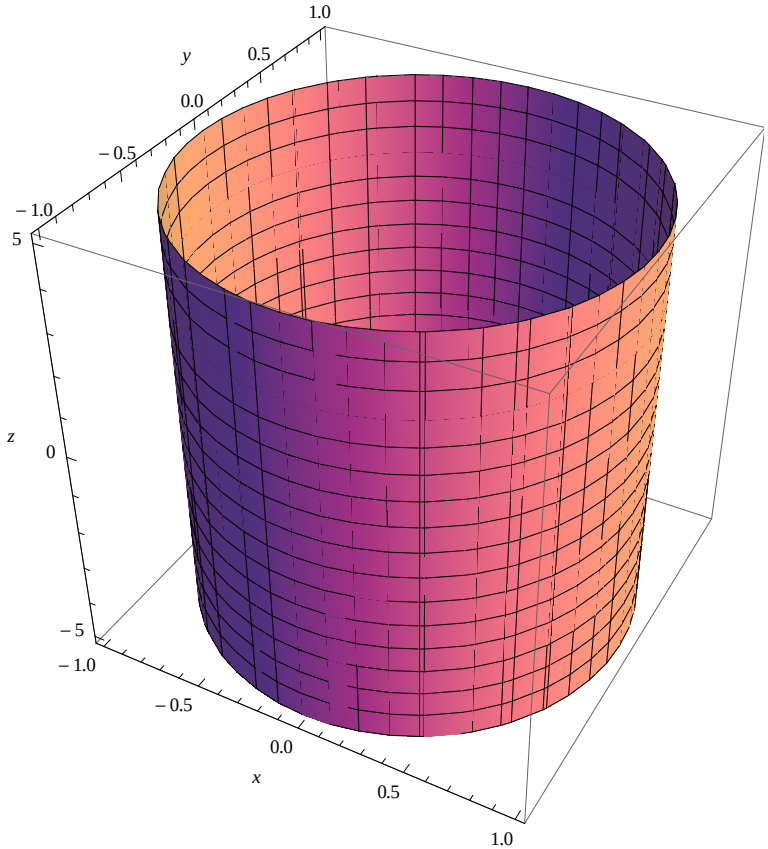
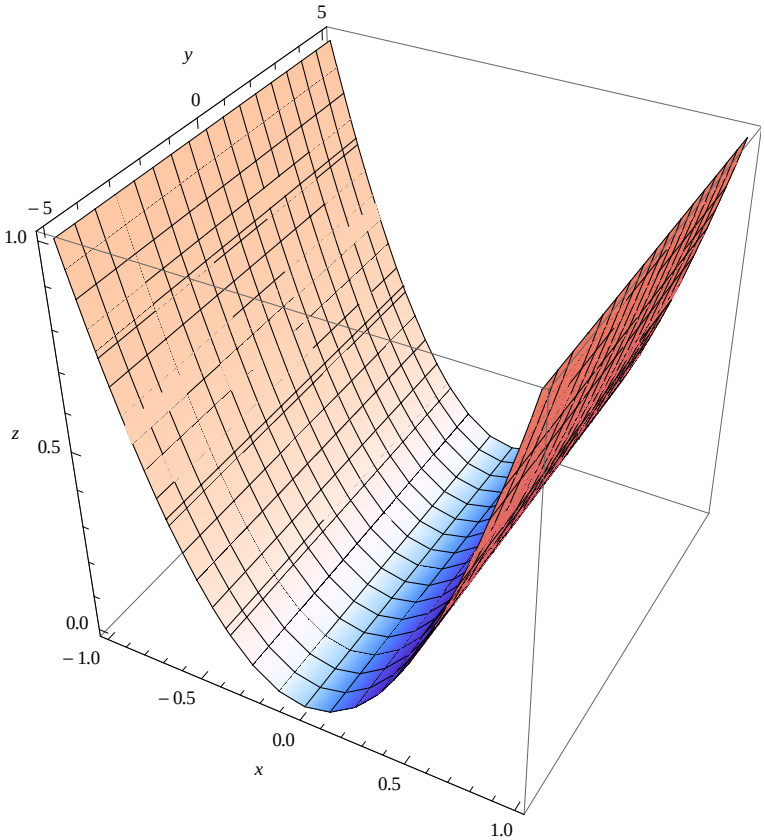
Quadratic surfaces

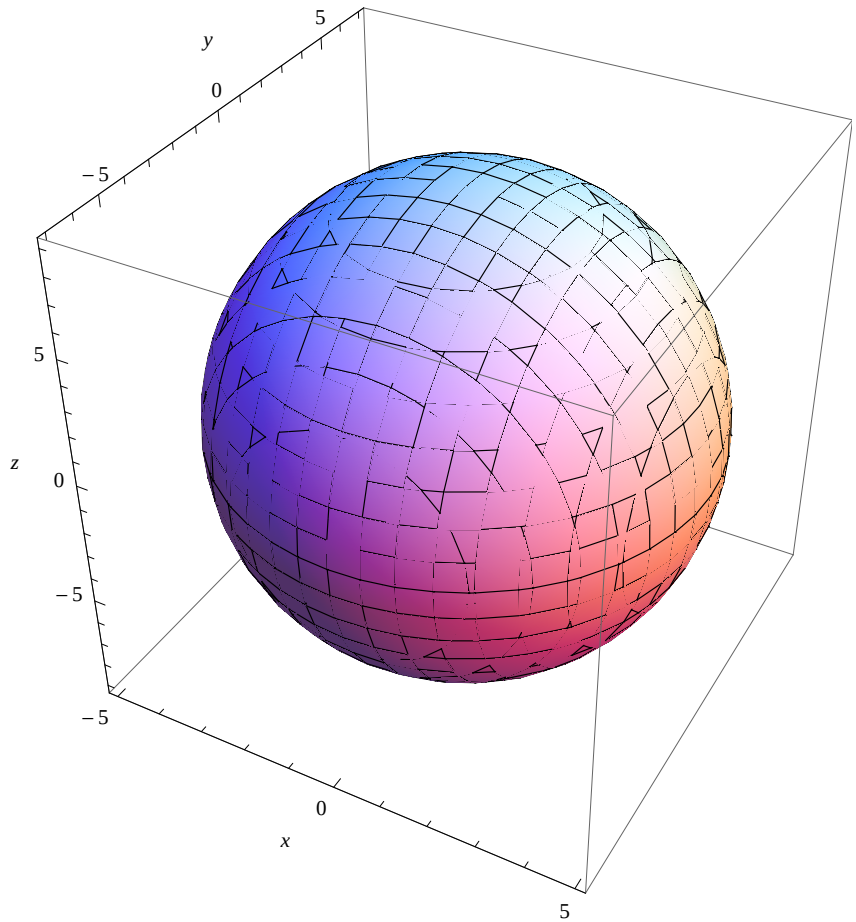
$x^2 + y^2 = 1$ **and** $z = x^2$





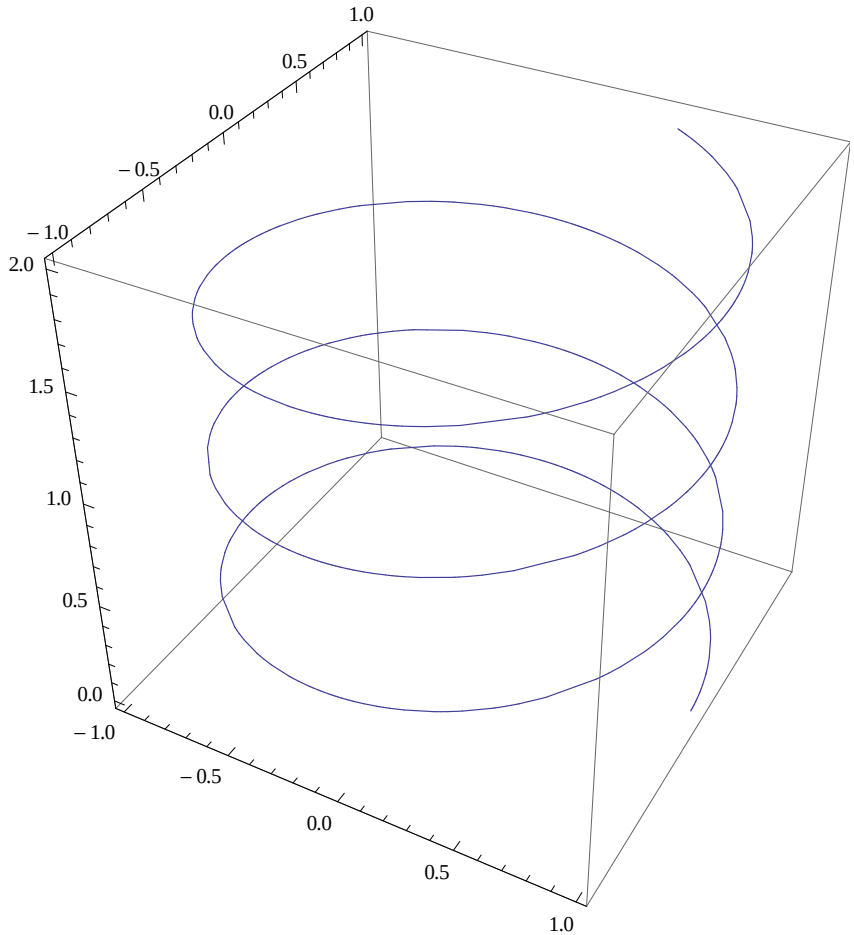
Quadratic surfaces

$$(\frac{x}{5})^2 + (\frac{y}{7})^2 + (\frac{z}{9})^2 = 1$$



Space curve

$$\left\{\cos t, \sin t, \frac{t}{10}\right\}$$



Intersection of curves

$\{x^2 + y^2 = 4, z = xy\}$