

# Te divne krivulje

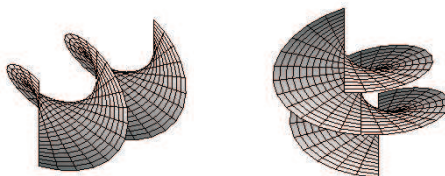
Od brojnih grafova krivulja, tu i tamo se nađe neki koji divno izgleda. Pokušat ćemo ih putem ove rubrike prikazati što više. Slike su crtane u Mapleu.

```
[>plot3d([x*sin(x)*cos(y),x*cos(x)*cos(y),x*sin(y)],x=0..2*Pi,y=0..Pi);
```



$$(x \sin x \cos x, x \cos x \cos y, x \sin y), \quad x \in [0, 2\pi], \quad y \in [0, \pi]$$

```
[>plot3d([1+y,x*sin(y),x*cos(y)],x=-1..1,y=-Pi..Pi);
```



$$(1 + y, x \sin y, x \cos y), \quad x \in [-1, 1], \quad y \in [-\pi, \pi]$$

Funkcija **plot3d** ovdje djeluje kao  $f(x, y) = (g_1(x, y), g_2(x, y), g_3(x, y))$ . Dakle ona preslikava uređenu dvojku  $(x, y) \rightarrow (g_1(x, y), g_2(x, y), g_3(x, y))$

Ako otkrijete koju zanimljivu krivulju, slobodno nam pišite na [math@petagimnazija.hr](mailto:math@petagimnazija.hr).

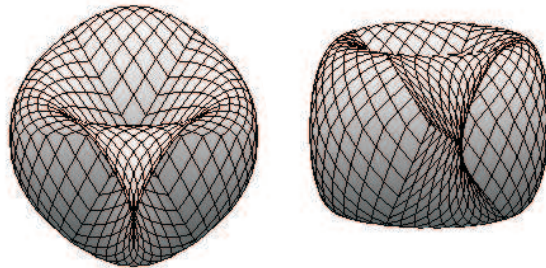
*Dino Malpera*

```
[>plot3d([(cos(u)*cos(v))^3,(sin(u)*cos(v))^3,sin(v)^3],u=-Pi/2..Pi/2,v=-Pi..Pi,numpoints=1024);
```



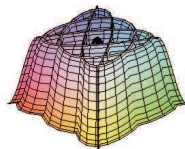
$$(\cos u \cos v)^3, (\sin u \cos v)^3, \sin^3 v, \quad u \in \left[-\frac{\pi}{2}, \frac{\pi}{2}\right], \quad v \in [-\pi, \pi]$$

```
[>plot3d([1*sin(u),1*sin(v),1*sin(u+v)],u=-Pi..Pi,v=-Pi..Pi,numpoints=1024,scaling=constrained);
```

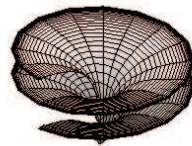
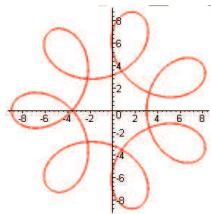


$$(\sin u, \sin v, \sin(u + v)), \quad u \in [-\pi, \pi], \quad v \in [-\pi, \pi]$$

```
[>plot3d([x*3*cos(4*t),x*2*cos(3*t),3*cos(3*x)],t=-Pi..Pi,x=-Pi..Pi,numpoints=6025);
```



```
[>x:=1:plot([6*cos(p)-(2+x)*cos((6)/1*p),(6)*sin(p)+(2+x)*sin(6/1*p),p=-10..10],scaling=constrained);
```



```
[>plot3d([1*cos(u)*sin(v),1*sin(u)*sin(v),1*(cos(v)+ln(tan(1/2*v)))+0.2*u],u=0..4*Pi, v=0..2, numpoints=1025);
```

```
[>plot3d([sqrt(2^2-x^2)*cos(y),sqrt(2^2-x^2)*sin(y),x],x=-2..2,y=0..20*Pi);
```

