

## Krychle

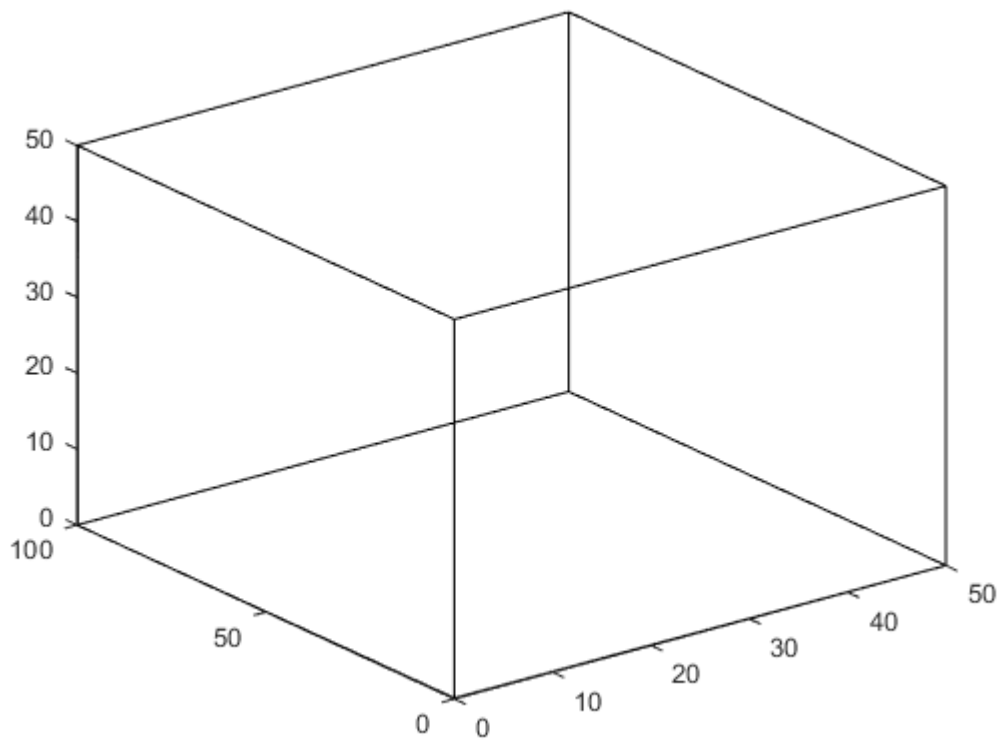
```
b = 50;  
l = 100;  
x = [0 b b 0 ]
```

```
x = 1×4  
    0    50    50    0
```

```
y = [0 l];  
z = [0 0 b b ]
```

```
z = 1×4  
    0    0    50    50
```

```
m = length(x);  
xr=[x x(1)];  
yr1=y(1)*ones(m+1,1);  
zr=[z z(1)];  
plot3(xr,yr1,zr,'k');  
hold on  
yr2=y(2)*ones(m+1,1);  
plot3(xr,yr2,zr,'k');  
hold on  
for i=1:1:m  
plot3([x(i) x(i)],y,[z(i) z(i)],'k');  
end  
hold off
```

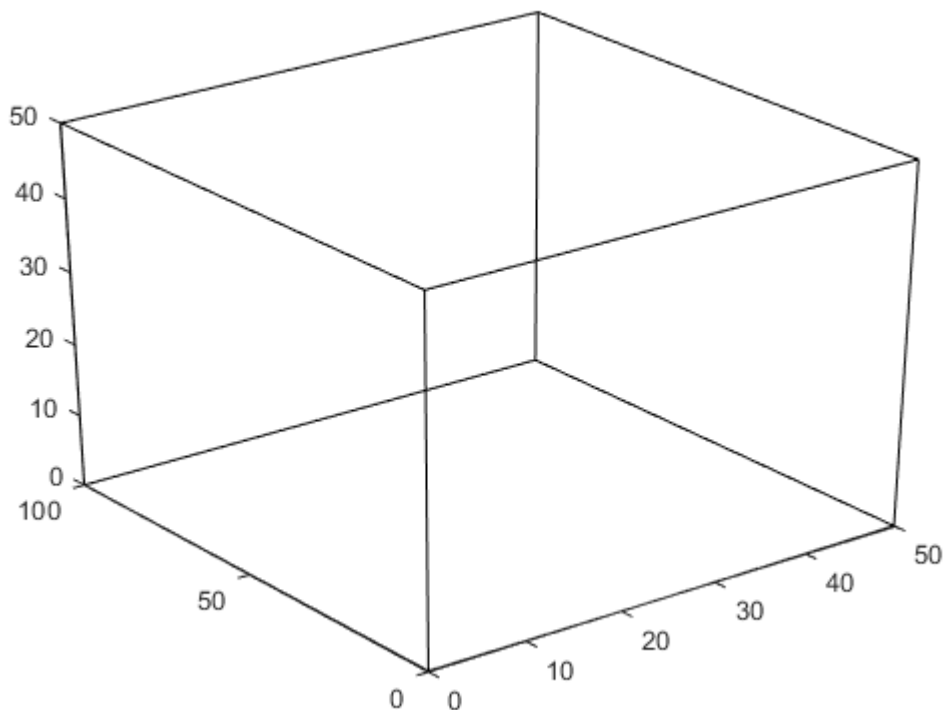


MATLAB® Graphics supports both orthographic and perspective projection types for displaying 3-D graphics. The one you select depends on the type of graphics you are displaying:

- orthographic projects the viewing volume as a rectangular parallelepiped (i.e., a box whose opposite sides are parallel). Relative distance from the camera does not affect the size of objects. This projection type is useful when it is important to maintain the actual size of objects and the angles between objects.
- perspective projects the viewing volume as the frustum of a pyramid (a pyramid whose apex has been cut off parallel to the base). Distance causes foreshortening; objects further from the camera appear smaller. This projection type is useful when you want to display realistic views of real objects.

By default, MATLAB displays objects using orthographic projection. You can set the projection type using the `camproj` command.

```
camproj('perspective');
```

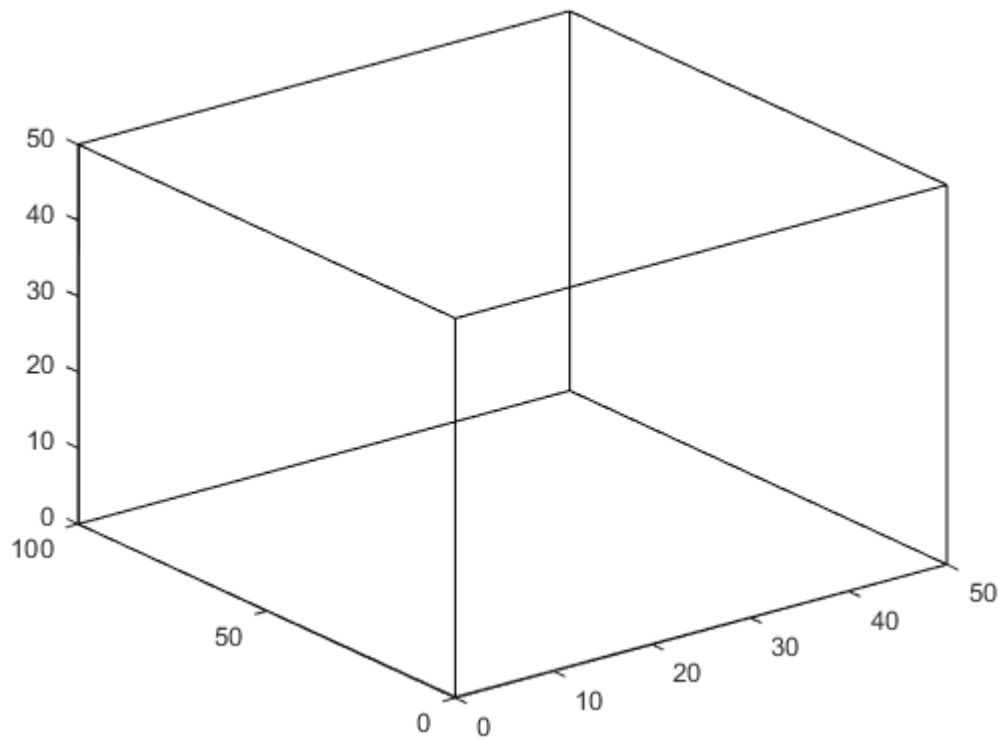


```
b = 50;  
l = 100;  
x = [0 b b 0];  
y = [0 l];  
z = [0 0 b b];  
m = length(x);  
xr=[x x(1)];  
yr1=y(1)*ones(m+1,1);
```

```

zr=[z z(1)];
plot3(xr,yr1,zr,'k');
hold on
yr2=y(2)*ones(m+1,1);
plot3(xr,yr2,zr,'k');
hold on
for i=1:1:m
plot3([x(i) x(i)],y,[z(i) z(i)],'k');
end
hold off

```



```
camproj('orthographic');
```

```

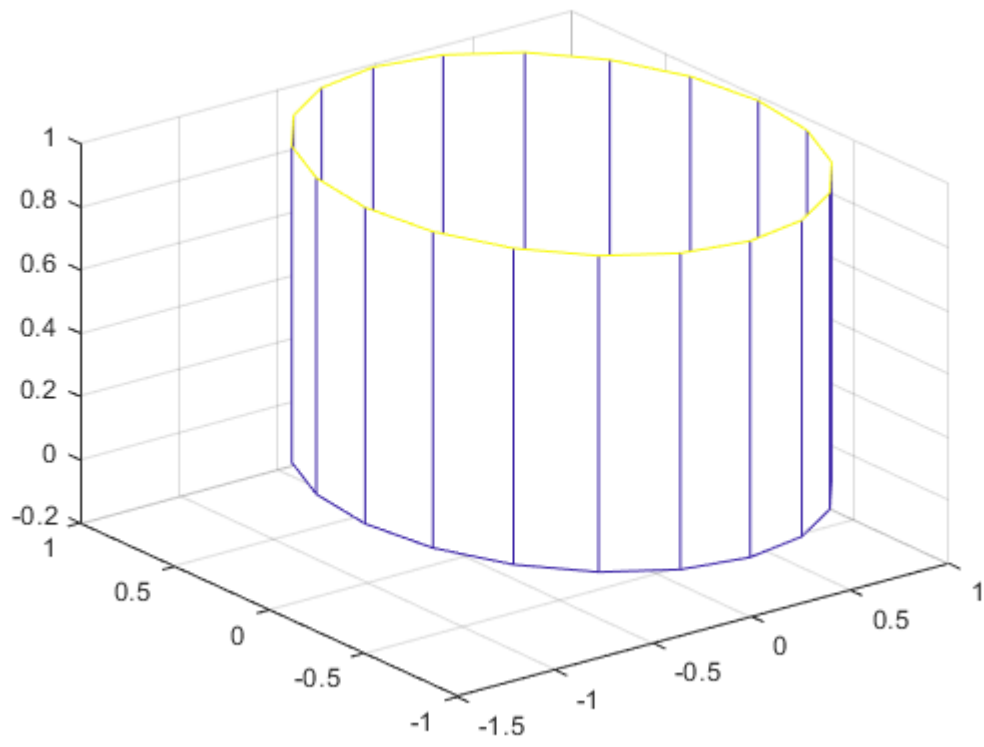
z0 = -100;
M = [1 0 0 0; 0 1 0 0; 0 0 1 0; 1/z0 0 1/z0 1];
Tform = maketform('projective', M);

[X,Y,Z] = cylinder;

[Xproj Yproj Zproj] = tformfwd(Tform,X,Y,Z);

mesh(Xproj,Yproj,Zproj)

```



`mesh(X,Y,Z)`

