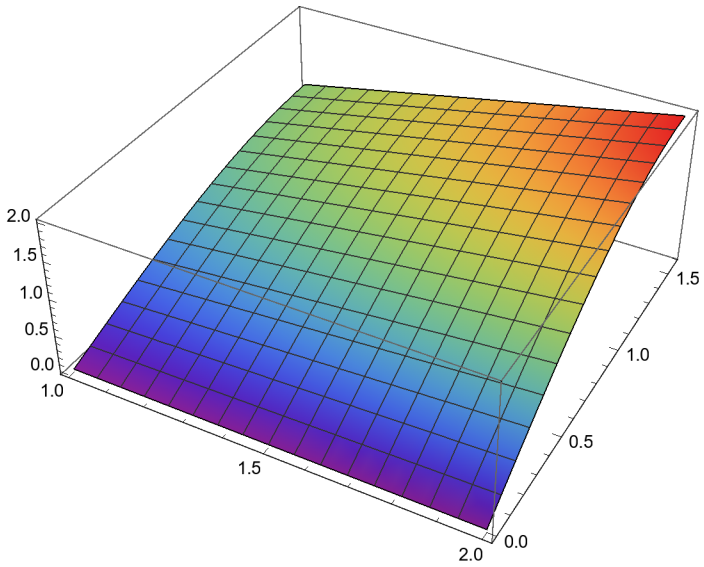
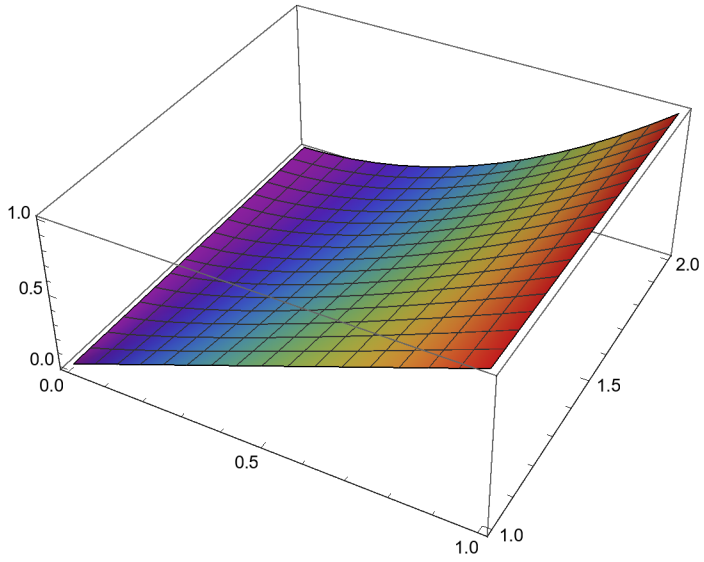
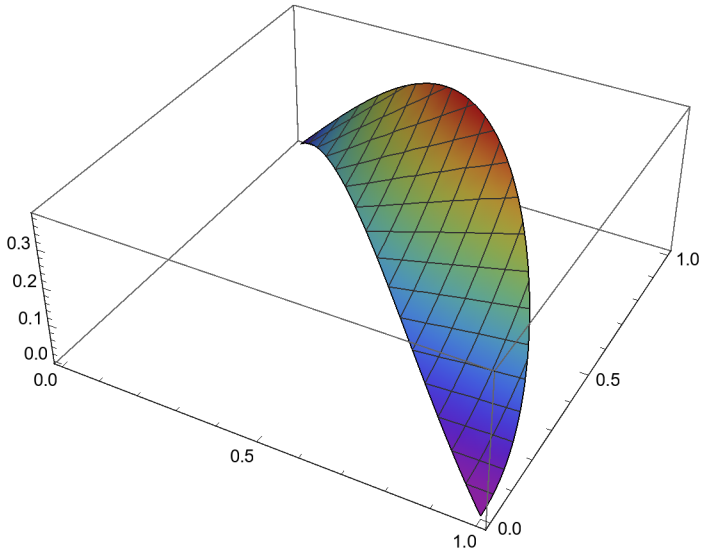
In[6]:=
```
SetOptions[Plot3D(*Or whichever plot you desire*),
  ColorFunction → "Rainbow"(*One of many options*)];
SetOptions[RegionPlot(*Or whichever plot you desire*),
  ColorFunction → "BlueGreenYellow"(*One of many options*)];


(*Prvni priklad*)

Plot3D[{x Sin[y]}, {x, 1, 2}, {y, 0, Pi/2}]
```



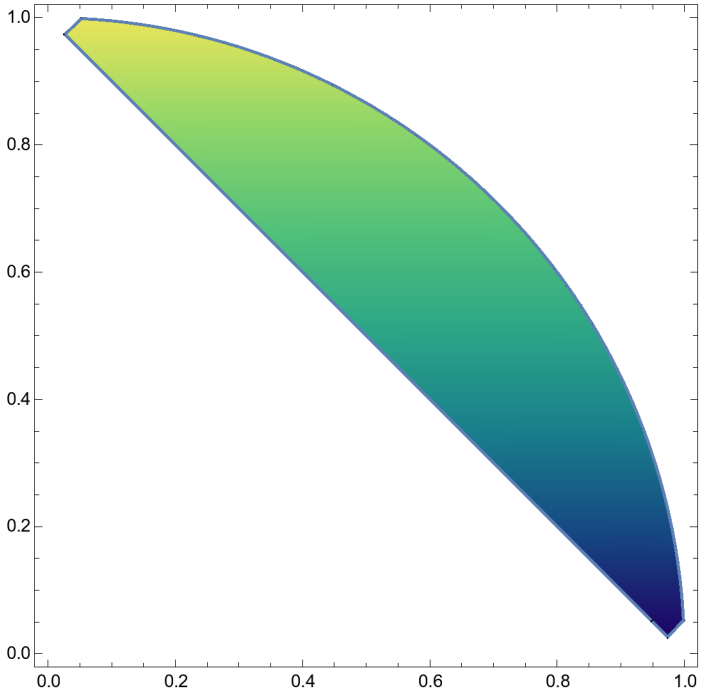

```
Plot3D[{x^y}, {x, 0, 1}, {y, 1, 2}]
```



```
Plot3D[{x * y^2}, {x, 0, 1}, {y, 0, 1},
 RegionFunction → Function[{x, y, z}, x^2 + y^2 ≤ 1 && x + y > 1], BoxRatios → Automatic]
```

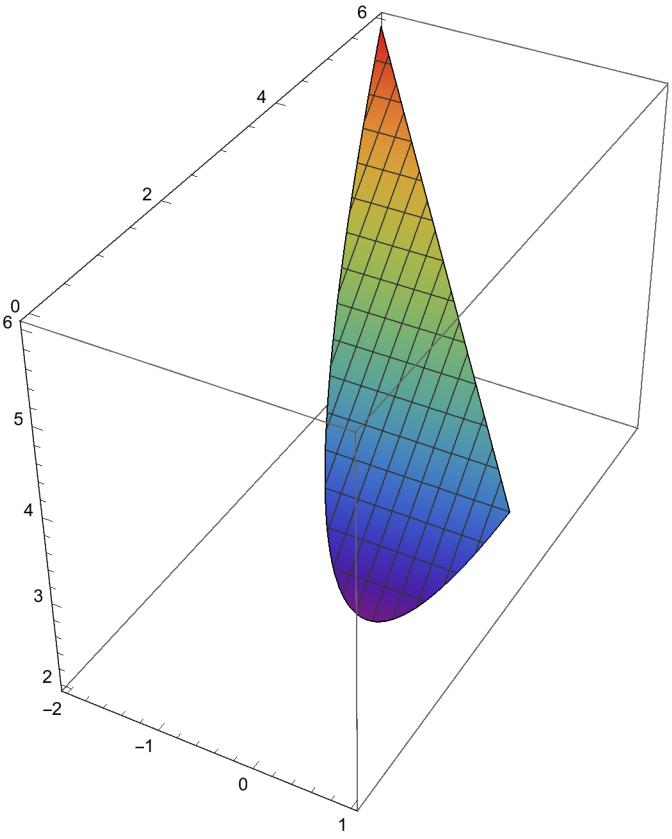



```
RegionPlot[x^2 + y^2 ≤ 1 && x + y > 1, {x, 0, 1}, {y, 0, 1}]
```



In[13]:=
```
Plot3D[{y}, {x, -2, 1}, {y, 0, 6},
 RegionFunction → Function[{x, y, z}, x^2 - y < -2 && x + y < 4], BoxRatios → Automatic]
```

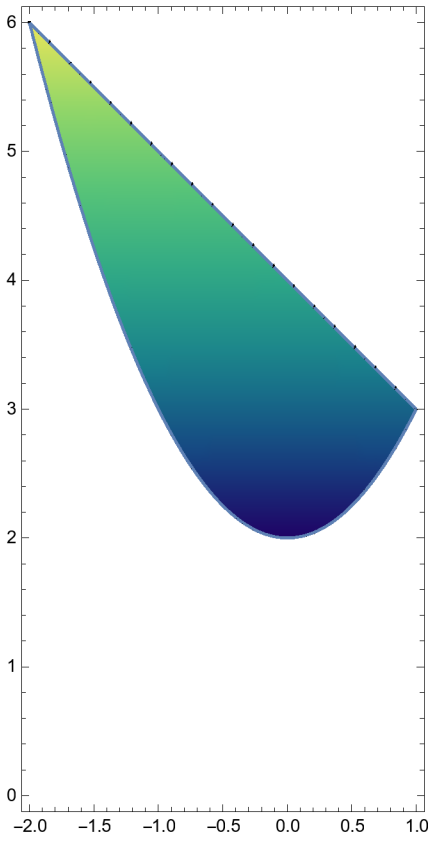
Out[13]=



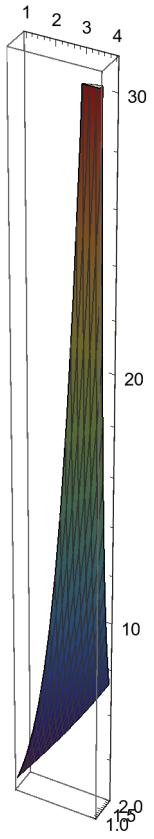
In[15]:=

```
RegionPlot[x^2 - y < -2 && x + y < 4, {x, -2, 1}, {y, 0, 6}, AspectRatio → Automatic]
```

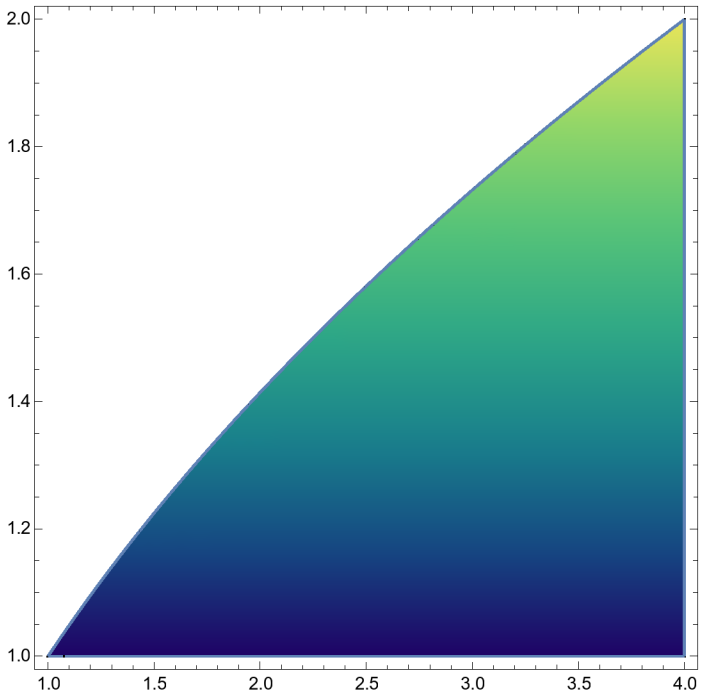
Out[15]=



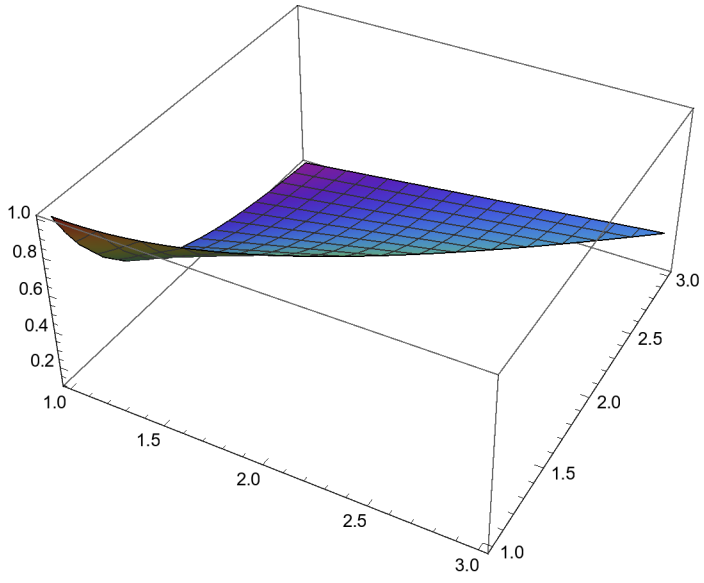
```
Plot3D[{Exp[x / y]}, {x, 1, 4}, {y, 1, 2},
 RegionFunction → Function[{x, y, z}, y^2 - x < 0], BoxRatios → Automatic]
```



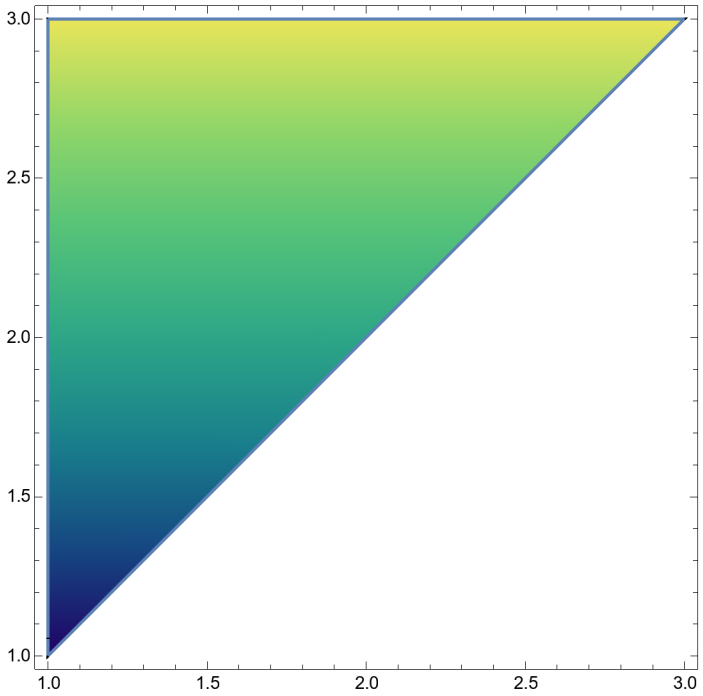
```
RegionPlot[y^2 - x < 0, {x, 1, 4}, {y, 1, 2}]
```



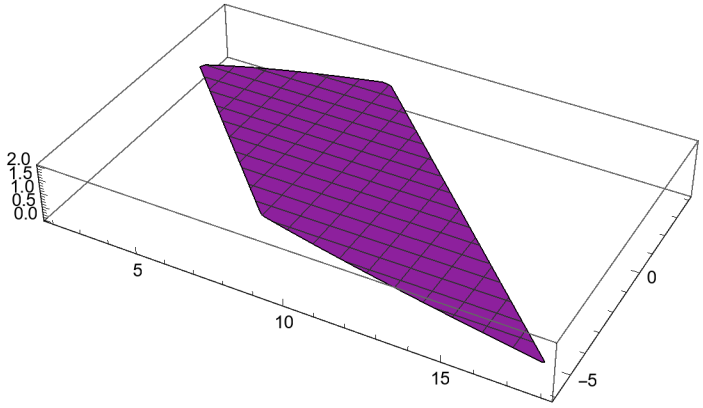

```
Plot3D[{x / (y^2)}, {x, 1, 3}, {y, 1, 3},
 RegionFunction → Function[{x, y, z}, x < y], BoxRatios → Automatic]
```



```
RegionPlot[x < y, {x, 1, 3}, {y, 1, 3}]
```

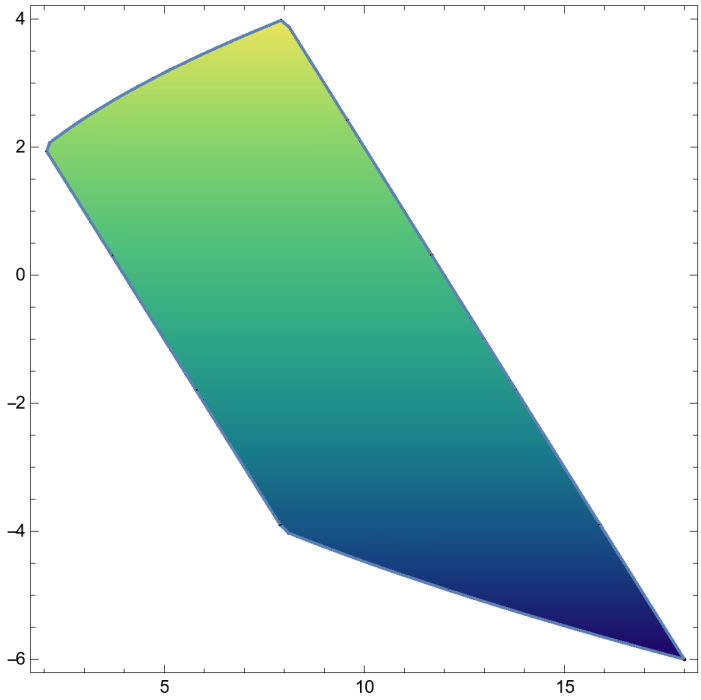



```
Plot3D[{1}, {x, 2, 18}, {y, -6, 4}, RegionFunction →
  Function[{x, y, z}, y * y < 2 x && x + y < 12 && x + y > 4], BoxRatios → Automatic]
```



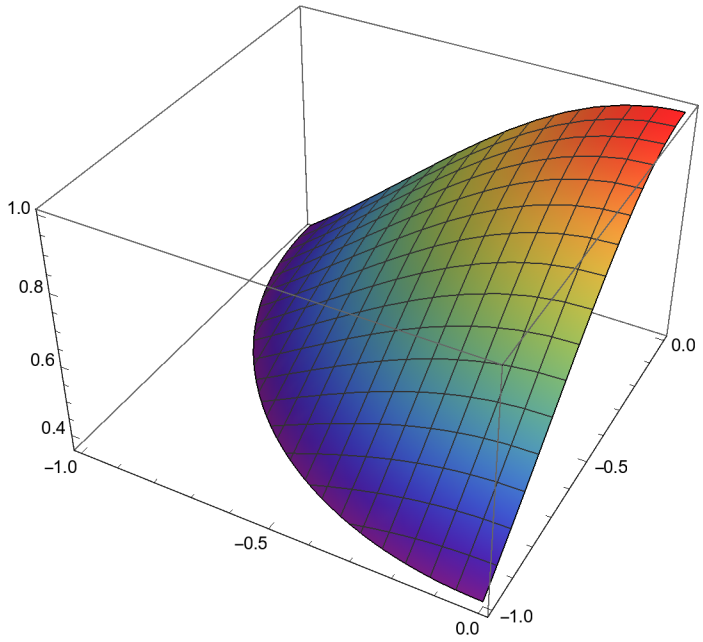
```
RegionPlot[y * y < 2 x && x + y < 12 && x + y > 4, {x, 2, 18}, {y, -6, 4}]
```

```
(*Druhy priklad*)
```

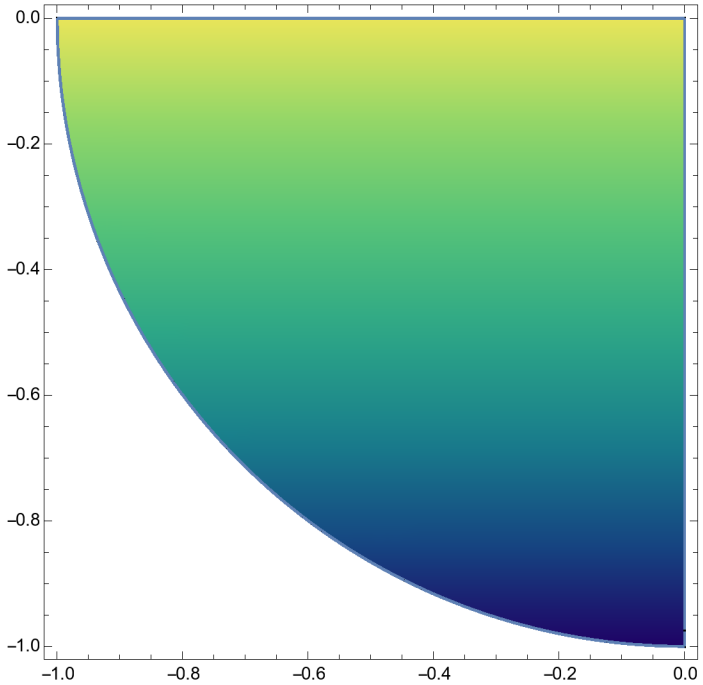



```
(*Druhy priklad*)
```

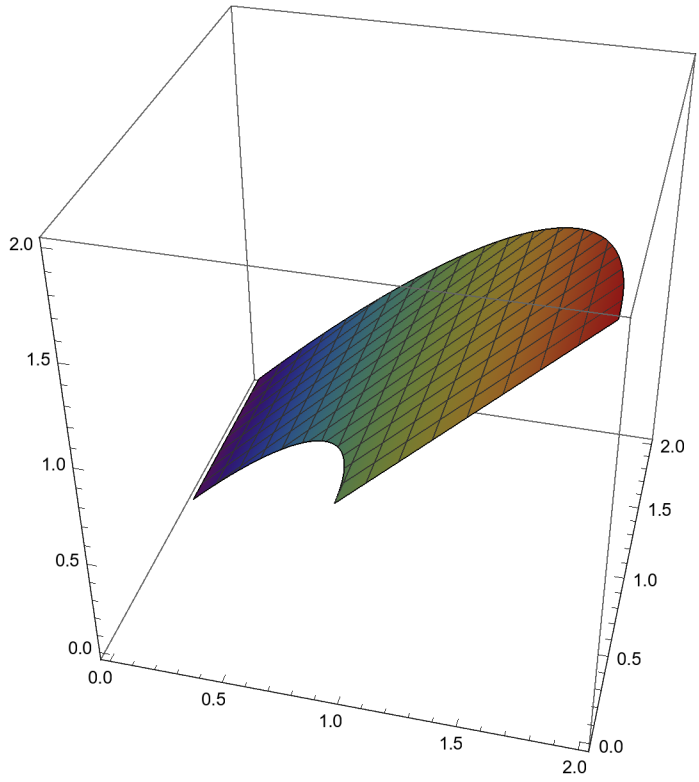
```
Plot3D[{Exp[-x * x - y * y]}, {x, -1, 0}, {y, -1, 0},
 RegionFunction → Function[{x, y, z}, x^2 + y^2 < 1], BoxRatios → Automatic]
```



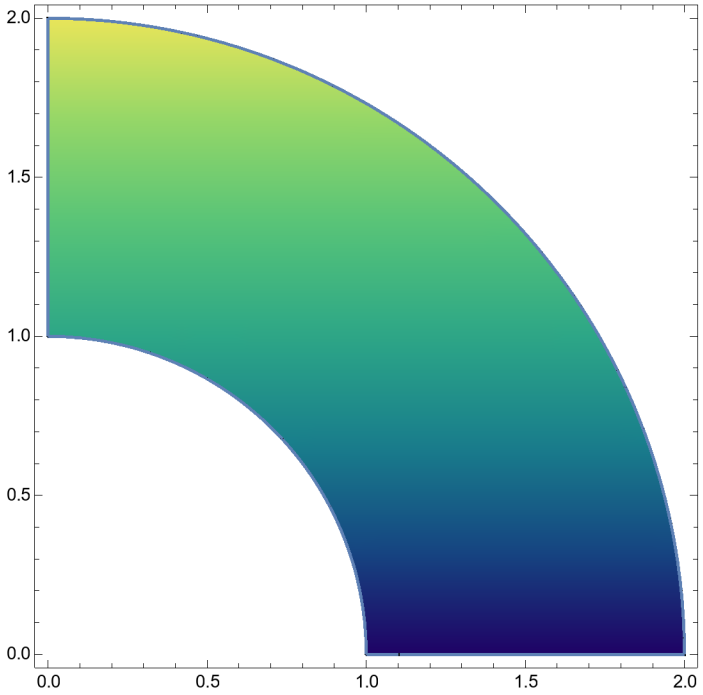

```
RegionPlot[x^2 + y^2 < 1, {x, -1, 0}, {y, -1, 0}]
```



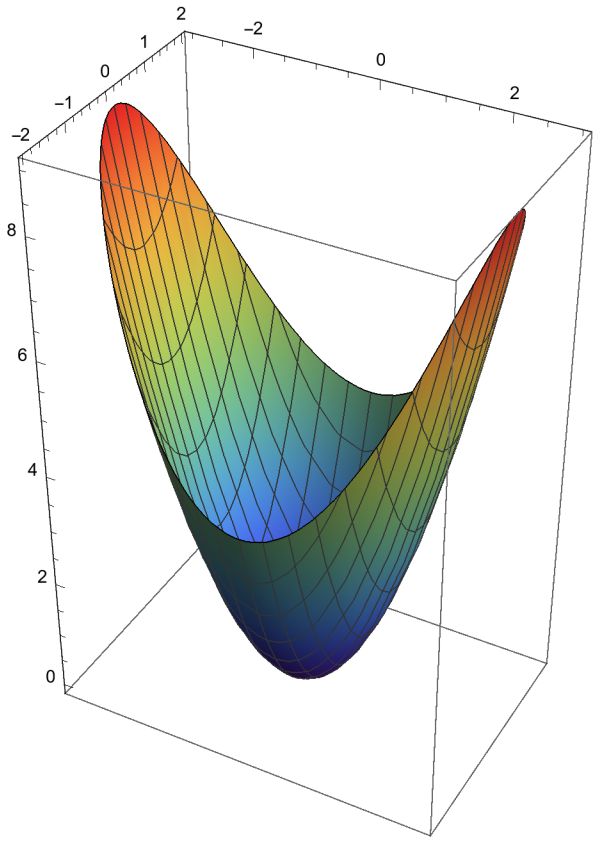
```
Plot3D[{x}, {x, 0, 2}, {y, 0, 2},
 RegionFunction → Function[{x, y, z}, 1 < x^2 + y^2 < 4], BoxRatios → Automatic]
```



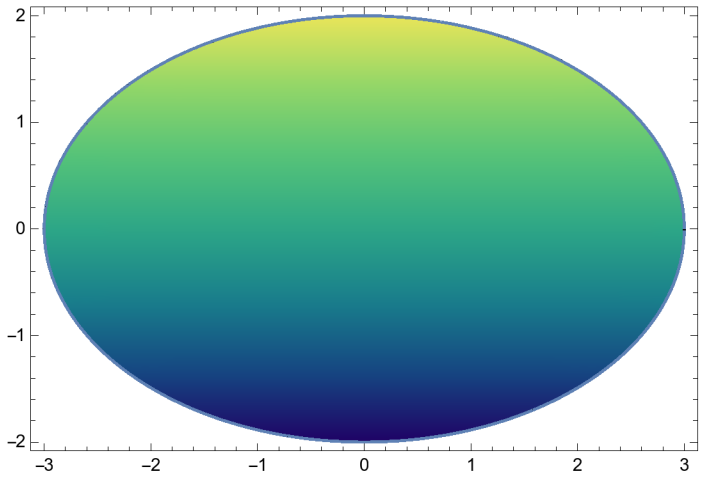

```
RegionPlot[1 < x^2 + y^2 < 4, {x, 0, 2}, {y, 0, 2}]
```



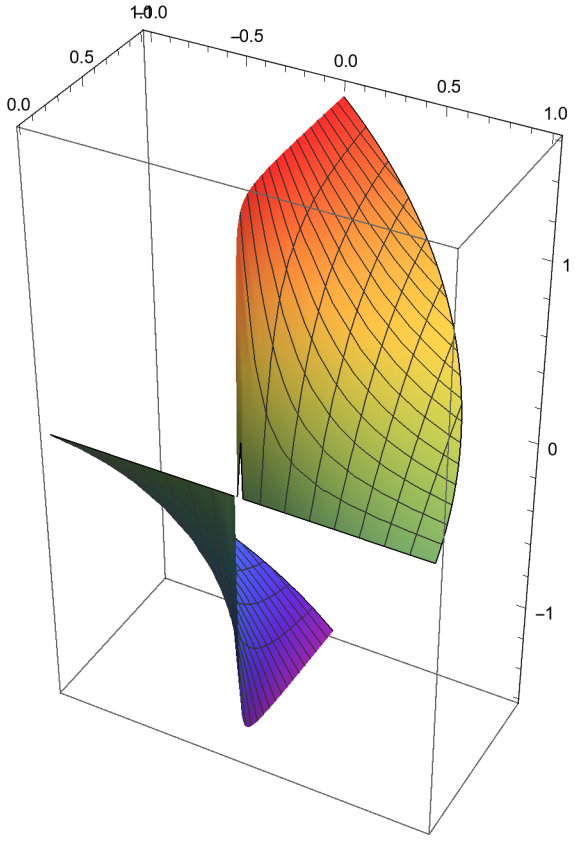
```
Plot3D[{x^2 + y^2}, {x, -3, 3}, {y, -2, 2},
 RegionFunction → Function[{x, y, z}, 4 x^2 + 9 y^2 < 36], BoxRatios → Automatic]
```



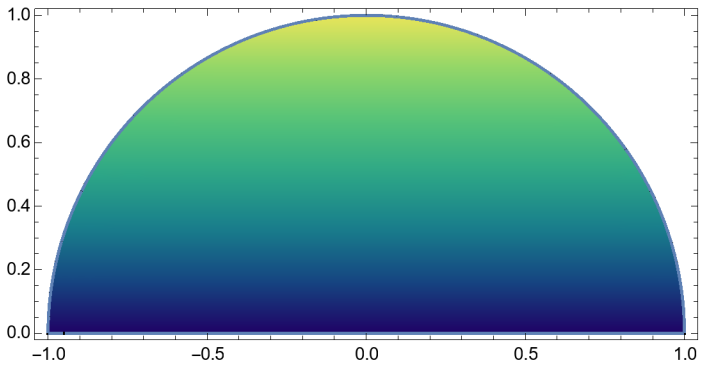

```
RegionPlot[4 x^2 + 9 y^2 < 36, {x, -3, 3}, {y, -2, 2}, AspectRatio → Automatic]
```



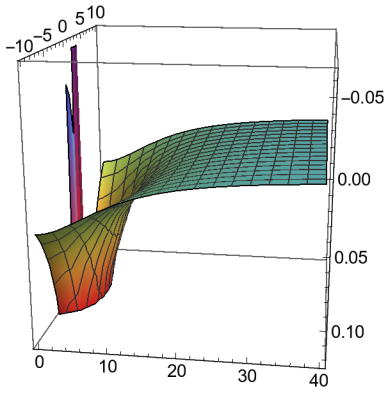
```
Plot3D[{ArcTan[y / x]}, {x, -1, 1}, {y, 0, 1},
 RegionFunction → Function[{x, y, z}, x^2 + y^2 < 1], BoxRatios → Automatic]
```



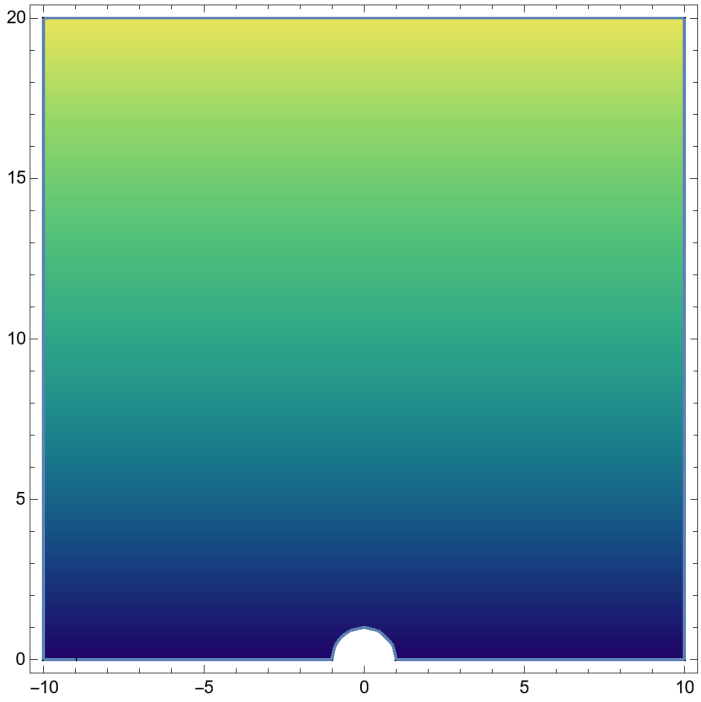

```
RegionPlot[x^2 + y^2 < 1, {x, -1, 1}, {y, 0, 1}, AspectRatio → Automatic]
```



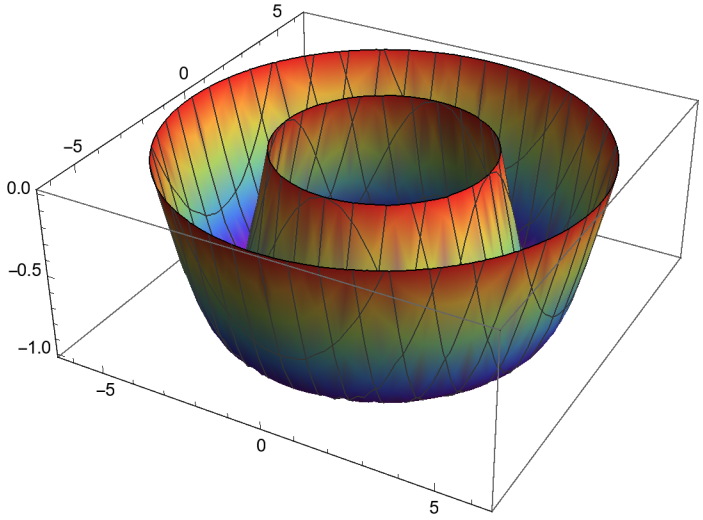
```
Plot3D[{Log[x * x + y * y] / (x * x + y * y)}, {x, -10, 10}, {y, 0, 40},
 RegionFunction → Function[{x, y, z}, x^2 + y^2 > 1], BoxRatios → 1]
```



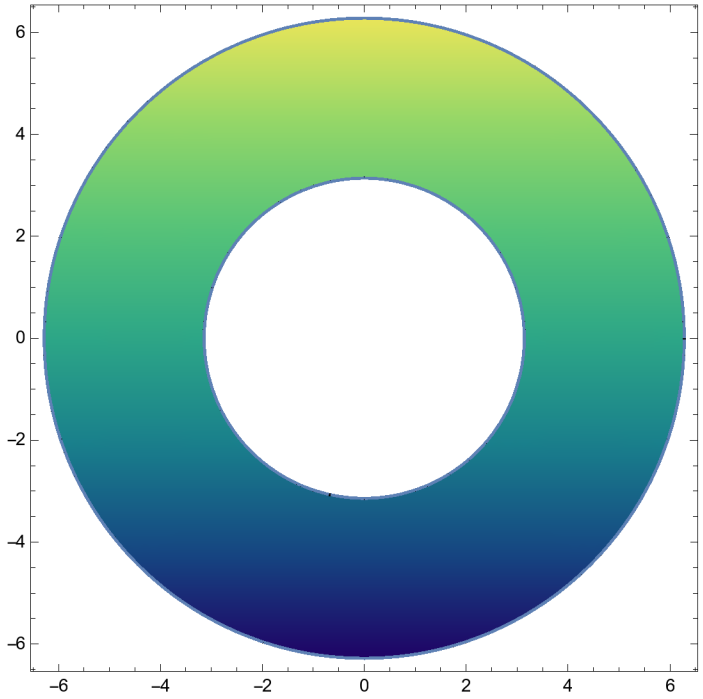

```
RegionPlot[x^2 + y^2 > 1, {x, -10, 10}, {y, 0, 20}, AspectRatio → Automatic]
```



```
Plot3D[{Sin[Sqrt[x^2 + y^2]]}, {x, -2 Pi, 2 * Pi}, {y, -2 Pi, 2 * Pi},
 RegionFunction → Function[{x, y, z}, Pi^2 < x^2 + y^2 < 4 * Pi^2]]
```

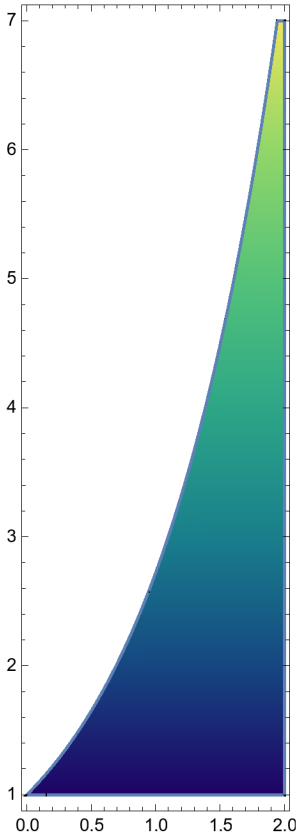



```
RegionPlot[Pi^2 < x^2 + y^2 < 4 * Pi^2, {x, -2 Pi, 2 * Pi}, {y, -2 Pi, 2 * Pi}]
```

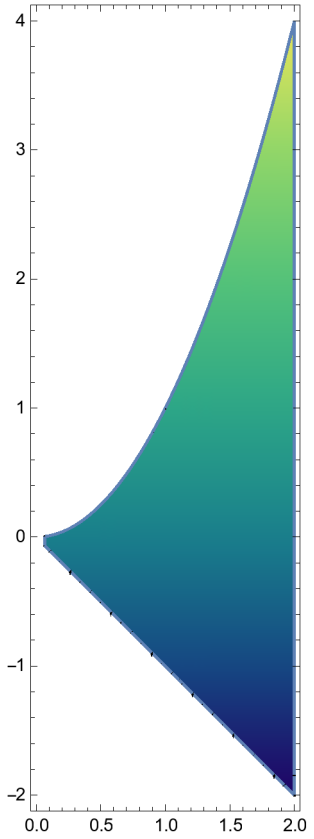



```
(* Sesty priklad *)
```

```
RegionPlot[x < 2 && 1 < y < Exp[x], {x, 0, 2}, {y, 1, 7}, AspectRatio → Automatic]
```



```
RegionPlot[-x < y < x^2, {x, 0, 2}, {y, -2, 4}, AspectRatio → Automatic]
```




```
RegionPlot[x^2 - 4 x + 5 < y < 6 x - 3 - x^2,
 {x, 1, 4}, {y, 1, 6}, ColorFunction → "BlueGreenYellow"]
```