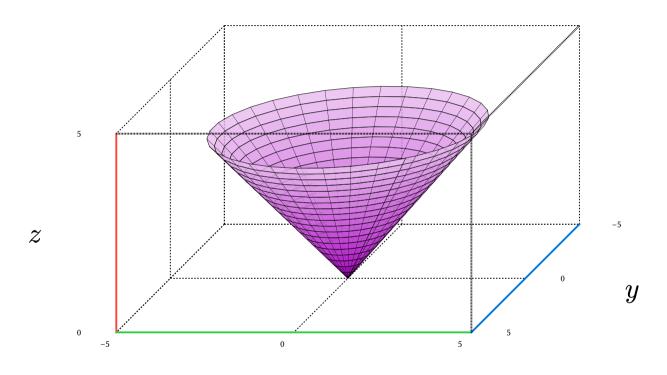
## **Parametric Surface**

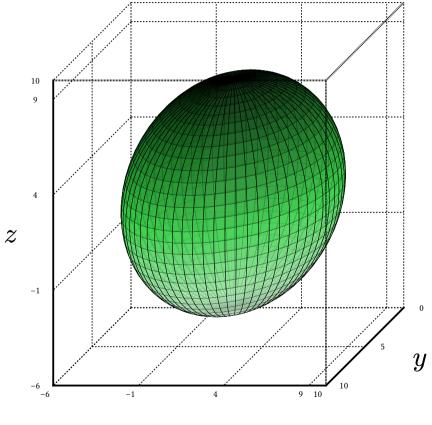
$$x(u,v)=u\sin(v),\ y(u,v)=u\cos(v),\ z(u,v)=u$$



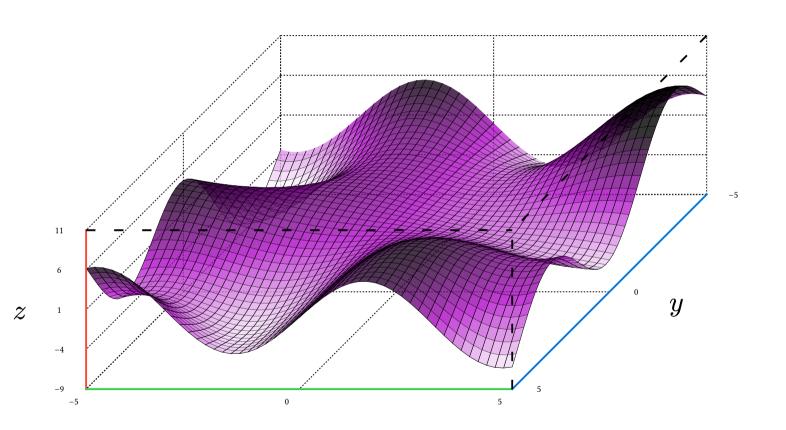
 $\boldsymbol{x}$ 

## **Parametric Surface**

$$x(u,v) = 6\cos(u)\sin(v), \ y(u,v) = 6\sin(u)\sin(v), \ z(u,v) = 6\cos(v)$$

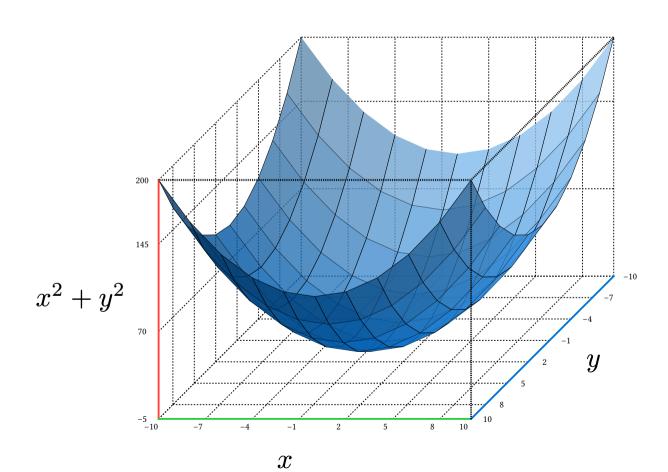


$$z = y\sin(x) - x\cos(y)$$



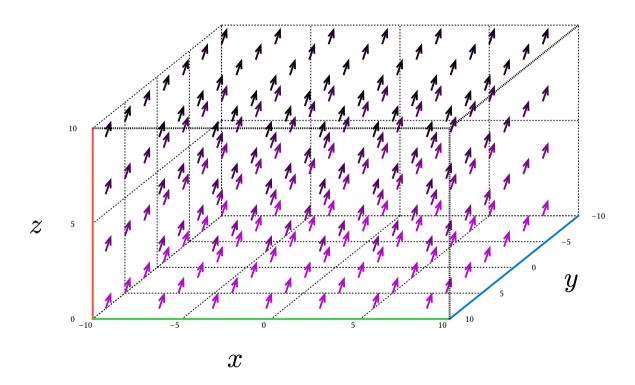
x

$$z = x^2 + y^2$$



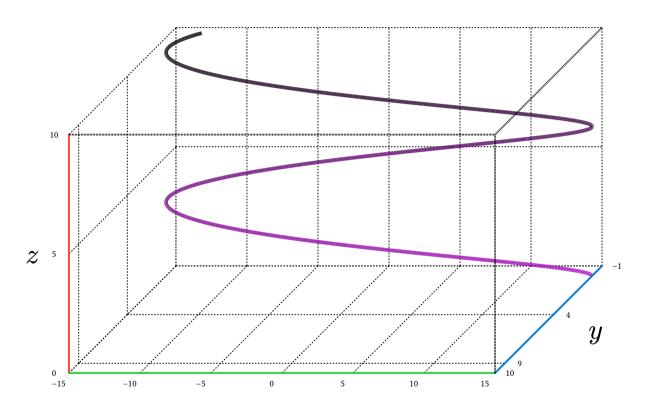
# **3D Vector Field**

$$\vec{p}(x,y,z) = (x+0.5)\hat{\imath} + (y+0.5)\hat{\jmath} + (z+1)\hat{k}$$



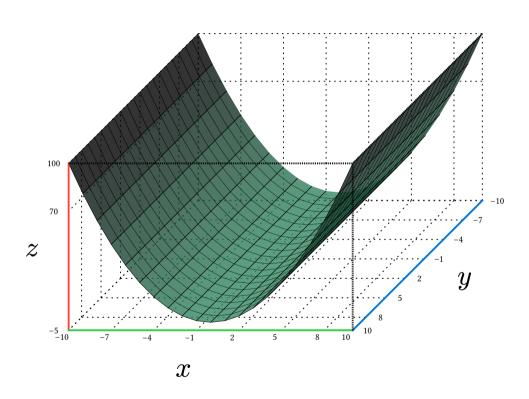
#### **Parametric Curve**

$$x(t) = 15\cos(t), \ y(t) = \sin(t), \ z(t) = t$$

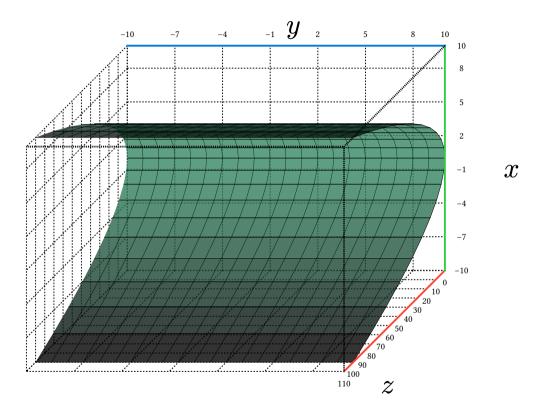


 $\mathcal{X}$ 

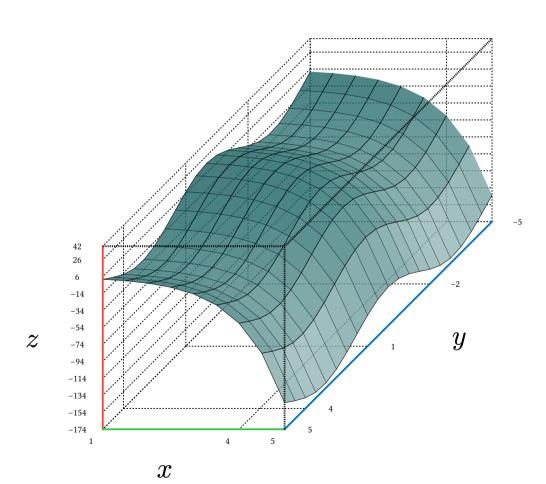
$$z = x^2$$



$$z = x^{2}$$



$$z = -e^x + 20\cos(y)$$



$$z = 10x$$

