Key

no notes: same in OF as Processing

!: new to OF 007

~: very similar, but not equivalent

X: not needed in OF due to different design, or external libraries like cmath

?: no corollary in OF

Structure

[] (array access)
= (assign)
catch**?**
class
, (comma)
// (comment)
{} (curly braces)
delay() ofSleepMillis()
/** */ (doc comment)
. (dot)
draw()
exit()
extends :
false
final const
implements**X**
import #include
loop()**?**
/* */ (multiline comment)
new
noLoop()**?**
null NULL
() (parentheses)
popStyle() ofPopStyle()
private
public
pushStyle() ofPushStyle()
redraw()**?**
return
; (semicolon)
setup()
size() ofSetupOpenGL() and ofSetWindowShape()
static
super**X**
this
true
try**?**
void

Shape

PShape**?**

2D Primitives
arc()**?**
ellipse() ofEllipse()
line() ofLine()
point()span class="missing">?
quad()**?**
rect() ofRect()
triangle() ofTriangle()

Curves
bezierTangent() ofBezierTangent()
bezier() ofBezier()
bezierDetail()
ofSetCurveResolution()
bezierPoint() ofBezierPoint()
curveTightness()**?**
curve() ofCurve()
curveDetail()
ofSetCurveResolution()
curvePoint() ofCurveVertex()
curveTangent() ofCurveTangent()

3D Primitives
box()**!** ofBox()
sphere()**!** ofSphere()
sphereDetail()**!**
ofSetSphereResolution()

Attributes
ellipseMode()**?**
noSmooth() ofEnableSmoothing()
rectMode() ofSetRectMode()
smooth() ofEnableSmoothing()
strokeCap()**?**
strokeJoin()**?**
strokeWeight() ofSetLineWidth()

Color

Setting
Color setting in OF uses a different style than Processing.
background() ofBackground()
colorMode()**?**
fill() ofFill() and ofSetColor()
noFill() ofNoFill()
noStroke() ofFill()
stroke() ofNoFill() and ofSetColor()

Creating & Reading
alpha() ofColor::a
blendColor()**?**
blue() ofColor::b
brightness()
ofColor::getBrightness()
color() ofColor()**!** or ofColor::fromHsb() or ofColor::fromHex()
green() ofColor::g
hue()**!** ofColor::getHue()
lerpColor()**!** ofColor::lerp()
red() ofColor::r
saturation()**!**
ofColor::getSaturation()

Image

PImage ofImage
createImage()**~**ofImage::allocate()

Loading & Displaying
image() ofImage::draw()
imageMode()**~**ofImage::setAnchorPercent()
loadImage() ofImage::loadImage()
noTint() ofSetColor(255) and ofImage::draw()
requestImage()**?**

Environment

cursor() glutSetCursor()
frameRate ofSetFrameRate()
focused?
frameCount ofGetFrameNum()
frameRate() ofGetFrameRate()
height ofGetHeight()
noCursor() ofHideCursor()
online X
screen ofGetScreenWidth()
width ofGetWidth()

Data

Primitive
boolean
color ofColor
byte unsigned char
char
double
float
int
long

Composite
ArrayList list
Array vector
HashMap map
Object X
String string
XMLElement

Conversion
boolean()! ofToBool()
binary()! ofToBinary()
byte()! ofToChar()
char()! ofToChar()
float() ofToFloat()
hex()! ofToHex()
int() ofToInt()
str() ofToString()
unbinary()! ofBinaryTo*()
[Int,Char,Float,String]
unhex()! ofHexTo*()
[Int,Char,Float,String]

String Functions

Vertex
beginShape()~ofBeginShape()
bezierVertex() ofBezierVertex()
curveVertex() ofCurveVertex()
endShape()~ofEndShape()
texture() ofTexture::bind()
textureMode() ofEnableArbTex(), ofDisableArbTex()
vertex() ofVertex()

Loading & Displaying
loadShape()?
shape()?
shapeMode()?

Input

Mouse
mousePressed! ofGetMousePressed()
mouseButton! ofGetMousePressed(button)
mouseClicked()?
mouseDragged()
mouseMoved()
mousePressed()
mouseReleased()
mouseX
mouseY
pmouseX?
pmouseY?

Keyboard
keyPressed! ofGetKeyPressed()
key
keyCode?
keyPressed()
keyReleased()
keyTyped()

Files
BufferedReader~ofBuffer
createInput()?
createReader()?
loadBytes()?
loadStrings()?
open()?

tint() ofSetColor() and ofImage::draw()

Pixels
blend()?
copy()?
filter()?
get()! ofImage::getPixel() (tentative)
loadPixels()?
pixels[] ofImage::getPixels()
set()! ofImage::setPixel() (tentative)
updatePixels() ofImage::update()

Rendering

PGraphics?
createGraphics()?
hint()?

Typography

PFont ofTrueTypeFont

Loading & Displaying
createFont()
ofTrueTypeFont::loadFont()
loadFont() X
text()
ofTrueTypeFont::drawString() or ofDrawBitmapString()
textFont()?

Attributes
textAlign()?
textLeading()
ofTrueTypeFont::getLineHeight()
textMode()~ofTrueTypeFont::drawString() and ofTrueTypeFont::drawStringAsShapes()
textSize()?
textWidth()
ofTrueTypeFont::stringWidth()

Metrics
textAscent()?

join()! ofJoinString()
match()?
matchAll()?
nf() ofToString()
nfc()?
nfp()?
nfs()?
split() ofSplitString()
splitTokens() ofSplitString()
trim()?

Array Functions
Lots of these can be done with STL, but aren't wrapped by OF.
append()?
arrayCopy()?
concat()?
expand()?
reverse()?
shorten()?
sort()?
splice()?
subset()?

Control

Relational Operators
== (equality)
> (greater than)
>= (greater than or equal to)
!= (inequality)
<= (less than or equal to)
< (less than)

Iteration
for
while

Conditionals
break
case
?: (conditional)
continue
default
else
if
switch()

selectFolder()?
selectInput()?

Web
link() ofLaunchBrowser()
param()X
status()X

Time & Date
day() ofGetDay()
hour() ofGetHours()
millis() ofGetElapsedTimeMillis()
minute() ofGetMinutes()
month() ofGetMonth()
second() ofGetSeconds()
year() ofGetYear()

Output

Text Area
print()X cout
println()X cout + endl

Image
save() ofSaveScreen()
saveFrame() ofSaveFrame()

Files
PrintWriter?
beginRaw()?
beginRecord()?
createOutput()?
createWriter()?
endRaw()?
endRecord()?
saveBytes()?
saveStream()?
saveStrings()?
selectOutput()?

Transform

applyMatrix()?
popMatrix() ofPopMatrix()
printMatrix()?
pushMatrix() ofPushMatrix()
resetMatrix()?
textDescent()?

Math

PVector ofPoint or ofVec*f

Operators
+= (add assign)
+ (addition)
-- (decrement)
/ (divide)
/= (divide assign)
++ (increment)
- (minus)
% (modulo)
* (multiply)
*= (multiply assign)
-= (subtract assign)

Bitwise Operators
& (bitwise AND)
| (bitwise OR)
<< (left shift)
>> (right shift)

Calculation
abs()X fabsf
ceil()X ceilf
constrain() ofClamp() or CLAMP() macro
dist() ofDist() or ofxVec*f::distance()
exp()X expf
floor()X floorf
lerp() ofLerp() or ofxVec*f::interpolate()
log()X logf
mag() ofxVec*f::length()
map() ofMap()
max() MAX() macro
min() MIN() macro
norm() ofNormalize() or ofxVec*f::normalize()
pow()X powf
round()X roundf
sq()?
sqrt()X sqrtf

Logical Operators
&& (logical AND)
! (logical NOT)
|| (logical OR)

rotate() ofRotate()
rotateX() ofRotateX()
rotateY() ofRotateY()
rotateZ() ofRotateZ()
scale() ofScale()
skewX()?
skewY()?
translate() ofTranslate()

Lights, Camera

Lights
ambientLight()?
directionalLight()?
lightSpecular()?
lightFalloff()?
lights()! ofLight
noLights()?
normal()?
pointLight()?
spotLight()?

Camera
beginCamera()?
camera()?
endCamera()?
frustum()?
ortho()~ofSetupScreenOrtho()
perspective()~ofSetupScreenPerspective()
printCamera()?
printProjection()?

Coordinates
modelX()?
modelY()?
modelZ()?
screenX()?
screenY()?
screenZ()?

Material Properties
ambient()?
emissive()?
shininess()?
specular()?

Trigonometry
acos()X acosf
asin()X asinf
atan()X atanf
atan2()X atan2f
cos()X cosf
degrees() ofRadToDeg()
radians() ofDegToRad()
sin()X sinf
tan()X tanf

Random
noise() ofNoise()
noiseDetail()?
noiseSeed()?
random()~!ofRandom()
randomSeed() ofSeedRandom()

Constants

HALF_PI (1.57079...)
PI (3.14159...)
QUARTER_PI (0.78539...)?
TWO_PI (6.28318...)