

# Processing Community Day Copenhagen 2020 - p5 workshop - cheatsheet

## Workshop github page

[github.com/kwichmann/p5workshop](https://github.com/kwichmann/p5workshop)

## Basic graphics

### Canvas

`createCanvas(width, height)` ..... Create  
`background(r, g, b)` ..... Background color

### Points and lines

`point(x, y)` ..... Point at  $(x, y)$   
`line(x1, y1, x2, y2)` . From  $(x_1, y_1)$  to  $(x_2, y_2)$

### Style of points, lines, and outlines

`strokeWeight(size)` ..... Size/width  
`stroke(r, g, b)` ..... Color  
`noStroke()` ..... Disable

### Geometric shapes

`rect(x, y, width, height)` Rectangle at  $(x, y)$   
`ellipse(x, y, radius)` . Circle with center  $(x, y)$   
`ellipse(x, y, width, height)` ..... Ellipse  
`triangle(x1, y1, x2, y2, x3, y3)` ... Triangle

### Style of fill

`fill(r, g, b)` ..... Color  
`noFill()` ..... Disable

## Color arguments

`···(r, g, b)` ..... Red, green, and blue, 0-255  
`···(brightness)` .. Grayscale: 0 black, 255 white

**Alpha:** 0 fully transparent, 255 fully opaque  
`···(r, g, b, a)` .... Red, green, blue with alpha  
`···(brightness, a)` ..... Grayscale with alpha

## Built-in variables

`width` and `height` ..... Canvas size  
`mouseX` and `mouseY` ..... Current mouse position  
`pmouseX` and `pmouseY` ... Previous mouse position  
`key` ..... Last key pressed

## Events

`function mousePressed() {...}` ... Mouse click  
`function keyPressed() {...}` ..... Key pressed

## Variables and constants

`let a` ..... Declare variable  $a$   
`let b = 5` ..... Declare and assign variable  $b$   
`const c = 42` ..... Assign constant  $c$   
`d = 3 * a + d` .... Reassign value to variable  $d$   
`n += 3` ..... Add 3 to variable  $n$   
`m -= 5` ..... Subtract 4 from variable  $m$   
`x *= 2` ..... Multiply variable  $x$  by 2  
`y /= 7` ..... Divide variable  $y$  by 7  
`i++` ..... Add 1 to variable  $i$   
`j--` ..... Subtract 1 from variable  $j$

## The console

`console.log(x)` . Write the value of  $x$  in console

## Conditionals

`if (a == 4) {...}` ..... Do if  $a$  is exactly 4  
`if (b < 60) {...}` ..... Do if  $b$  is less than 60  
`if (c > -3) {...}` ..... Do if  $c$  is more than -3

**Else:** Do something else when not true  
`if (condition) {...} else {...}`

## Images

`img = loadImage(path)` ..... Assign to variable  
`image(img, x, y)` ..... Show image at  $(x, y)$   
`image(img, x, y, height, width)` .... Set size  
`tint(r, g, b)` ..... Color images  
`noTint()` ..... Undo image coloring  
`imageMode(MODE)` ..... Change display mode  
`filter(FILTER)` ..... Use image filter

## Webcam

`webcam = createCapture(VIDEO)` .... Show cam  
`webcam.hide()` ..... Hide cam

## Sound

`mp3 = loadSound(path)` ..... Assign to variable  
`mp3.play()` ..... Play  
`mp3.stop()` ..... Stop  
`mp3.rate(r)` ..... Set playback rate

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Created by Kristian Gårdhus Wichmann, 2020

Based on [www.latextemplates.com/template/cheatsheet](http://www.latextemplates.com/template/cheatsheet)

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