

Processing Functions

Arrays	append(array, item)	Appends item to the array
Arrays	arrayCopy(from, begin, to, begin, num)	
Arrays	arrayCopy(from, to)	
Arrays	arrayCopy(from, to, num)	
Arrays	concat(a, b)	Concatenate array b onto array a
Arrays	deleteElement(a, begin)	
Arrays	expand(array, moreElements)	Add moreElements to the length of the array
Arrays	reverse(a)	
Arrays	shorten(array)	Get rid of the last element of array
Arrays	sort(a)	
Arrays	splice(a, b, index)	
Arrays	subset(a, begin, num)	
Arrays		
Color	blendColor(pi1, pi2, mode)	mode = BLEND, ADD, SUBTRACT, DARKEST, LIGHTEST, DIFFERENCE, DODGE, BURN, MULTIPLY, EXCLUSION, SCREEN, OVERLAY
Color	color(c)	Set the current color to the color variable c
Color	color(gray)	Set the current color to (gray, gray, gray)
Color	color(h, s, b)	Set the current color to (h, s, b) if in HSB space
Color	color(r, g, b)	Set the current color to (r, g, b) if in RGB space
Color	colorMode(mode)	Set the color specification mode to RGB or HSB
Color	lerpColor(c1, c2, t)	Linearly interpolate two color variables
Color		
Drawing	fill(c)	Fill using the color c
Drawing	noFill()	Don't do any filling
Drawing	noStroke()	Don't do any outlining
Drawing	stroke(c)	Outline using the color c
Drawing	strokeWeight(w)	Thickness of the outline
Drawing		
Keyboard	keyPressed()	Gets called when a key is pressed -- what got pressed is in the variable named "key"
Keyboard		
Math	abs(f)	Absolute value
Math	acos(c)	Arc whose cosine is c (returned in radians)
Math	asin(s)	Arc whose sine is s (returned in radians)
Math	atan(t)	Arc whose tangent is t (returned in radians)
Math	atan2(y, x)	Arc whose tangent is y/x (returned in radians)
Math	constrain(low, high, f)	Return f, but limited to the range between low and high
Math	cos(r)	Cosine (angle is in radians)
Math	degrees(r)	Convert a number of radians to degrees
Math	dist(v1, v2)	Distance between 2 points
Math	exp(f)	Raise e (2.71828...) to the f power
Math	float(i)	Promote i to a float
Math	int(f)	Truncate f to an integer
Math	lerp(low, high, t)	Linearly interpolate two values
Math	log(f)	Natural logarithm
Math	mag(v)	Magnitude of a vector
Math	map(input, lowin, highin, lowout, highout)	Linearly map the input variable from the range [lowin,highin] to [lowout,highout]
Math	max(f1, f2)	Maximum of the two numbers
Math	min(f1, f2)	Minimum of the two numbers
Math	pow(f, e)	Raise f to the e power
Math	radians(d)	Convert a number of degrees to radians
Math	round(f)	Round f to the nearest integer
Math	sin(r)	Sine (angle is in radians)
Math	sq(f)	f * f
Math	sqrt(f)	Square root (f must be >= 0.)
Math		
Mouse	mouseDragged()	Gets called when the mouse has been moved with one or more buttons down
Mouse	mouseMoved()	Gets called when the mouse has been moved with all buttons up
Mouse	mousePressed()	Gets called when a mouse button is pressed -- what got pressed is in the variable named "mouseButton"
Mouse	mouseReleased()	Gets called when a mouse button is released
Mouse		
Printing	print(s)	Print the string into the console
Printing	println(s)	Print the string into the console, adding a return
Printing	status(s)	Print a string into the status area
Printing		
Randomness	noise(f)	
Randomness	noiseDetail(??)	
Randomness	noiseSeed(??)	
Randomness	random(low, high)	Return a random number between low and high
Randomness	randomSeed(s)	Set the random number sequence to a different pattern
Randomness		
Setup	background(gray)	Set the background to (gray, gray, gray)
Setup	background(r, g, b)	Set the background to r, g, b
Setup	background(c)	Set the background to the color c
Setup	draw()	The function that gets called over and over to draw your scene
Setup	exit()	Exit the Processing program
Setup	frameRate(fr)	Set the refresh rate to attempt to achieve
Setup	loop()	Starts automatic calling of draw()
Setup	noLoop()	Stops automatic calling of draw()
Setup	noSmooth()	Set the display antialiasing to off
Setup	setup()	The function that gets called when your program starts

Processing Functions

Setup	size(w, h)	Set the size of the graphics window to w x h pixels
Setup	size(w, h, renderer)	JAVA2D, P2D, {3D, OPENGGL, PDF
Setup	smooth()	Set the display antialiasing to on
Setup		
Shapes	arc(cx, cy, rx, ry, th1, th2)	Draw an arc with center (cx,cy) with radii (rx,ry), from angle th1 to angle th2
Shapes	beginShape()	Begin an arbitrary shape
Shapes	box(b)	Draw a 3D box with dimensions b x b x b around the origin
Shapes	box(l, w, h)	Draw a 3D box with dimensions l x w x h around the origin
Shapes	curve(x0, y0, x1, y1, x2, y2, x3, y3)	Draw a Catmull-Rom curve
Shapes	ellipse(cx, cy, w, h)	Draw an ellipse in CENTER mode
Shapes	ellipse(cx, cy, x/2., y/2.)	Draw an ellipse in RADIUS mode
Shapes	ellipse(ulx, uly, llx, lly)	Draw an ellipse in CORNERS mode
Shapes	ellipse(ulx, uly, w, h)	Draw an ellipse in CORNER mode
Shapes	ellipseMode(m)	CORNER, CORNERS, CENTER, RADIUS
Shapes	endShape()	End an arbitrary shape
Shapes	line(x0, y0, x1, y1)	Draw a line
Shapes	point(x, y)	Put a dot at (x,y)
Shapes	quad(x0, y0, x1, y1, x2, y2, x3, y3)	Draw a quadrilateral
Shapes	rect(cx, cy, w, h)	Draw a rectangle in CENTER mode
Shapes	rect(cx, cy, x/2., y/2.)	Draw a rectangle in RADIUS mode
Shapes	rect(ulx, uly, llx, lly)	Draw a rectangle in CORNERS mode
Shapes	rect(ulx, uly, w, h)	Draw a rectangle in CORNER mode
Shapes	rectMode(m)	CORNER, CORNERS, CENTER, RADIUS
Shapes	sphere(r)	Draw a 3D sphere with radius r around the origin
Shapes	sphereDetail(slices, stacks)	Set the number of slices and stacks to use when drawing a sphere
Shapes	triangle(x0, y0, x1, y1, x2, y2)	Draw a triangle
Shapes	vertex(x, y)	Specify a vertex in the outline of the arbitrary shape
Shapes		
Text	loadFont(font)	Load and assign the given font
Text	text(s, x, y)	Draw the text "s" on the screen at (x,y) with the current fill color
Text	textFont(theFont)	Set theFont as the current font
Text		
Textures	loadImage("filename")	Read and assign an image file to a Pimage variable
Textures	texture(??)	
Textures	textureMode(??)	
Textures		
Time	day()	Current day of the month: 1 - 31
Time	delay(ms)	Stops the program for ms milliseconds
Time	hour()	Current hour of the day: 0 - 23
Time	millis()	# milliseconds since the program started
Time	minute()	Current minute of the hour: 0 - 59
Time	second()	Current second of the minute 0 - 59
Time	year()	Current year
Time		
Transformations	rotate(r)	Perform a 2D CW rotation of r radians
Transformations	rotateX(r)	Perform an X rotation of r radians
Transformations	rotateY(r)	Perform a Y rotation of r radians
Transformations	rotateZ(r)	Perform a Z rotation of r radians
Transformations	scale(sx, sy)	Scale by (sx,sy)
Transformations	translate(tx, ty)	Translate by (tx,ty)
Transformations		
Variables	frameCount	Current frame number
Variables	HALF_PI	$\pi / 2$.
Variables	height	Screen height in pixels
Variables	Infinity	∞
Variables	key	The keyboard key that is pressed
Variables	keyCode	Modifier keys
Variables	keyPressed	true if a keyboard key has been pressed
Variables	mouseButton	LEFT, CENTER, RIGHT
Variables	mousePressed	true if a mouse button has been pressed
Variables	mouseX	The current mouse X position
Variables	mouseY	The current mouse Y position
Variables	PI	π
Variables	QUARTER_PI	$\pi / 4$.
Variables	TWO_PI	2π
Variables	width	Screen width in pixels
Variables		