

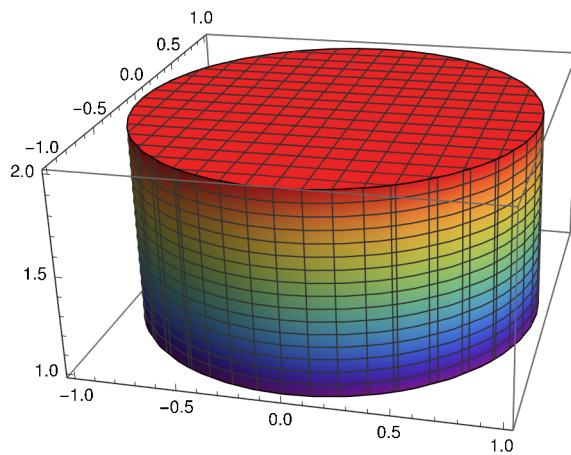
```
In[18]:= SetOptions[RegionPlot3D(*Or whichever plot you desire*),
          ColorFunction → "Rainbow"(*One of many options*)];
(*SetOptions[RegionPlot3D(*Or whichever plot you desire*),
          ColorFunction → Function[{x,y,z}, Hue[z]]];*)
```

(*Myslenka*)

```
RegionPlot3D[x < ArcTan[y] && z < 6 x / (1 + y^2),
             {x, 0, 1}, {y, 0, 1}, {z, 0, 3}, BoxRatios → Automatic]
```

(*1a*)

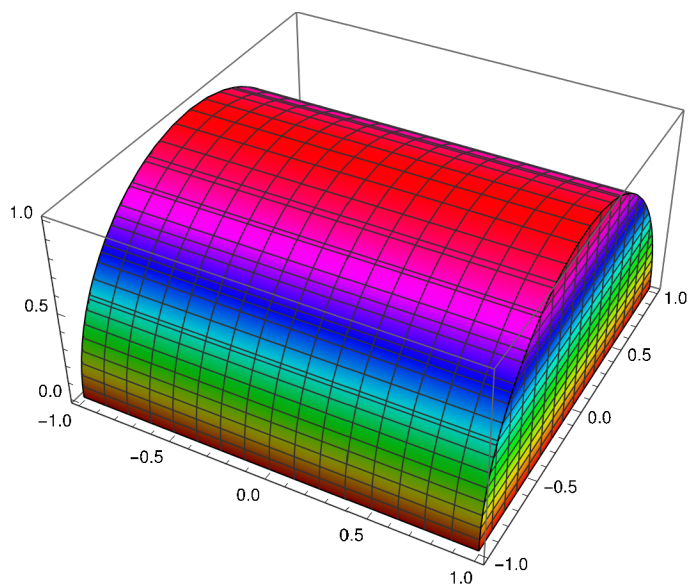
```
In[19]:= RegionPlot3D[1 > x^2 + y^2, {x, -1, 1}, {y, -1, 1}, {z, 1, 2}, BoxRatios → Automatic]
Out[19]=
```



(*b*)

```
In[20]:= RegionPlot3D[1 > z^2 + y^2, {x, -1, 1}, {y, -1, 1}, {z, 0, 1},
  BoxRatios -> Automatic, ColorFunction -> Function[{x, y, z}, Hue[z]]]
```

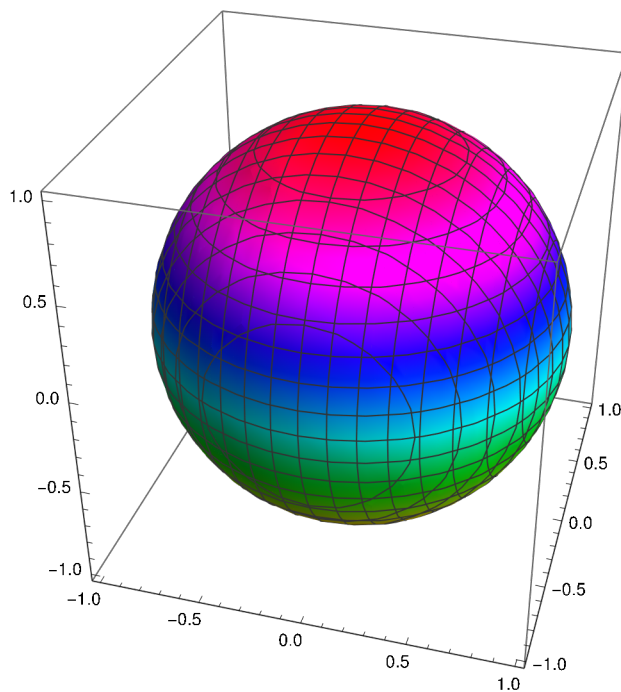
Out[20]=



(*C*)

```
In[21]:= RegionPlot3D[1 > x^2 + z^2 + y^2, {x, -1, 1}, {y, -1, 1}, {z, -1, 1},
  BoxRatios -> Automatic, ColorFunction -> Function[{x, y, z}, Hue[z]]]
```

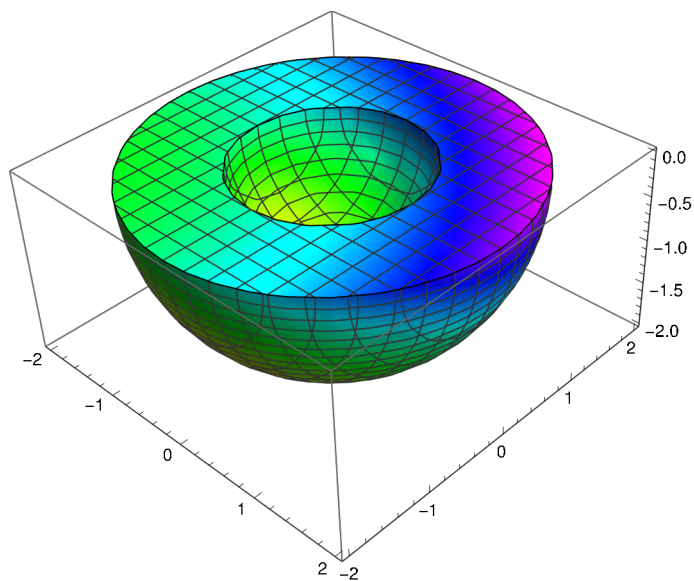
Out[21]=



(*d*)

```
In[31]:= RegionPlot3D[4 > z^2 + y^2 + x^2 > 1, {x, -2, 2}, {y, -2, 2}, {z, -2, 0},
  BoxRatios -> Automatic, ColorFunction -> Function[{x, y, z}, Hue[1/3 (z^2 + x^2 + y^2)]]]
```

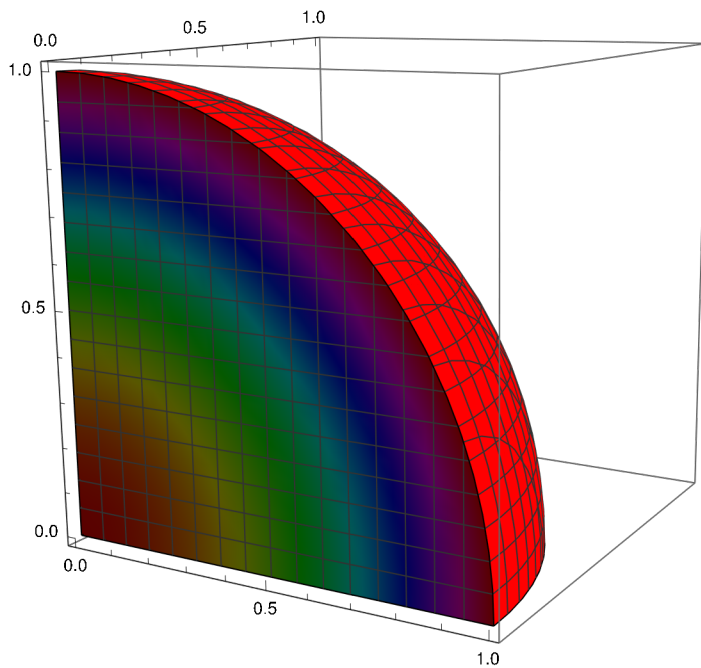
Out[31]=



(*)

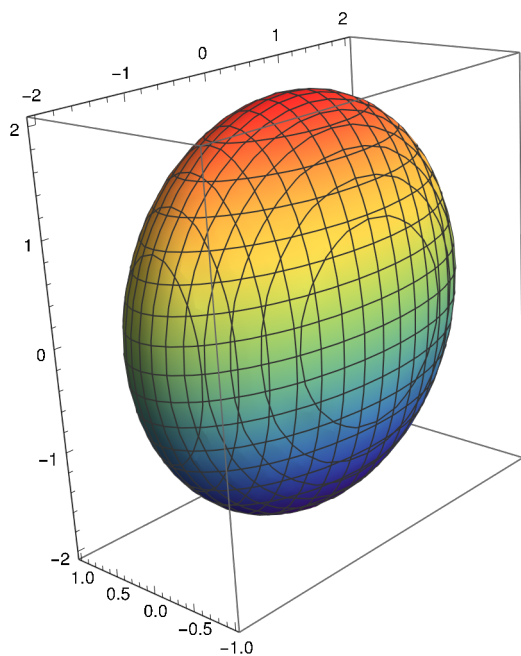
```
In[27]:= RegionPlot3D[1 > x^2 + y^2 + z^2, {x, 0, 1}, {y, 0, 1}, {z, 0, 1},
  BoxRatios -> Automatic, ColorFunction -> Function[{x, y, z}, Hue[z^2 + x^2 + y^2]]]
```

Out[27]=



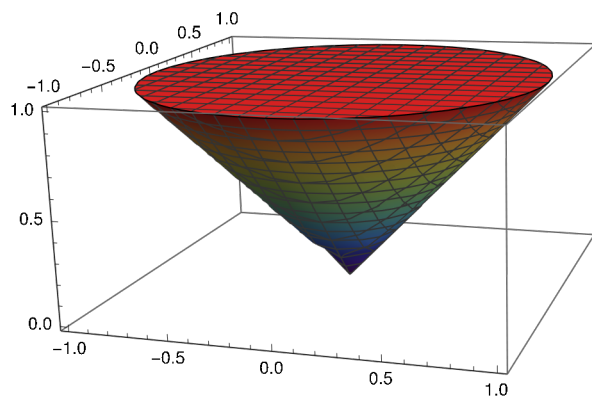
(*)

```
RegionPlot3D[4 > z^2 + x^2 + 4 y^2, {x, -2, 2}, {y, -1, 1}, {z, -2, 2}, BoxRatios -> Automatic]
```



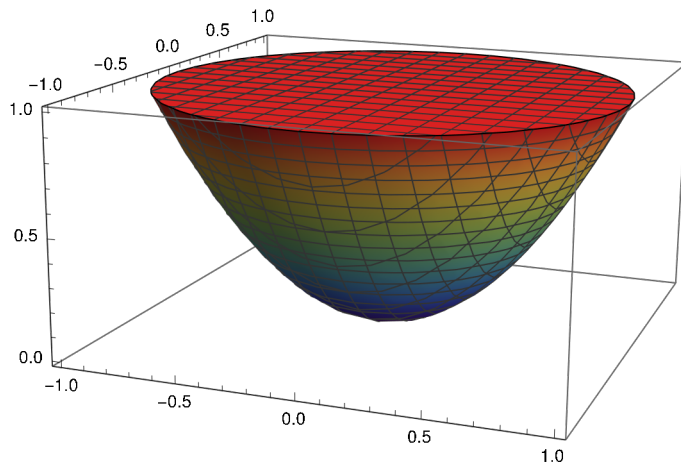
(*g*)

```
RegionPlot3D[z^2 > x^2 + y^2, {x, -1, 1}, {y, -1, 1}, {z, 0, 1}, BoxRatios -> Automatic]
```



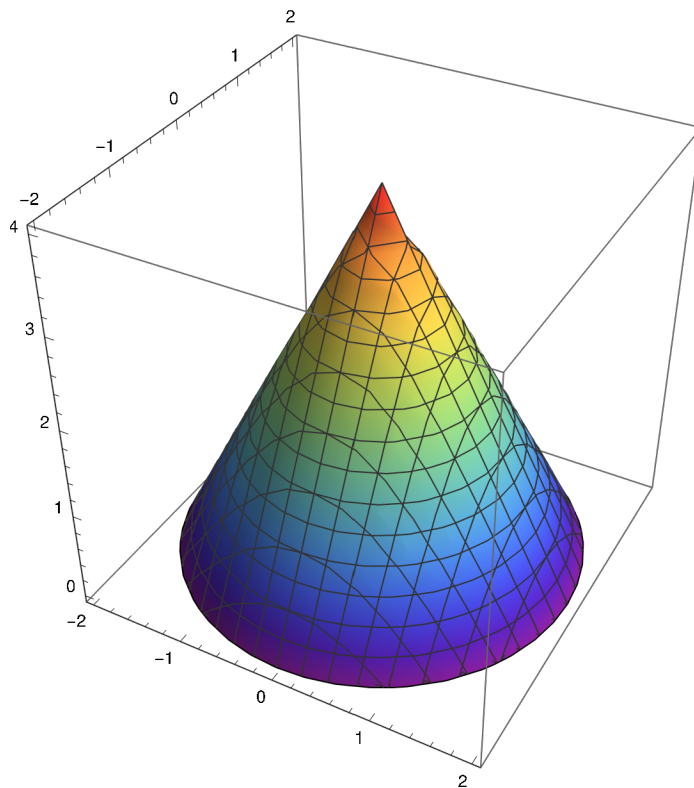
(*h*)

```
RegionPlot3D[z > x^2 + y^2, {x, -1, 1}, {y, -1, 1}, {z, 0, 1}, BoxRatios -> Automatic]
```



```
In[32]:= (*i*)
```

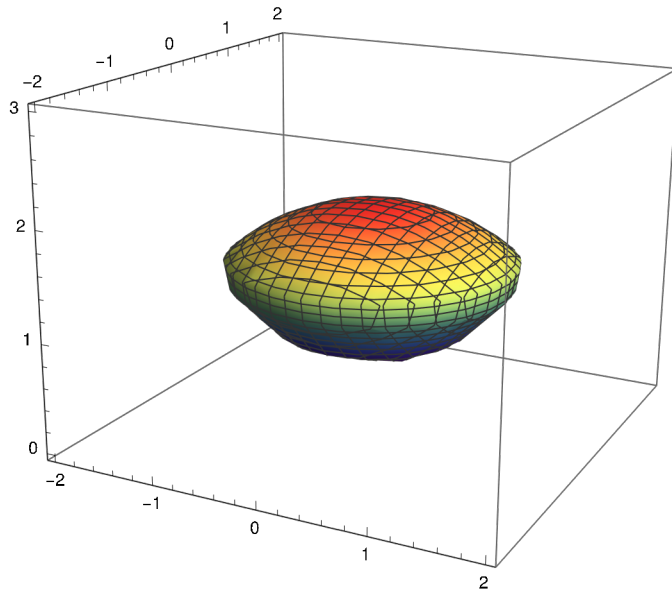
```
RegionPlot3D[4 - 2 Sqrt[x^2 + y^2] > z,  
{x, -2, 2}, {y, -2, 2}, {z, 0, 4}, BoxRatios -> Automatic]
```



(*j*)

```
In[38]:= RegionPlot3D[1 < x^2 + y^2 + z^2 < 4 && x^2 + y^2 < z^2,
  {x, -2, 2}, {y, -2, 2}, {z, 0, 3}, BoxRatios -> Automatic]
```

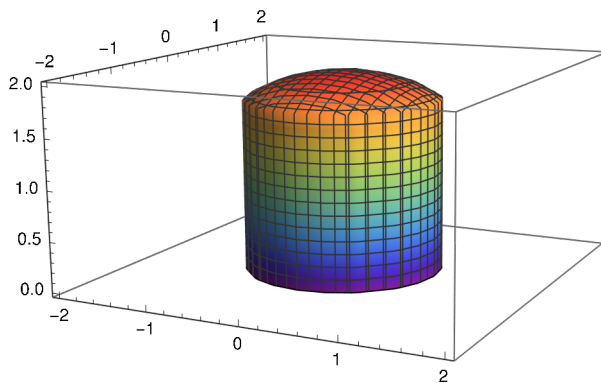
Out[38]=



(*k*)

```
In[41]:= RegionPlot3D[x^2 + y^2 + z^2 < 4 && x^2 + y^2 < 1,
  {x, -2, 2}, {y, -2, 2}, {z, 0, 2}, BoxRatios -> Automatic]
```

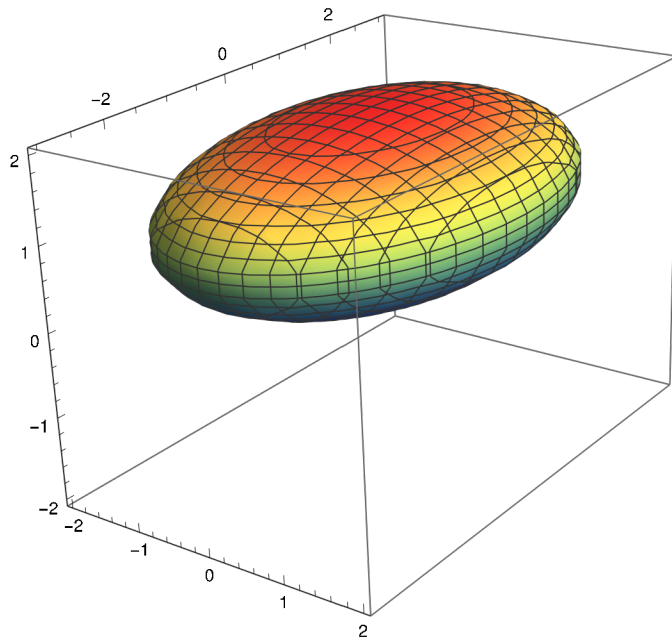
Out[41]=



(*l*)

```
In[43]:= RegionPlot3D[x^2/4 + y^2/9 + z^2 < 2 z,
  {x, -2, 2}, {y, -3, 3}, {z, -2, 2}, BoxRatios -> Automatic]
```

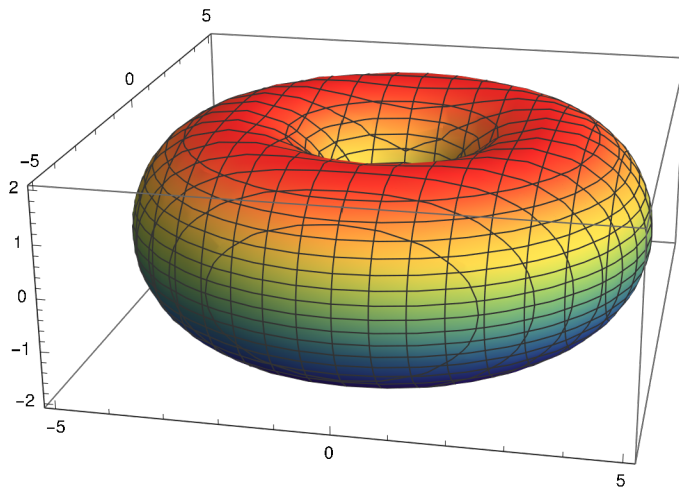
Out[43]=



(***)

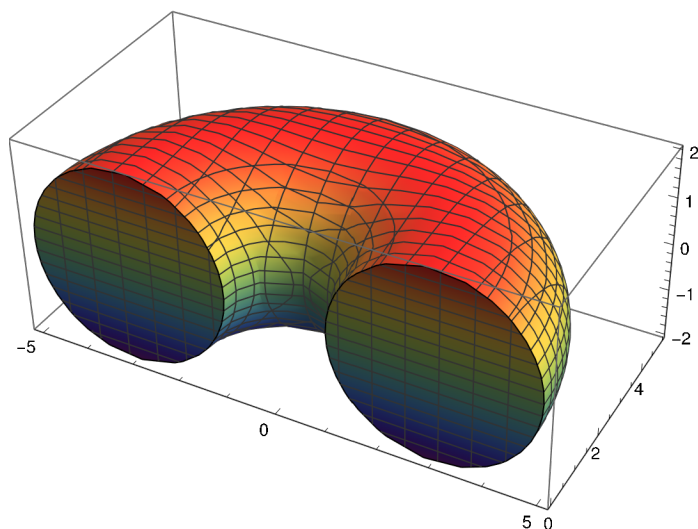
```
In[54]:= RegionPlot3D[(Sqrt[x^2 + y^2] - 3)^2 + z^2 < 4,
  {x, -5, 5}, {y, -5, 5}, {z, -2, 2}, BoxRatios -> Automatic]
```

Out[54]=



```
In[56]:= RegionPlot3D[(Sqrt[x^2 + y^2] - 3)^2 + z^2 < 4,  
  {x, -5, 5}, {y, 0, 5}, {z, -2, 2}, BoxRatios -> Automatic]
```

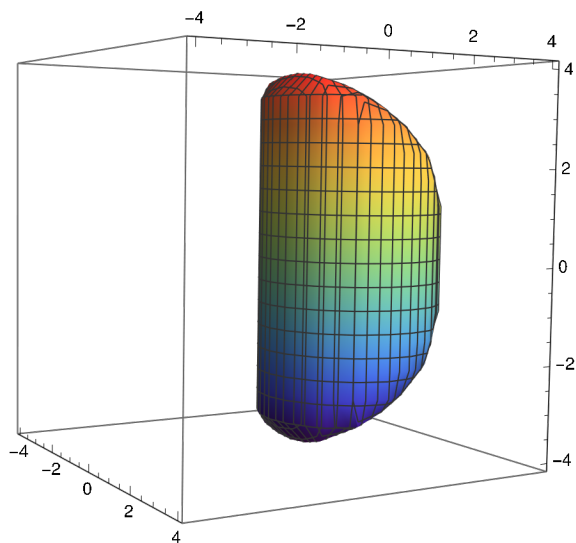
Out[56]=



(*n*)

```
In[61]:= RegionPlot3D[x^2 + y^2 + z^2 < 16 && x^2 + y^2 < 4 y,  
  {x, -4, 4}, {y, -4, 4}, {z, -4, 4}, BoxRatios -> Automatic]
```

Out[61]=




```
In[64]:= RegionPlot3D[x^2 + y^2 + z^2 < 16 && x^2 + y^2 > 4 y,  
  {x, -4, 5}, {y, -4, 5}, {z, -4, 4}, BoxRatios -> Automatic]
```

Out[64]=

