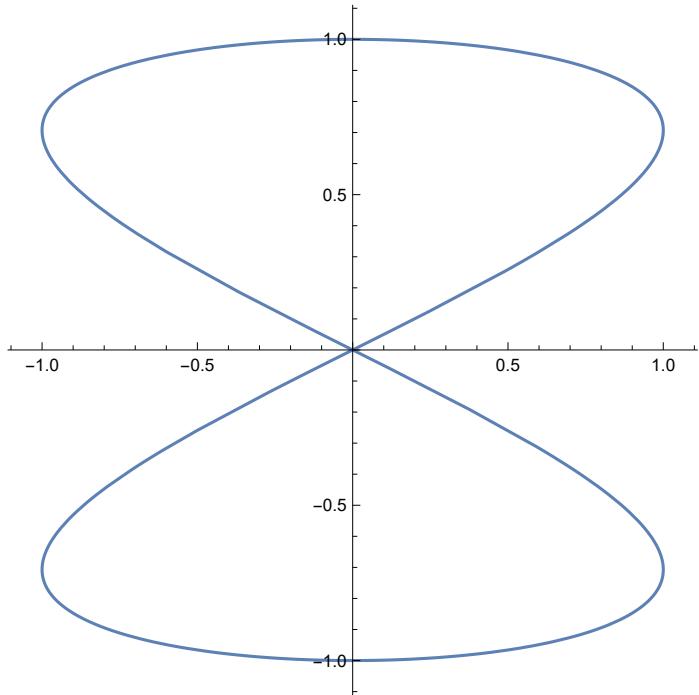
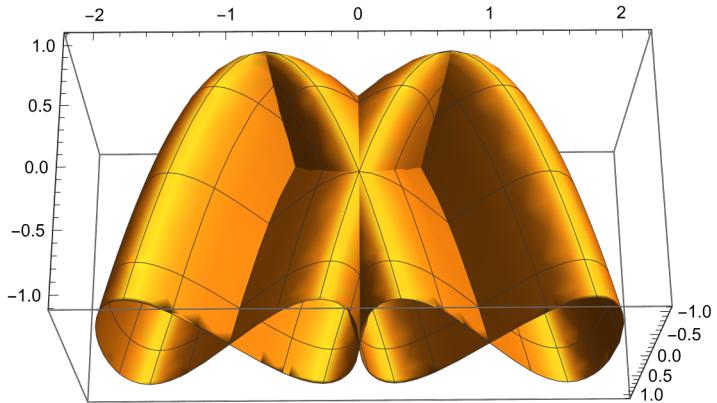


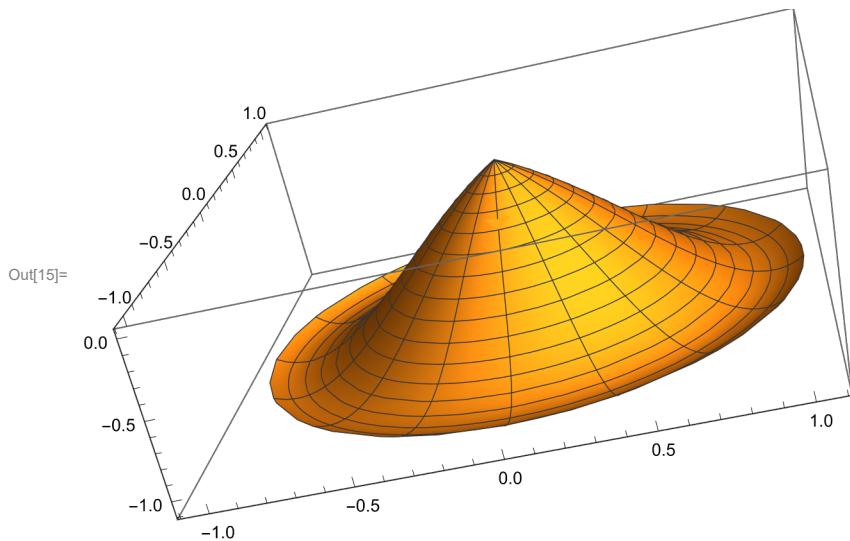
```
In[2]:= ParametricPlot[{Sin[2 u], Sin[u]}, {u, 0, 2 Pi}]
```



```
In[10]:= ParametricPlot3D[{Cos[2 u], Sin[u] + Cos[v], Sin[2 v]}, {u, 0, 2 \pi}, {v, -\pi, \pi}]
```

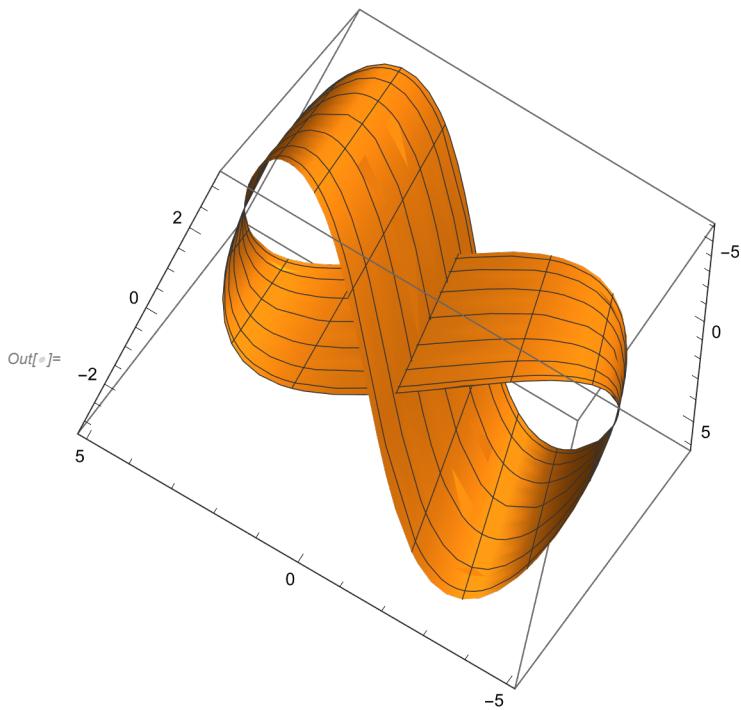


```
In[15]:= RevolutionPlot3D[t^4 - t^2 - t, {t, 0, 1}]
```

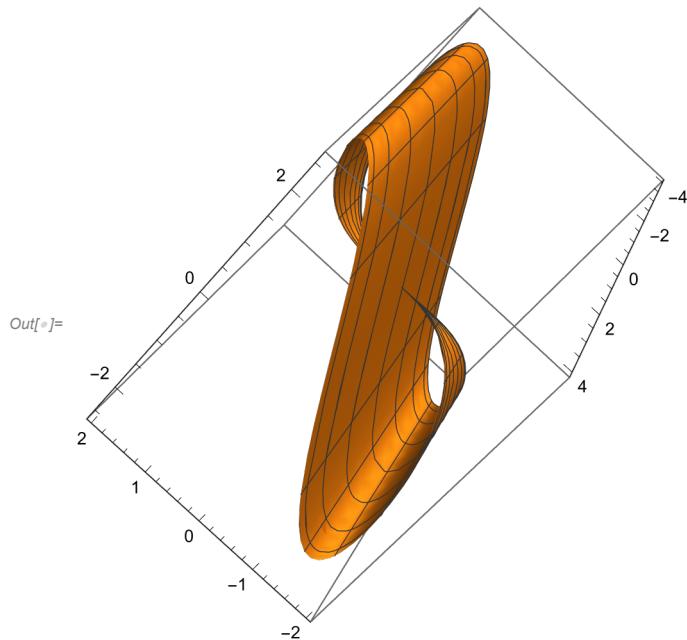


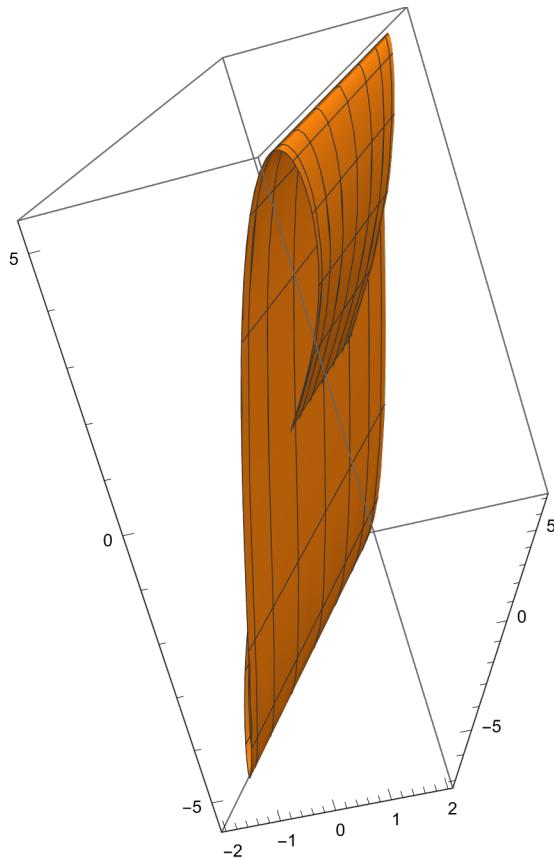
```
In[16]:= a := 1  
b := 5
```

```
In[17]:= ParametricPlot3D[  
{ (a + b * Cos[v]) * Cos[u], (a + b * Cos[v]) * Sin[v], b * Sin[v] }, {u, 0, 2 \pi}, {v, 0, 2 \pi}]
```

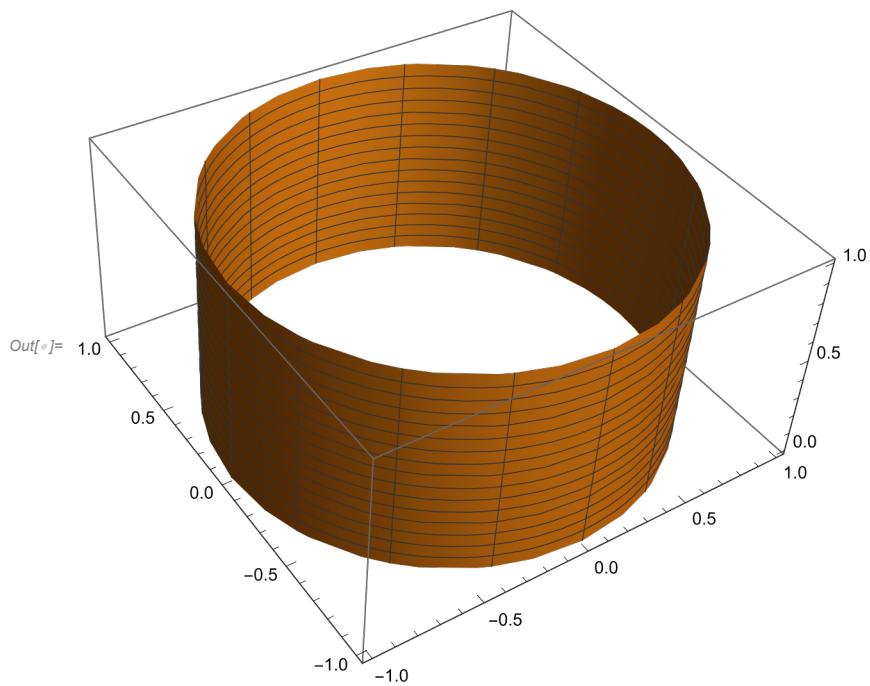


```
In[6]:= a := 2
b := 2
ParametricPlot3D[
{ (a + b * Cos[v]) * Cos[u], (a + b * Cos[v]) * Sin[v], b * Sin[v] }, {u, 0, 2 π}, {v, 0, 2 π}]
a := 5
b := 2
ParametricPlot3D[
{ (a + b * Cos[v]) * Cos[u], (a + b * Cos[v]) * Sin[v], b * Sin[v] }, {u, 0, 2 π}, {v, 0, 2 π}]
```



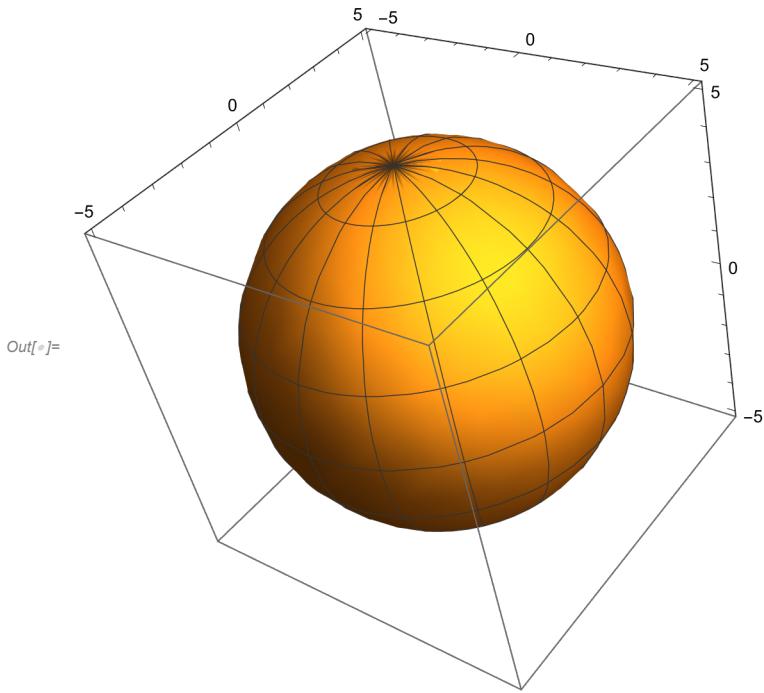


```
In[7]:= ParametricPlot3D[{Cos[u], Sin[u], v}, {u, 0, 2 Pi}, {v, 0, 1}]
```

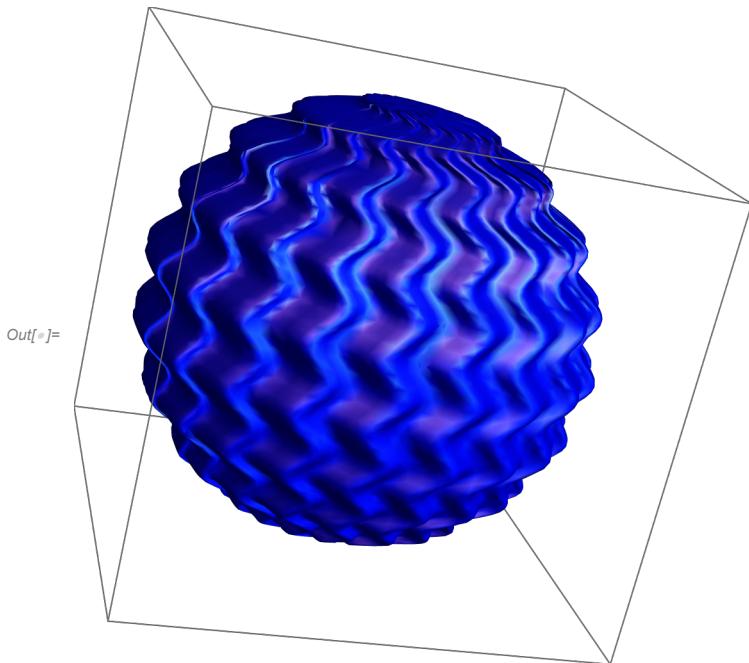


```
In[8]:=
```

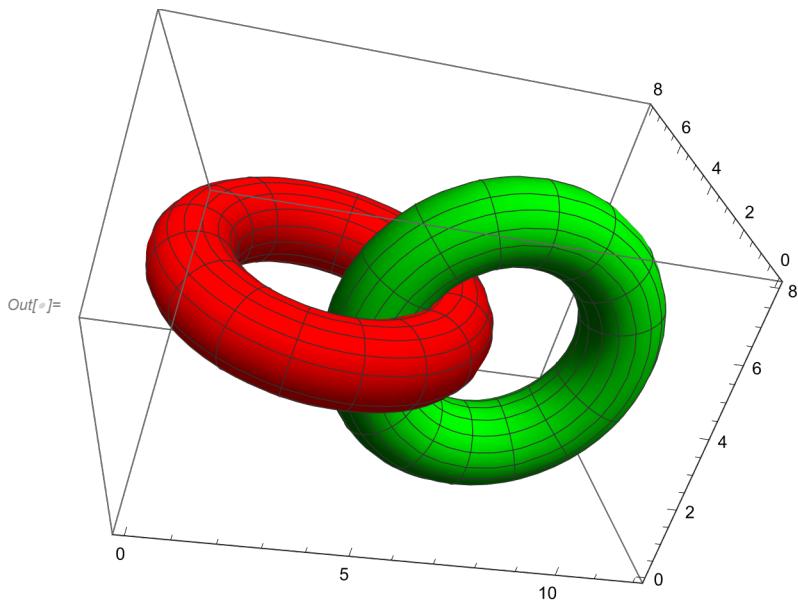
```
In[6]:= ParametricPlot3D[{a * Cos[u] * Cos[v], a * Sin[u] * Cos[v], a * Sin[v]}, {u, 0, 2 π}, {v, 0, 2 π}]
```



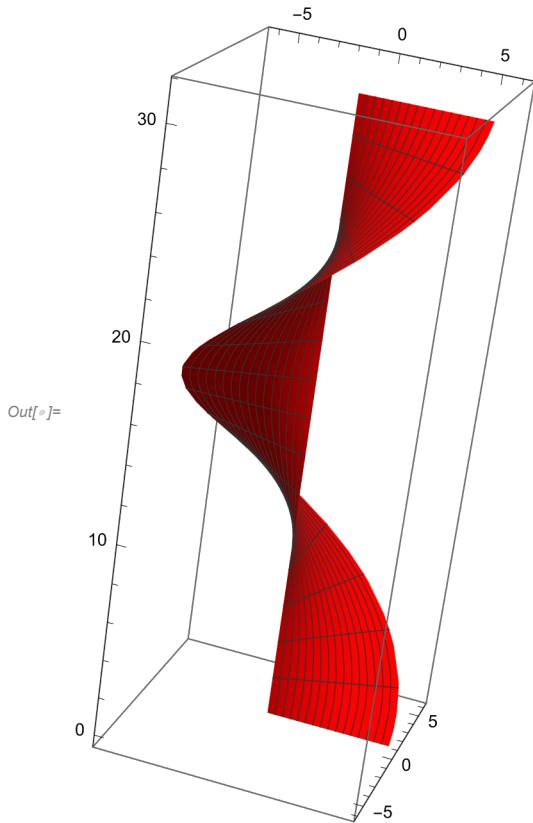
```
In[7]:= ParametricPlot3D[{Sin[u] Sin[v] + 0.05 Cos[20 v], Cos[u] Sin[v] + 0.05 Cos[20 u], Cos[v]}, {u, -π, π}, {v, -π, π}, MaxRecursion → 4, PlotStyle → {Blue, Specularity[White, 10]}, Axes → None, Mesh → None]
```



```
In[6]:= ParametricPlot3D[{(4 + (3 + Cos[v]) Sin[u]), 4 + (3 + Cos[v]) Cos[u], 4 + Sin[v]}, {8 + (3 + Cos[v]) Cos[u], 3 + Sin[v], 4 + (3 + Cos[v]) Sin[u]}}, {u, 0, 2 Pi}, {v, 0, 2 Pi}, PlotStyle -> {Red, Green}]
```

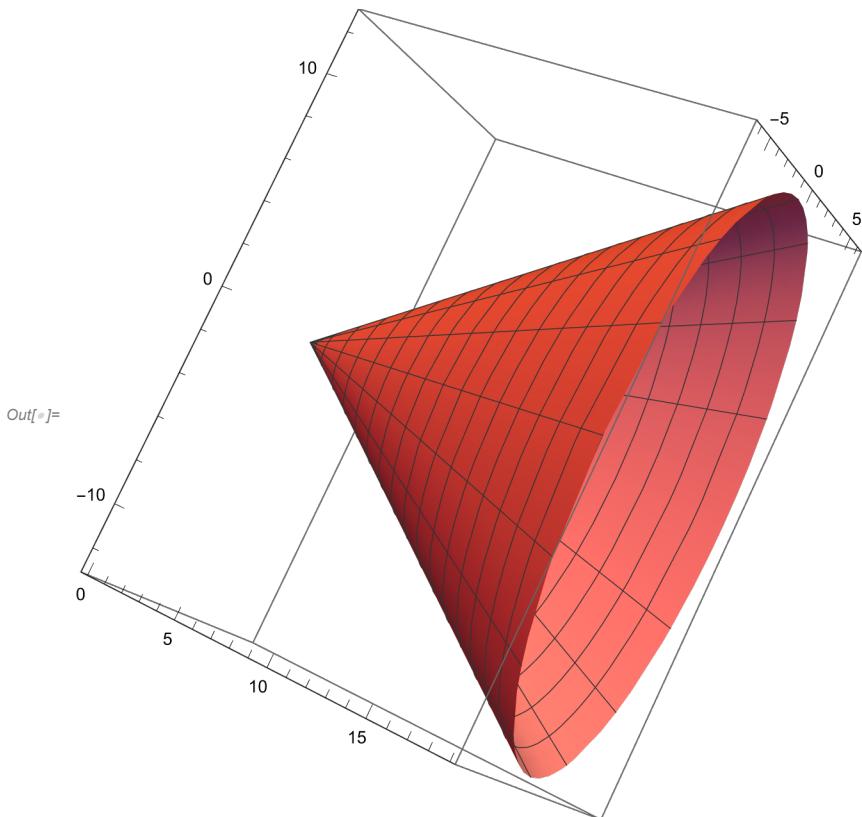


```
In[7]:= ParametricPlot3D[{u * Cos[v], u * Sin[v], a * v}, {u, 0, 2 Pi}, {v, 0, 2 Pi}, PlotStyle -> {Red}]
```

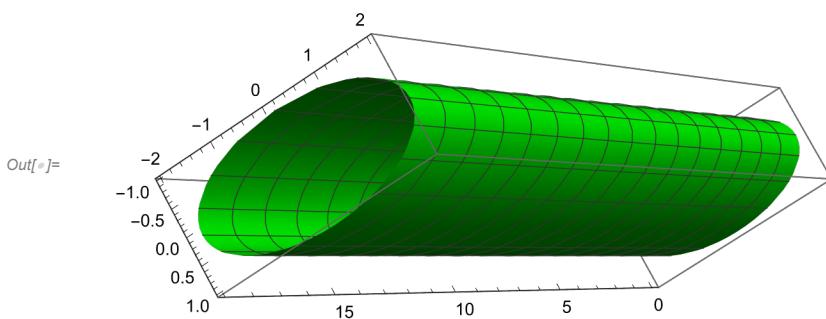


```
In[6]:= a := 1
b := 2
c := 3

In[7]:= ParametricPlot3D[{a*u*Cos[v], b*u*Sin[v], c*u},
{u, 0, 2Pi}, {v, 0, 2Pi}, PlotStyle -> {Pink}]
```

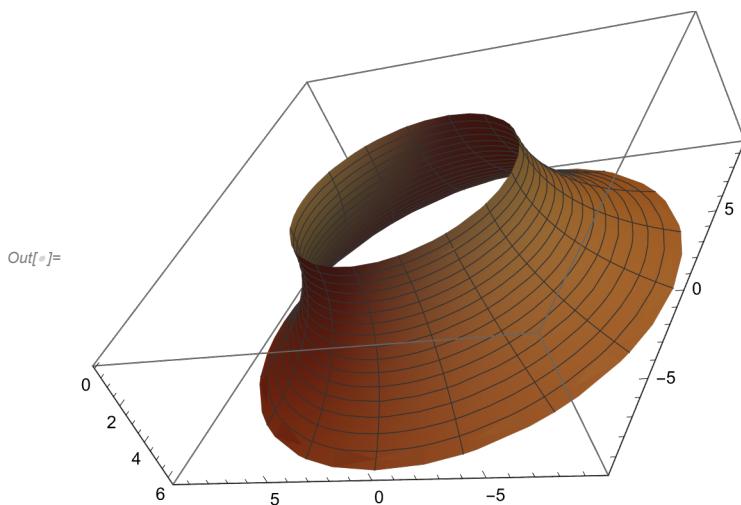


```
In[8]:= ParametricPlot3D[{a*Cos[u], b*Sin[u], c*v},
{u, 0, 2Pi}, {v, 0, 2Pi}, PlotStyle -> {Green}]
```

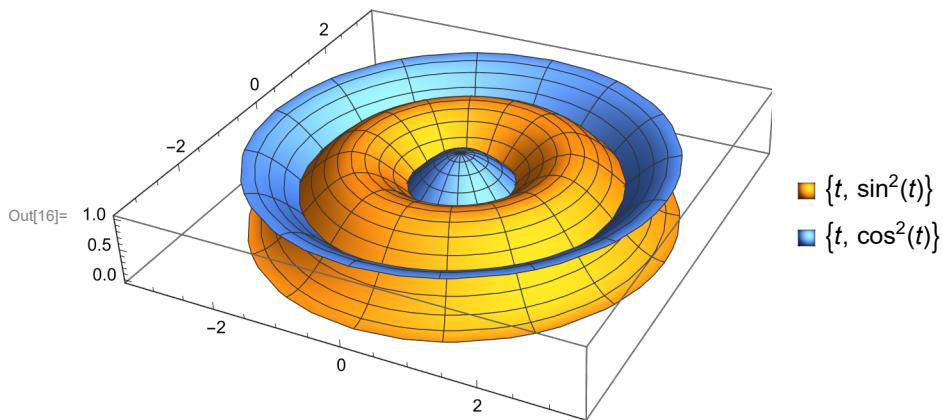


```
In[9]:= a := 5
```

```
In[1]:= ParametricPlot3D[{a * Cosh[x / a] * Cos[y], a * Cosh[x / a] * Sin[y], x},  
{x, 0, 2 Pi}, {y, 0, 2 Pi}, PlotStyle -> {Brown}]
```

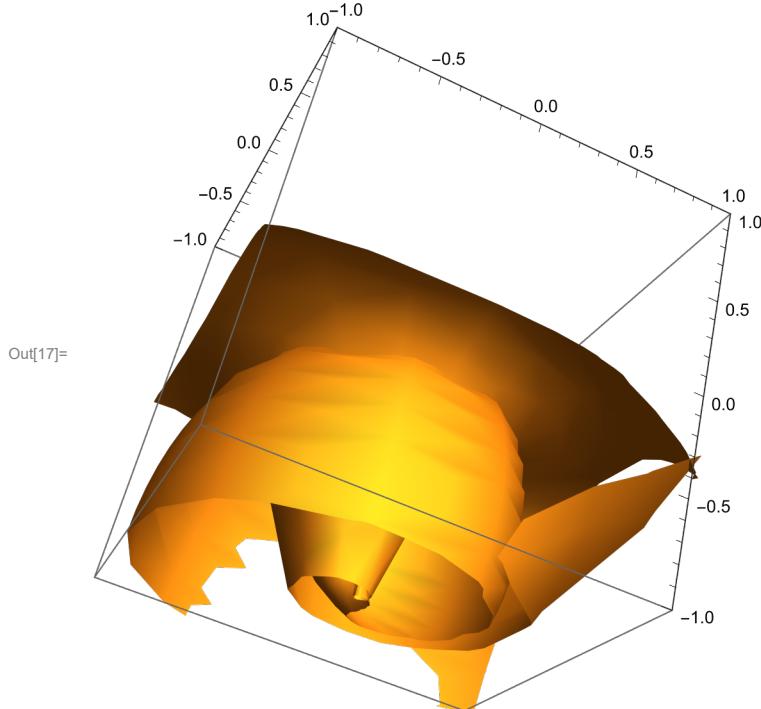


```
In[16]:= RevolutionPlot3D[{{t, Sin[t]^2}, {t, Cos[t]^2}}, {t, 0, \[Pi]}, PlotLegends -> "Expressions"]
```



In[17]:= **ParametricPlot3D[**

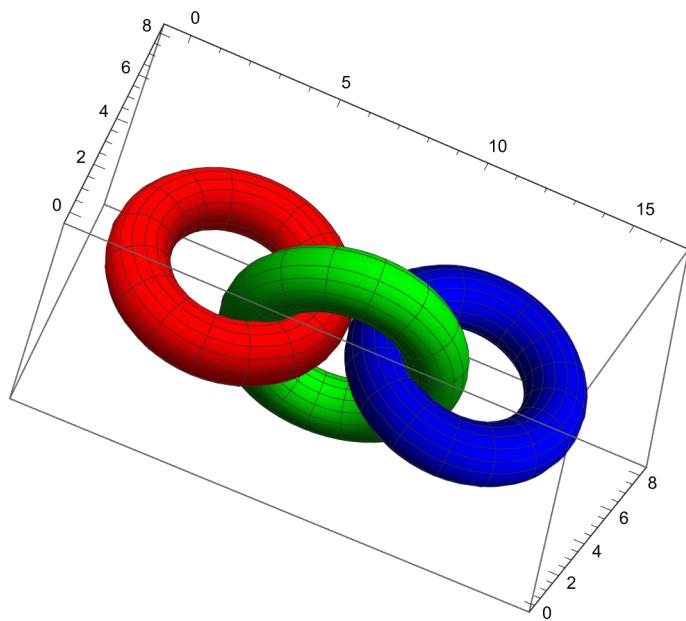
```
{1.16^v Cos[v] (1 + Cos[u]), -1.16^v Sin[v] (1 + Cos[u]), -2 × 1.16^v (1 + Sin[u])},
{u, 0, 2 Pi}, {v, -15, 6}, Mesh → False, PlotRange → 1]
```



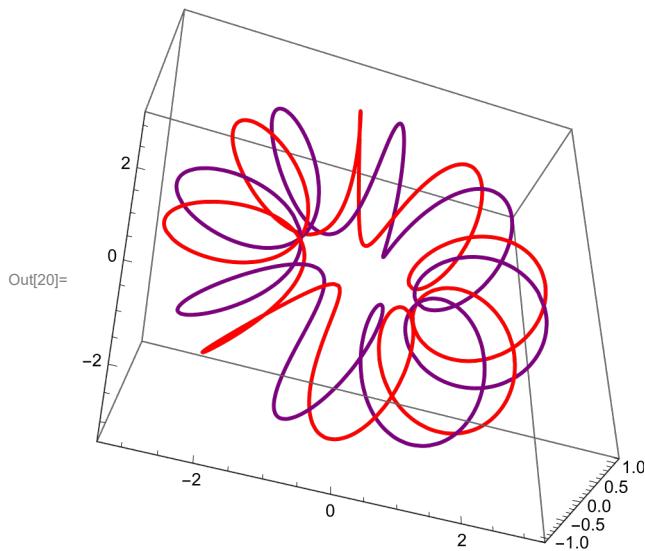
In[18]:= **ParametricPlot3D[{{4 + (3 + Cos[v]) Sin[u], 4 + (3 + Cos[v]) Cos[u], 4 + Sin[v]},**

```
{8 + (3 + Cos[v]) Cos[u], 3 + Sin[v], 4 + (3 + Cos[v]) Sin[u]},  
{12 + (3 + Cos[v]) Sin[u], 4 + (3 + Cos[v]) Cos[u], 4 + Sin[v]}},  
{u, 0, 2 Pi}, {v, 0, 2 Pi}, PlotStyle → {Red, Green, Blue}]
```

Out[18]=



```
In[20]:= ParametricPlot3D[{Tooltip[{Cos[u] (2 + Cos[8 u]), (2 + Cos[8 u]) Sin[u], Sin[8 u]}, "red"], Tooltip[{Cos[u] (2 - Sin[Pi/6 + 8 u]), Sin[u] (2 - Sin[Pi/6 + 8 u]), Cos[Pi/6 + 8 u]}, "purple"]}, {u, 0, 2 Pi}, PlotStyle -> {Red, Purple}]
```



```
In[21]:= Graphics[Rotate[Style[Text["Mojtaba"], 24], -Pi/4]]
```

Out[21]=

```
In[22]:= RotationMatrix[\theta] // MatrixForm
```

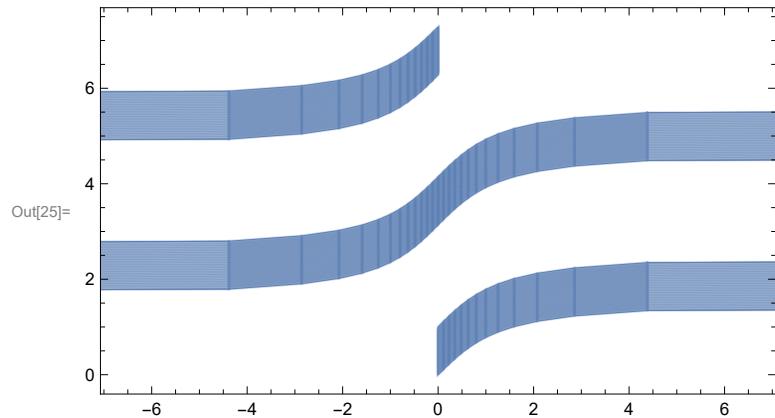
```
Out[22]//MatrixForm=
```

$$\begin{pmatrix} \cos[\theta] & -\sin[\theta] \\ \sin[\theta] & \cos[\theta] \end{pmatrix}$$

In[23]:= **RotationMatrix[30 Degree]**

$$\left\{ \left\{ \frac{\sqrt{3}}{2}, -\frac{1}{2} \right\}, \left\{ \frac{1}{2}, \frac{\sqrt{3}}{2} \right\} \right\}$$

In[25]:= **ParametricPlot[{Tan[u], u + v}, {u, 0, 2 Pi}, {v, 0, 1}, Exclusions → {u == Pi / 2, u == 3 Pi / 2}, Axes → None]**



In[26]:= **Plot[{x^(1/4), x^(3/4), x^(3/2), x^(7/2)}, {x, 0, 2}, PlotStyle → {Thick, Automatic, Red, Dashed}]**

