%Semicirculo 1 (color naranja)

r=1.75;

t= linspace(0, pi, 1000);

x3= (0)+r\*cos(t);

y3= (7)+r\*sin(t);

z3= 0.25\*t;

plot3(x3,y3,z3);

hold on

xlabel ('x-axis')

ylabel ('y-axis')

zlabel ('z-axis')

grid on

r=3;

t= linspace(0, pi, 1000);

x3= (0)+r\*cos(t);

y3= (7)+r\*sin(t);

z3= 0.25\*t;

plot3(x3,y3,z3);

%Linea base exterior (color amarilla)

k = linspace(3, 3, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 0\*k;

plot3(x, y, z);

%Linea base interior (color morada)

k = linspace(1.75, 1.75, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 0\*k;

plot3(x, y, z);

%Linea base interior (color )

k = linspace(-1.75, -1.75, 100);

r = linspace(7, 3, 100);

l = linspace (0.8, 1.6, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Linea base exterior (color )

k = linspace(-3, -3, 100);

r = linspace(7, 3, 100);

l = linspace (0.8, 1.6, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Semicirculo 1 (color AMARILLO)

r=1.75;

t= linspace(0,pi, 1000);

x3= r\*-cos(t);

y3= 3+r\*-sin(t);

z3= 1.6+0.25\*t;

plot3(x3,y3,z3);

%Semicirculo 1 (color MORADO)

r=3;

t= linspace(0,pi, 1000);

x3= r\*-cos(t);

y3= 3+r\*-sin(t);

z3= 1.6+0.25\*t;

plot3(x3,y3,z3);

%Segundo piso

%Semicirculo 1 (color naranja)

r=1.75;

t= linspace(0, pi, 1000);

x4= (0)+r\*cos(t);

y4= (7)+r\*sin(t);

z4= 2.4+0.25\*t;

plot3(x4,y4,z4);

r=3;

t= linspace(0, pi, 1000);

x5= (0)+r\*cos(t);

y5= (7)+r\*sin(t);

z5= 2.4+0.25\*t;

plot3(x5,y5,z5);

%Linea base exterior (color amarilla)

k = linspace(3, 3, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 2.4+0\*k;

plot3(x, y, z);

%Linea base interior (color morada)

k = linspace(1.75, 1.75, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 2.4+0\*k;

plot3(x, y, z);

%Linea base interior (color )

k = linspace(-1.75, -1.75, 100);

r = linspace(7, 3, 100);

l = linspace (3.2, 4, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Linea base exterior (color )

k = linspace(-3, -3, 100);

r = linspace(7, 3, 100);

l = linspace (3.2, 4, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Semicirculo 1 (color AMARILLO)

r=1.75;

t= linspace(0,pi, 1000);

x3= r\*-cos(t);

y3= 3+r\*-sin(t);

z3= 4+0.25\*t;

plot3(x3,y3,z3);

%Semicirculo 1 (color MORADO)

r=3;

t= linspace(0,pi, 1000);

x3= r\*-cos(t);

y3= 3+r\*-sin(t);

z3= 4+0.25\*t;

plot3(x3,y3,z3);

%Tercer piso

%Semicirculo 1 (color naranja)

r=1.75;

t= linspace(0, pi, 1000);

x4= (0)+r\*cos(t);

y4= (7)+r\*sin(t);

z4= 4.8+0.25\*t;

plot3(x4,y4,z4);

r=3;

t= linspace(0, pi, 1000);

x5= (0)+r\*cos(t);

y5= (7)+r\*sin(t);

z5= 4.8+0.25\*t;

plot3(x5,y5,z5);

%Linea base exterior (color amarilla)

k = linspace(3, 3, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 4.8+0\*k;

plot3(x, y, z);

%Linea base interior (color morada)

k = linspace(1.75, 1.75, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 4.8+0\*k;

plot3(x, y, z);

%Linea base interior (color )

k = linspace(-1.75, -1.75, 100);

r = linspace(7, 3, 100);

l = linspace (5.6, 6.4, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Linea base exterior (color )

k = linspace(-3, -3, 100);

r = linspace(7, 3, 100);

l = linspace (5.6, 6.4, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Semicirculo 1 (color AMARILLO)

r=1.75;

t= linspace(0,pi, 1000);

x3= r\*-cos(t);

y3= 3+r\*-sin(t);

z3= 6.4+0.25\*t;

plot3(x3,y3,z3);

%Semicirculo 1 (color MORADO)

r=3;

t= linspace(0,pi, 1000);

x3= r\*-cos(t);

y3= 3+r\*-sin(t);

z3= 6.4+0.25\*t;

plot3(x3,y3,z3);

%Cuarto piso

%Semicirculo 1 (color naranja)

r=1.75;

t= linspace(0, pi, 1000);

x4= (0)+r\*cos(t);

y4= (7)+r\*sin(t);

z4= 7.2+0.25\*t;

plot3(x4,y4,z4);

r=3;

t= linspace(0, pi, 1000);

x5= (0)+r\*cos(t);

y5= (7)+r\*sin(t);

z5= 7.2+0.25\*t;

plot3(x5,y5,z5);

%Linea base exterior (color amarilla)

k = linspace(3, 3, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 7.2+0\*k;

plot3(x, y, z);

%Linea base interior (color morada)

k = linspace(1.75, 1.75, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 7.2+0\*k;

plot3(x, y, z);

%Linea base interior (color )

k = linspace(-1.75, -1.75, 100);

r = linspace(7, 3, 100);

l = linspace (8, 8.8, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Linea base exterior (color )

k = linspace(-3, -3, 100);

r = linspace(7, 3, 100);

l = linspace (8, 8.8, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Semicirculo 1 (color AMARILLO)

r=1.75;

t= linspace(0,pi, 1000);

x3= r\*-cos(t);

y3= 3+r\*-sin(t);

z3= 8.8+0.25\*t;

plot3(x3,y3,z3);

%Semicirculo 1 (color MORADO)

r=3;

t= linspace(0,pi, 1000);

x3= r\*-cos(t);

y3= 3+r\*-sin(t);

z3= 8.8+0.25\*t;

plot3(x3,y3,z3);

%Quito piso

%Semicirculo 1 (color naranja)

r=1.75;

t= linspace(0, pi, 1000);

x4= (0)+r\*cos(t);

y4= (7)+r\*sin(t);

z4= 9.6+0.25\*t;

plot3(x4,y4,z4);

r=3;

t= linspace(0, pi, 1000);

x5= (0)+r\*cos(t);

y5= (7)+r\*sin(t);

z5= 9.6+0.25\*t;

plot3(x5,y5,z5);

%Linea base exterior (color amarilla)

k = linspace(3, 3, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 9.6+0\*k;

plot3(x, y, z);

%Linea base interior (color morada)

k = linspace(1.75, 1.75, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 9.6+0\*k;

plot3(x, y, z);

%Linea base interior (color )

k = linspace(-1.75, -1.75, 100);

r = linspace(7, 3, 100);

l = linspace (10.4, 11.2, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Linea base exterior (color )

k = linspace(-3, -3, 100);

r = linspace(7, 3, 100);

l = linspace (10.4, 11.2, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Semicirculo 1 (color AMARILLO)

r=1.75;

t= linspace(0,pi, 1000);

x3= r\*-cos(t);

y3= 3+r\*-sin(t);

z3= 11.2+0.25\*t;

plot3(x3,y3,z3);

%Semicirculo 1 (color MORADO)

r=3;

t= linspace(0,pi, 1000);

x3= r\*-cos(t);

y3= 3+r\*-sin(t);

z3= 11.2+0.25\*t;

plot3(x3,y3,z3);

%Quinto piso abajo

%Semicirculo 1 (color naranja)

r=1.75;

t= linspace(0, pi, 1000);

x4= (0)+r\*-cos(t);

y4= (7)+r\*sin(t);

z4= 12+0.25\*-t;

plot3(x4,y4,z4);

r=3;

t= linspace(0, pi, 1000);

x5= (0)+r\*-cos(t);

y5= (7)+r\*sin(t);

z5= 12+0.25\*-t;

plot3(x5,y5,z5);

%Linea base interior (color )

k = linspace(1.75, 1.75, 100);

r = linspace(7, 3, 100);

l = linspace (11.2, 10.4, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Linea base exterior (color )

k = linspace(3, 3, 100);

r = linspace(7, 3, 100);

l = linspace (11.2, 10.4, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Semicirculo 1 (color AMARILLO)

r=1.75;

t= linspace(0,pi, 1000);

x3= r\*cos(t);

y3= 3+r\*-sin(t);

z3= 10.4+0.25\*-t;

plot3(x3,y3,z3);

%Semicirculo 1 (color MORADO)

r=3;

t= linspace(0,pi, 1000);

x3= r\*cos(t);

y3= 3+r\*-sin(t);

z3= 10.4+0.25\*-t;

plot3(x3,y3,z3);

%cuarto Piso

%Semicirculo 1 (color naranja)

r=1.75;

t= linspace(0, pi, 1000);

x4= (0)+r\*-cos(t);

y4= (7)+r\*sin(t);

z4= 9.6+0.25\*-t;

plot3(x4,y4,z4);

r=3;

t= linspace(0, pi, 1000);

x5= (0)+r\*-cos(t);

y5= (7)+r\*sin(t);

z5= 9.6+0.25\*-t;

plot3(x5,y5,z5);

%Linea base exterior (color amarilla)

k = linspace(-3, -3, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 9.6+0\*k;

plot3(x, y, z);

%Linea base interior (color morada)

k = linspace(-1.75, -1.75, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 9.6+0\*k;

plot3(x, y, z);

%Linea base interior (color )

k = linspace(1.75, 1.75, 100);

r = linspace(7, 3, 100);

l = linspace (8.8, 8, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Linea base exterior (color )

k = linspace(3, 3, 100);

r = linspace(7, 3, 100);

l = linspace (8.8, 8, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Semicirculo 1 (color AMARILLO)

r=1.75;

t= linspace(0,pi, 1000);

x3= r\*cos(t);

y3= 3+r\*-sin(t);

z3= 8+0.25\*-t;

plot3(x3,y3,z3);

%Semicirculo 1 (color MORADO)

r=3;

t= linspace(0,pi, 1000);

x3= r\*cos(t);

y3= 3+r\*-sin(t);

z3= 8+0.25\*-t;

plot3(x3,y3,z3);

%Tercer piso

%Semicirculo 1 (color naranja)

r=1.75;

t= linspace(0, pi, 1000);

x4= (0)+r\*-cos(t);

y4= (7)+r\*sin(t);

z4= 7.2+.25\*-t;

plot3(x4,y4,z4);

r=3;

t= linspace(0, pi, 1000);

x5= (0)+r\*-cos(t);

y5= (7)+r\*sin(t);

z5= 7.2+0.25\*-t;

plot3(x5,y5,z5);

%Linea base exterior (color amarilla)

k = linspace(-3, -3, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 7.2+0\*k;

plot3(x, y, z);

%Linea base interior (color morada)

k = linspace(-1.75, -1.75, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 7.2+0\*k;

plot3(x, y, z);

%Linea base interior (color )

k = linspace(1.75, 1.75, 100);

r = linspace(7, 3, 100);

l = linspace (6.4, 5.6, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Linea base exterior (color )

k = linspace(3, 3, 100);

r = linspace(7, 3, 100);

l = linspace (6.4, 5.6, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Semicirculo 1 (color AMARILLO)

r=1.75;

t= linspace(0,pi, 1000);

x3= r\*cos(t);

y3= 3+r\*-sin(t);

z3= 5.6+0.25\*-t;

plot3(x3,y3,z3);

%Semicirculo 1 (color MORADO)

r=3;

t= linspace(0,pi, 1000);

x3= r\*cos(t);

y3= 3+r\*-sin(t);

z3= 5.6+0.25\*-t;

plot3(x3,y3,z3);

%segundo piso

%Semicirculo 1 (color naranja)

r=1.75;

t= linspace(0, pi, 1000);

x4= (0)+r\*-cos(t);

y4= (7)+r\*sin(t);

z4= 4.8+.25\*-t;

plot3(x4,y4,z4);

r=3;

t= linspace(0, pi, 1000);

x5= (0)+r\*-cos(t);

y5= (7)+r\*sin(t);

z5= 4.8+0.25\*-t;

plot3(x5,y5,z5);

%Linea base exterior (color amarilla)

k = linspace(-3, -3, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 4.8+0\*k;

plot3(x, y, z);

%Linea base interior (color morada)

k = linspace(-1.75, -1.75, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 4.8+0\*k;

plot3(x, y, z);

%Linea base interior (color )

k = linspace(1.75, 1.75, 100);

r = linspace(7, 3, 100);

l = linspace (4, 3.2, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Linea base exterior (color )

k = linspace(3, 3, 100);

r = linspace(7, 3, 100);

l = linspace (4, 3.2, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Semicirculo 1 (color AMARILLO)

r=1.75;

t= linspace(0,pi, 1000);

x3= r\*cos(t);

y3= 3+r\*-sin(t);

z3= 3.2+0.25\*-t;

plot3(x3,y3,z3);

%Semicirculo 1 (color MORADO)

r=3;

t= linspace(0,pi, 1000);

x3= r\*cos(t);

y3= 3+r\*-sin(t);

z3= 3.2+0.25\*-t;

plot3(x3,y3,z3);

%primer piso abajo

%Semicirculo 1 (color naranja)

r=1.75;

t= linspace(0, pi, 1000);

x4= (0)+r\*-cos(t);

y4= (7)+r\*sin(t);

z4= 2.4+.25\*-t;

plot3(x4,y4,z4);

r=3;

t= linspace(0, pi, 1000);

x5= (0)+r\*-cos(t);

y5= (7)+r\*sin(t);

z5= 2.4+0.25\*-t;

plot3(x5,y5,z5);

%Linea base exterior (color amarilla)

k = linspace(-3, -3, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 2.4+0\*k;

plot3(x, y, z);

%Linea base interior (color morada)

k = linspace(-1.75, -1.75, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 2.4+0\*k;

plot3(x, y, z);

%Linea base interior (color )

k = linspace(1.75, 1.75, 100);

r = linspace(7, 3, 100);

l = linspace (1.6, .8, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Linea base exterior (color )

k = linspace(3, 3, 100);

r = linspace(7, 3, 100);

l = linspace (1.6, .8, 100);

x = k;

y = r;

z = l;

plot3(x, y, z);

%Semicirculo 1 (color AMARILLO)

r=1.75;

t= linspace(0,pi, 1000);

x3= r\*cos(t);

y3= 3+r\*-sin(t);

z3= 0.8+0.25\*-t;

plot3(x3,y3,z3);

%Semicirculo 1 (color MORADO)

r=3;

t= linspace(0,pi, 1000);

x3= r\*cos(t);

y3= 3+r\*-sin(t);

z3= 0.8+0.25\*-t;

plot3(x3,y3,z3);

%Linea base exterior (color amarilla)

k = linspace(-3, -3, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 0\*k;

plot3(x, y, z);

%Linea base interior (color morada)

k = linspace(-1.75, -1.75, 100);

r = linspace(3, 7, 100);

x = k;

y = r;

z = 0\*k;

plot3(x, y, z);

%cuartocirculo 1 (color verde)

r=1.75;

t= linspace(0, 0.5\*pi, 1000);

x4= (0)+r\*-cos(t);

y4= (7)+r\*-sin(t);

z4= 12;

plot3(x4,y4,z4+zeros(1,numel(x4)));

%cuartocirculo 2 (color azul)

r=3;

t= linspace(0, 0.5\*pi, 1000);

x4= (0)+r\*-cos(t);

y4= (7)+r\*-sin(t);

z4= 12;

plot3(x4,y4,z4+zeros(1,numel(x4)));

%Semi-ovalo int 2

a=3;

b=3;

t= linspace(0, 0.5\*pi, 1000);

x4= a\*sin(t);

y4= (2.25)+b\*cos(t);

z4= 12;

plot3(x4,y4,z4+zeros(1,numel(x4)));

%Semi-ovalo ext 2

a=1.75;

b=1.75;

t= linspace(0, 0.5\*pi, 1000);

x4= a\*sin(t);

y4= (2.25)+b\*cos(t);

z4= 12;

plot3(x4,y4,z4+zeros(1,numel(x4)));

hold off