OpenSCAD CheatSheet v2015.03

Syntax

var = value;
module name(…) { … }
name();
function name(…) = …
name();
include <….scad>
use <….scad>

2D

circle(radius | d=diameter)
square(size,center)
square([width,height],center)
polygon([points])
polygon([points],[paths])
text(text, size, font,
     halign, valign, spacing,
     direction, language, script)

3D

sphere(radius | d=diameter)
cube(size, center)
cube([width,depth,height], center)
cylinder(h,r|d,center)
cylinder(h,r1|d1,r2|d2,center)
polyhedron(points, triangles, convexity)

Transformations

translate([x,y,z])
rotate([x,y,z])
scale([x,y,z])
resize([x,y,z],auto)
mirror([x,y,z])
multmatrix(m)
color("colorname",alpha)
color([r,g,b,a])
offset(r|delta,chamfer)
hull()
minkowski()

Boolean operations

union()
difference()
intersection()

Modifier Characters

*   disable
!   show only
highlight / debug
%   transparent / background

Mathematical

abs
sign
sin
cos
tan
acos
asin
atan
atan2
floor
round
ceil
ln
len
let
log
pow
sqrt
exp
rands
min
max

Functions

concat
lookup
str
chr
search
version
version_num
norm
cross
parent_module(idx)

List Comprehensions

Generate [for (i = range|list) i]
Conditions [for (i = …) if (condition(i)) i]
Assignments [for (i = …) let (assignments) a]

Special variables

$fa   minimum angle
$fs   minimum size
$fn   number of fragments
$t   animation step
$vpr   viewport rotation angles in degrees
$vpt   viewport translation
$vpd   viewport camera distance
$children number of module children

Other

echo(…)
for (i = [start:end]) { … }
for (i = [start:step:end]) { … }
for (i = […,…,…]) { … }
intersection_for(i = [start:end]) { … }
intersection_for(i = [start:step:end]) { … }
intersection_for(i = […,…,…]) { … }
if (…) { … }
~~assign (…) { … }~~
import("….stl")
linear_extrude(height,center,convexity,twist,slices,scale)
rotate_extrude(angle,convexity)
surface(file = "….dat",center,convexity)
projection(cut)
render(convexity)
children([idx])