**Structure**

() (parentheses)

, (comma)

. (dot)

/\* \*/ (multiline comment)

/\*\* \*/ (doc comment)

// (comment)

; (semicolon)

= (assign)

[] (array access)

{} (curly braces)

catch

class

draw()

exit()

extends

false

final

implements

import

loop()

new

noLoop()

null

pop()

popStyle()

private

public

push()

pushStyle()

redraw()

return

setLocation()

setResizable()

setTitle()

setup()

static

super

this

thread()

true

try

void

**Environment**

cursor()

delay()

displayDensity()

focused

frameCount

frameRate()

frameRate

fullScreen()

height

noCursor()

noSmooth()

pixelDensity()

pixelHeight

pixelWidth

settings()

size()

smooth()

width

**Data**

Primitive

boolean

byte

char

color

double

float

int

long

Composite

Array

ArrayList

FloatDict

FloatList

HashMap

IntDict

IntList

JSONArray

JSONObject

Object

String

StringDict

StringList

Table

TableRow

XML

Conversion

binary()

boolean()

byte()

char()

float()

hex()

int()

str()

unbinary()

unhex()

String Functions

join()

match()

matchAll()

nf()

nfc()

nfp()

nfs()

split()

splitTokens()

trim()

Array Functions

append()

arrayCopy()

concat()

expand()

reverse()

shorten()

sort()

splice()

subset()

**Control**

Relational Operators

!= (inequality)

< (less than)

<= (less than or equal to)

== (equality)

> (greater than)

>= (greater than or equal to)

Iteration

for

while

Conditionals

?: (conditional)

break

case

continue

default

else

if

switch

Logical Operators

! (logical NOT)

&& (logical AND)

|| (logical OR)

**Shape**

createShape()

loadShape()

PShape

2D Primitives

arc()

circle()

ellipse()

line()

point()

quad()

rect()

square()

triangle()

Curves

bezier()

bezierDetail()

bezierPoint()

bezierTangent()

curve()

curveDetail()

curvePoint()

curveTangent()

curveTightness()

3D Primitives

box()

sphere()

sphereDetail()

Attributes

ellipseMode()

rectMode()

strokeCap()

strokeJoin()

strokeWeight()

Vertex

beginContour()

beginShape()

bezierVertex()

curveVertex()

endContour()

endShape()

quadraticVertex()

vertex()

Loading & Displaying

shape()

shapeMode()

**Input**

Mouse

mouseButton

mouseClicked()

mouseDragged()

mouseMoved()

mousePressed()

mousePressed

mouseReleased()

mouseWheel()

mouseX

mouseY

pmouseX

pmouseY

Keyboard

key

keyCode

keyPressed()

keyPressed

keyReleased()

keyTyped()

Files

BufferedReader

createInput()

createReader()

launch()

loadBytes()

loadJSONArray()

loadJSONObject()

loadStrings()

loadTable()

loadXML()

parseJSONArray()

parseJSONObject()

parseXML()

selectFolder()

selectInput()

Time & Date

day()

hour()

millis()

minute()

month()

second()

year()

**Output**

Text Area

print()

printArray()

println()

Image

save()

saveFrame()

Files

beginRaw()

beginRecord()

createOutput()

createWriter()

endRaw()

endRecord()

PrintWriter

saveBytes()

saveJSONArray()

saveJSONObject()

saveStream()

saveStrings()

saveTable()

saveXML()

selectOutput()

**Transform**

applyMatrix()

popMatrix()

printMatrix()

pushMatrix()

resetMatrix()

rotate()

rotateX()

rotateY()

rotateZ()

scale()

shearX()

shearY()

translate()

**Lights, Camera**

Lights

ambientLight()

directionalLight()

lightFalloff()

lights()

lightSpecular()

noLights()

normal()

pointLight()

spotLight()

Camera

beginCamera()

camera()

endCamera()

frustum()

ortho()

perspective()

printCamera()

printProjection()

Coordinates

modelX()

modelY()

modelZ()

screenX()

screenY()

screenZ()

Material Properties

ambient()

emissive()

shininess()

specular()

**Color**

Setting

background()

clear()

colorMode()

fill()

noFill()

noStroke()

stroke()

Creating & Reading

alpha()

blue()

brightness()

color()

green()

hue()

lerpColor()

red()

saturation()

**Image**

createImage()

PImage

Loading & Displaying

image()

imageMode()

loadImage()

noTint()

requestImage()

tint()

Textures

texture()

textureMode()

textureWrap()

Pixels

blend()

copy()

filter()

get()

loadPixels()

pixels[]

set()

updatePixels()

**Rendering**

blendMode()

clip()

createGraphics()

hint()

noClip()

PGraphics

Shaders

loadShader()

PShader

resetShader()

shader()

**Typography**

PFont

Loading & Displaying

createFont()

loadFont()

text()

textFont()

Attributes

textAlign()

textLeading()

textMode()

textSize()

textWidth()

Metrics

textAscent()

textDescent()

**Math**

PVector

Operators

% (modulo)

\* (multiply)

\*= (multiply assign)

+ (addition)

++ (increment)

+= (add assign)

- (minus)

-- (decrement)

-= (subtract assign)

/ (divide)

/= (divide assign)

Bitwise Operators

& (bitwise AND)

<< (left shift)

>> (right shift)

| (bitwise OR)

Calculation

abs()

ceil()

constrain()

dist()

exp()

floor()

lerp()

log()

mag()

map()

max()

min()

norm()

pow()

round()

sq()

sqrt()

Trigonometry

acos()

asin()

atan()

atan2()

cos()

degrees()

radians()

sin()

tan()

Random

noise()

noiseDetail()

noiseSeed()

random()

randomGaussian()

randomSeed()

Constants

HALF\_PI

PI

QUARTER\_PI

TAU

TWO\_PI