb(25, randomNumber(0, 255), 0) );
17 rect(0, 200, 400, 200);
18

```

7b

```

1 var spot1 = randomNumber(90,155);
2 var spot2 = randomNumber(60,165);
3 background(▼"white");
4
5 //draw butterfly wings and body
6 noStroke();
7 fill(▼"lightGreen");
8 ellipse(120, 180, 160, 200);
9 ellipse(280, 180, 160, 200);
10 ellipse(155, 280, 90, 110);
11 ellipse(245, 280, 90, 110);
12 stroke(▼"black");
13 fill(▼"black");
14 ellipse(200, 210, 50, 240);
15 ellipse(200, 90, 50, 50);
16 noFill();
17 arc(160, 60, 75, 75, 180, 45);
18 arc(240, 60, 75, 75, 135, 0);
19 noStroke();
20
21 //draw spots
22 fill(▼"red");
23 ellipse(spot1, 240, 25, 25);
24 ellipse(400-spot1, 240, 25, 25);
25
26 fill(▼"yellow");
27 ellipse(spot2, 140, 20, 20);
28 ellipse(400-spot2, 140, 25, 25);

```

7c

```

1 var height = randomNumber(100, 200);
2 var width = randomNumber(10, 100);
3 var leavesWidth = randomNumber(20, 200);
4 noStroke();
5
6 //Draw the background and grass
7 background(▼"skyBlue");
8 fill(▼"lightGreen");
9 rect(0, 300, 400, 100);
10
11 //Draw the trunk
12 fill(▼"tan");
13 rect(200-(width/2), 350-height, width, height);
14
15 //Draw the leaves
16 fill(▼"darkGreen");
17 ellipse(200, 350-height, leavesWidth*width, leavesWidth*width);
18

```