Parametric Surface Plot **gnuplot** Demo

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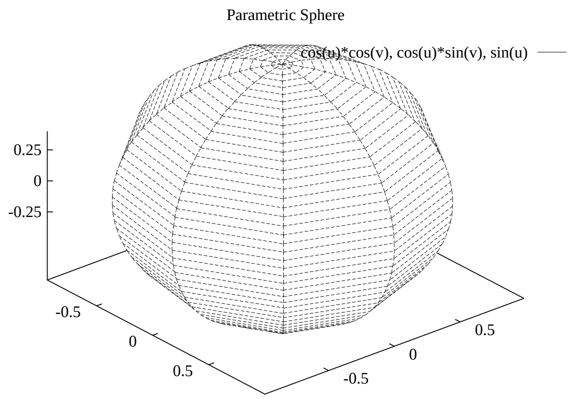
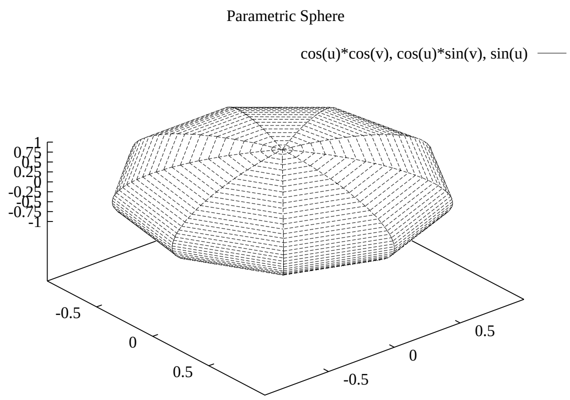
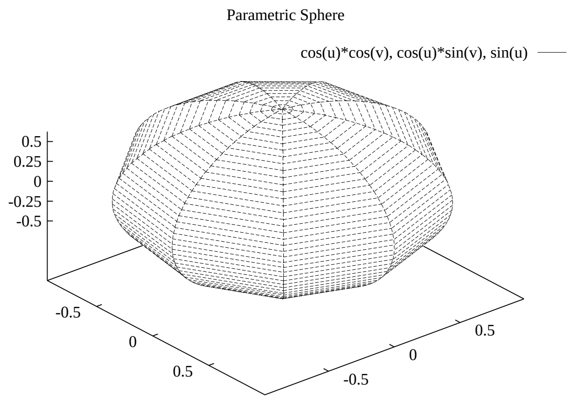
```
set parametric
set isosamples 50,10
set nogrid
set hidden
set title "Parametric Sphere"
set urange [-pi/2:pi/2]
set vrange [0:2*pi]
set zrange [-1:1]
set ztics -1.0,0.25,1.0
set view 45,50,,2.5

splot cos(u)*cos(v),cos(u)*sin(v),sin(u)
```



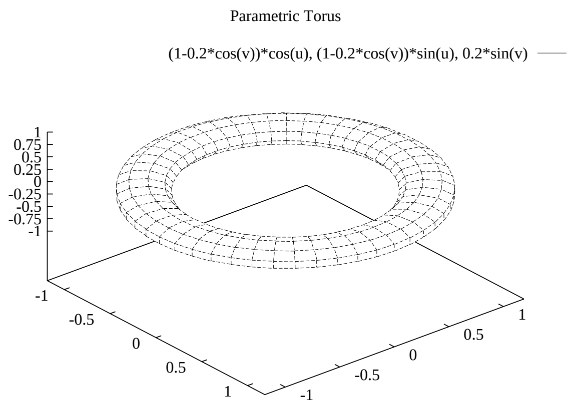

```
set view ,,,0.8

replot
```



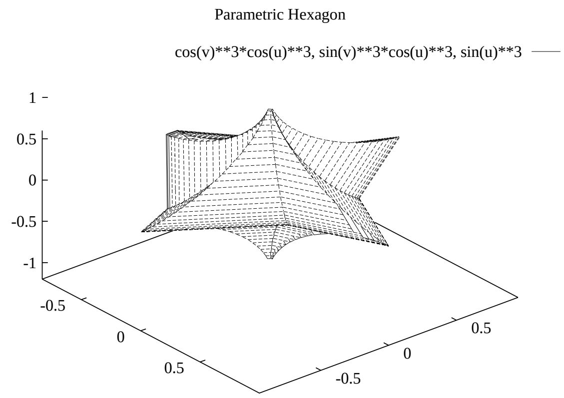

```
set view ,,,1.6

replot
```




```
set view ,,,1.0

set title "Parametric Torus"
set urange [0:2*pi]
set vrange [0:2*pi]

splot (1-0.2*cos(v))*cos(u),(1-0.2*cos(v))*sin(u),0.2*sin(v)
```

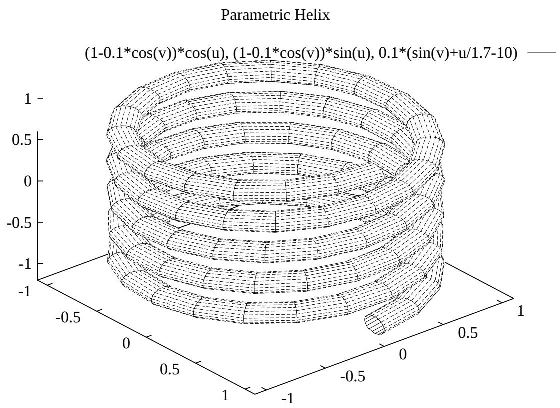



```
set title "Parametric Hexagon"
set urange [-1.3:1.3]
set vrange [0:2*pi]
set zrange [-0.6:0.6]
set ztics

splot cos(v)**3*cos(u)**3,sin(v)**3*cos(u)**3,sin(u)**3
```

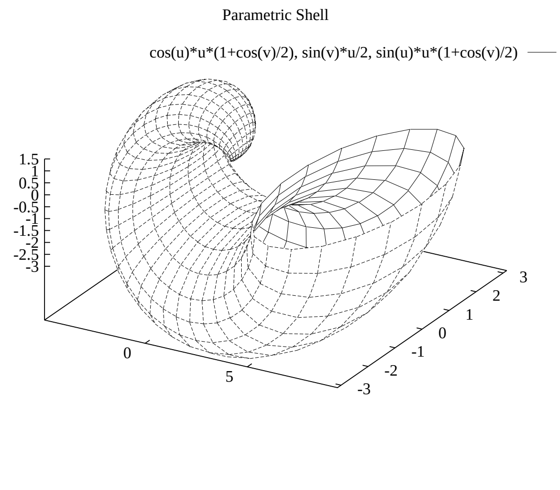



```
set title "Parametric Helix"
set isosamples 100,20
set urange [0:10*pi]
set vrange [0:2*pi]
```

```
set zrange [-0.6:0.6]

splot (1-0.1*cos(v))*cos(u),(1-0.1*cos(v))*sin(u),0.1*(sin(v)+u/1.7-10)
```




```
set title "Parametric Shell"
set isosamples 40,20
set view 50,30,1.0
set urange [0:2*pi]
set vrange [0:2*pi]
set zrange [-3:1.5]

splot cos(u)*u*(1+cos(v)/2),sin(v)*u/2,sin(u)*u*(1+cos(v)/2)
```



```
set title "Interlocking Tori"

set urange [-pi:pi]
set vrange [-pi:pi]
set isosamples 50,20

splot cos(u)+.5*cos(u)*cos(v),sin(u)+.5*sin(u)*cos(v),.5*sin(v) with lines,\
 1+cos(u)+.5*cos(u)*cos(v),.5*sin(v),sin(u)+.5*sin(u)*cos(v) with lines
```