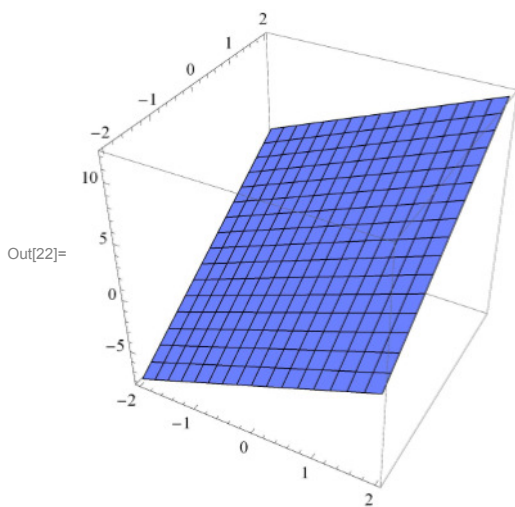


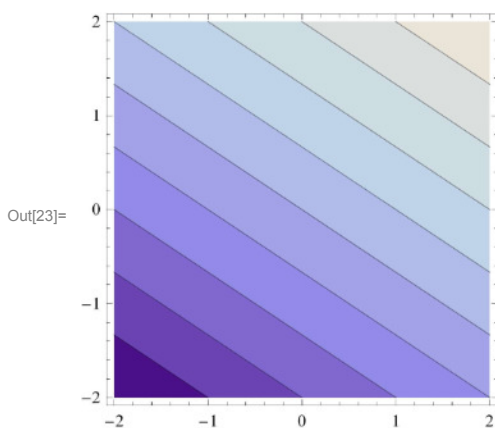
Funzioni reali di due variabili: grafici e linee di livello

Di ciascuna delle prossime funzioni si rappresenta prima il grafico e poi l'insieme delle linee di livello

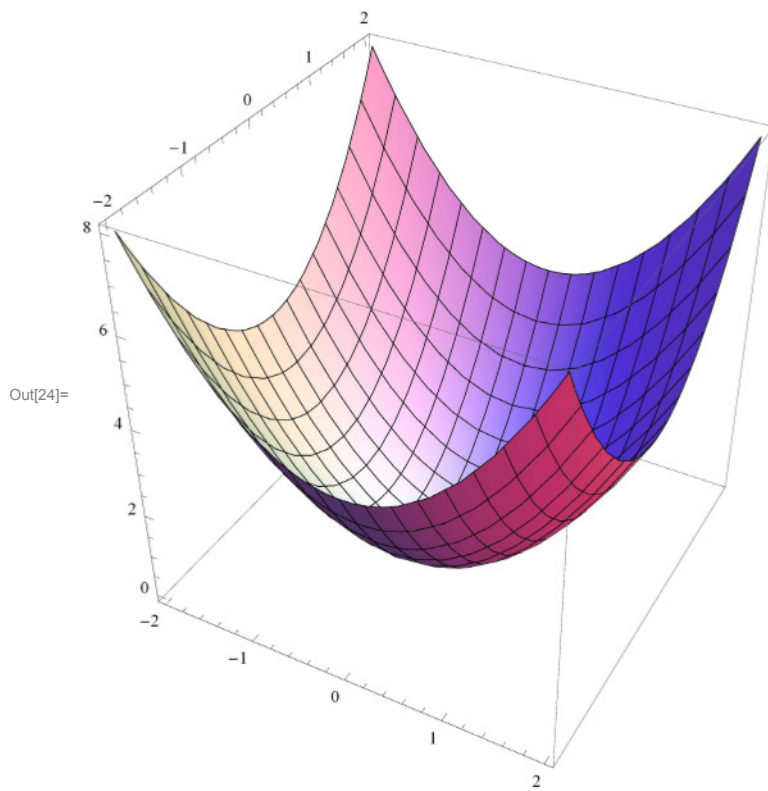
```
In[22]= Plot3D[2 x + 3 y + 2, {x, -2, 2}, {y, -2, 2}, BoxRatios -> {1, 1, 1}]
```



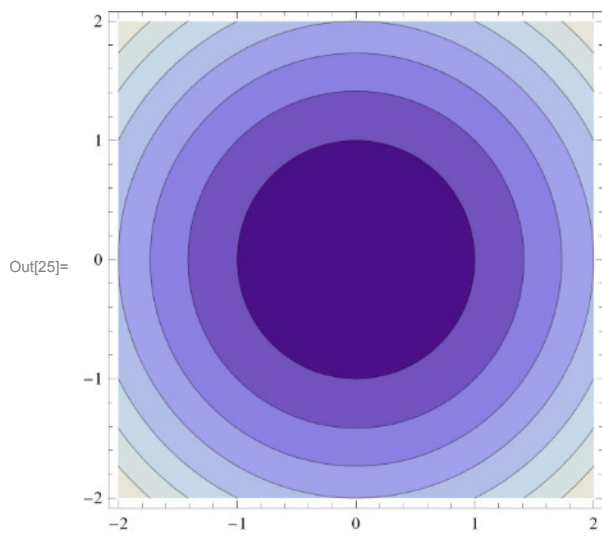
```
In[23]= ContourPlot[2 x + 3 y + 2, {x, -2, 2}, {y, -2, 2}]
```



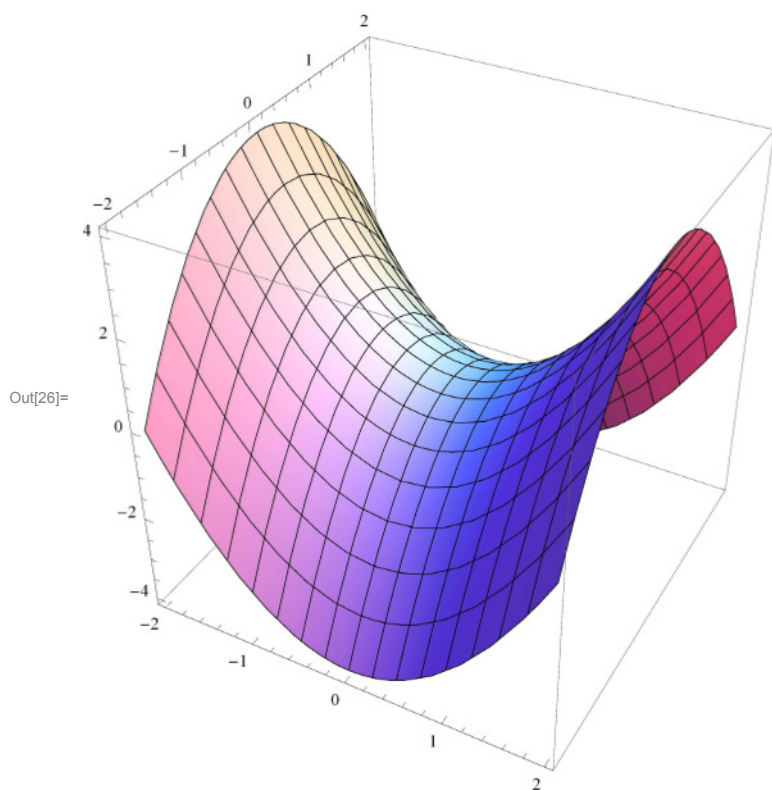
In[24]= `Plot3D[x^2 + y^2, {x, -2, 2}, {y, -2, 2}, BoxRatios -> {1, 1, 1}]`



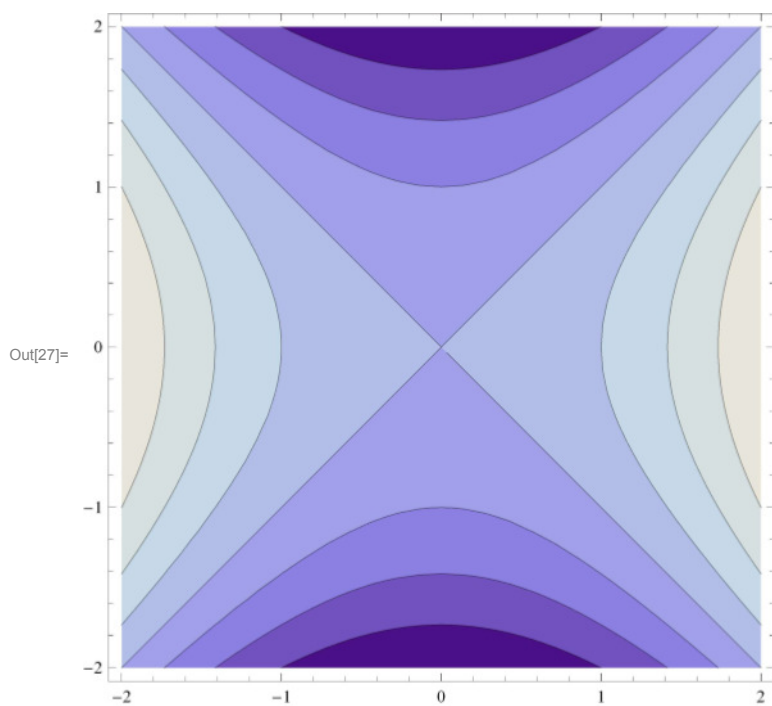
In[25]= `ContourPlot[x^2 + y^2, {x, -2, 2}, {y, -2, 2}]`



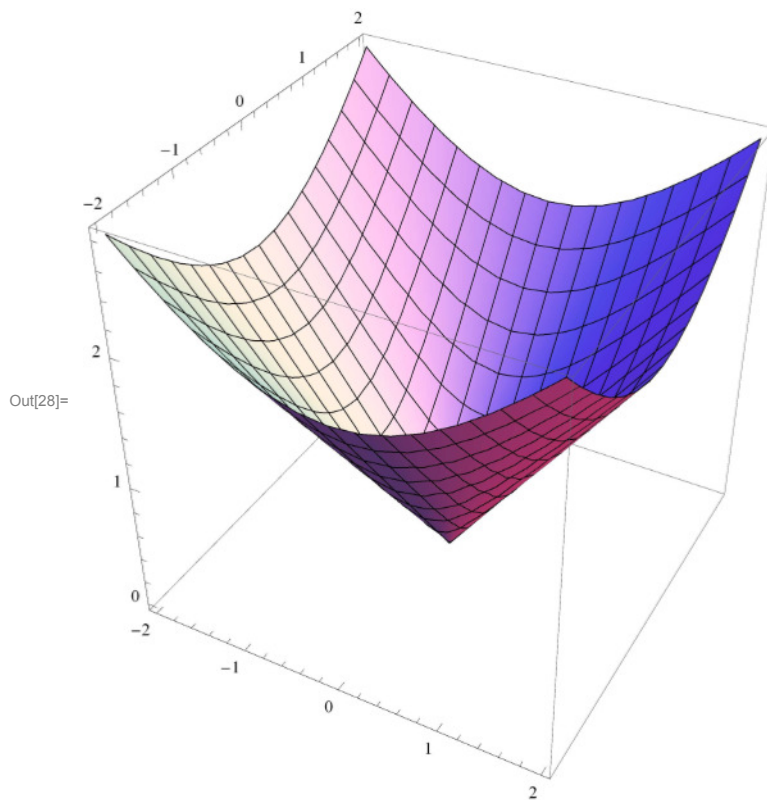
```
In[26]= Plot3D[x^2 - y^2, {x, -2, 2}, {y, -2, 2}, BoxRatios -> {1, 1, 1}]
```



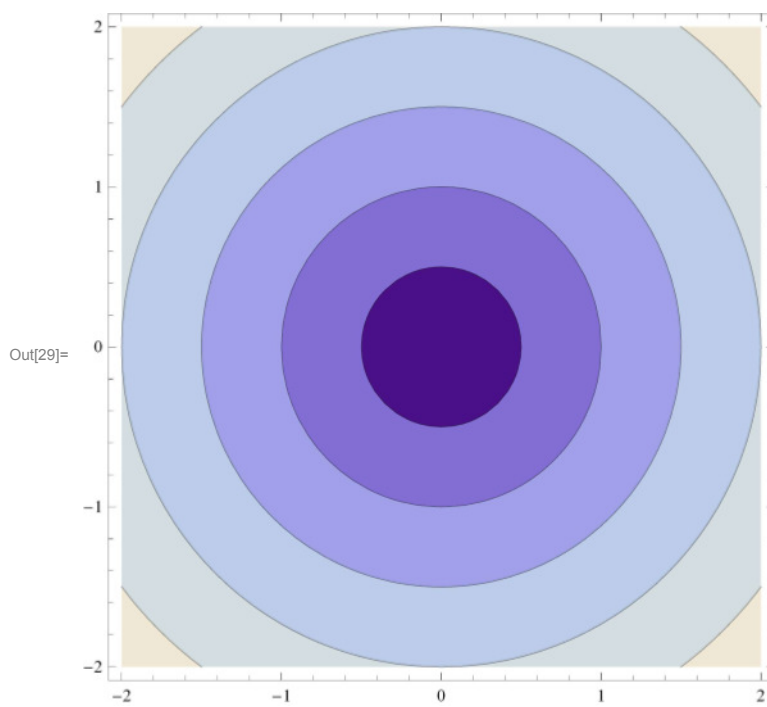
```
In[27]= ContourPlot[x^2 - y^2, {x, -2, 2}, {y, -2, 2}]
```



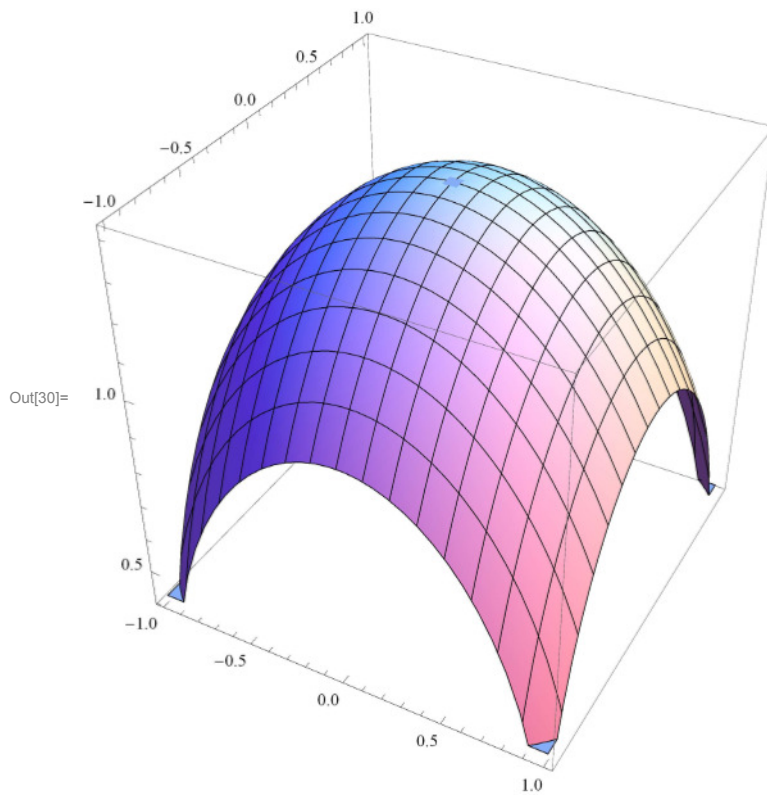
```
In[28]= Plot3D[Sqrt[x^2 + y^2], {x, -2, 2}, {y, -2, 2}, BoxRatios -> {1, 1, 1}]
```



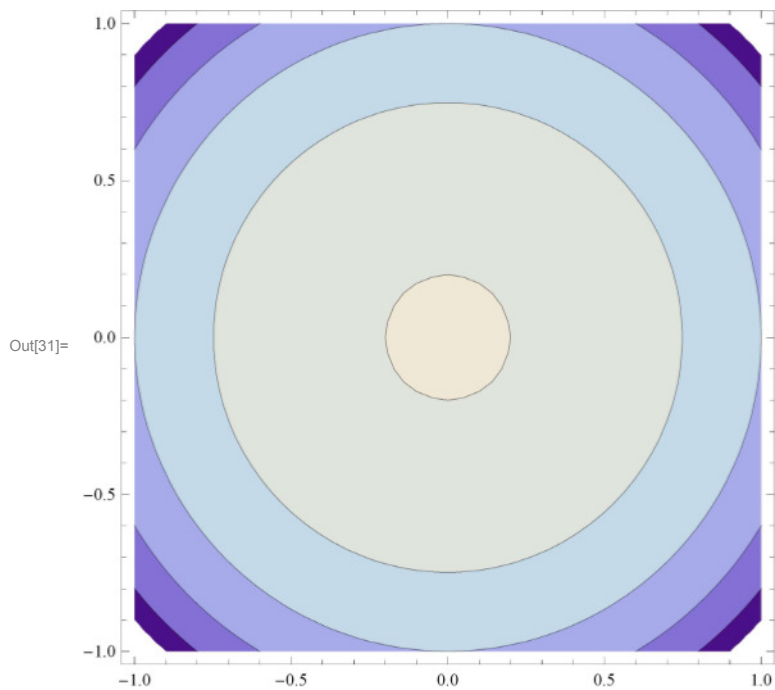
```
In[29]= ContourPlot[Sqrt[x^2 + y^2], {x, -2, 2}, {y, -2, 2}]
```



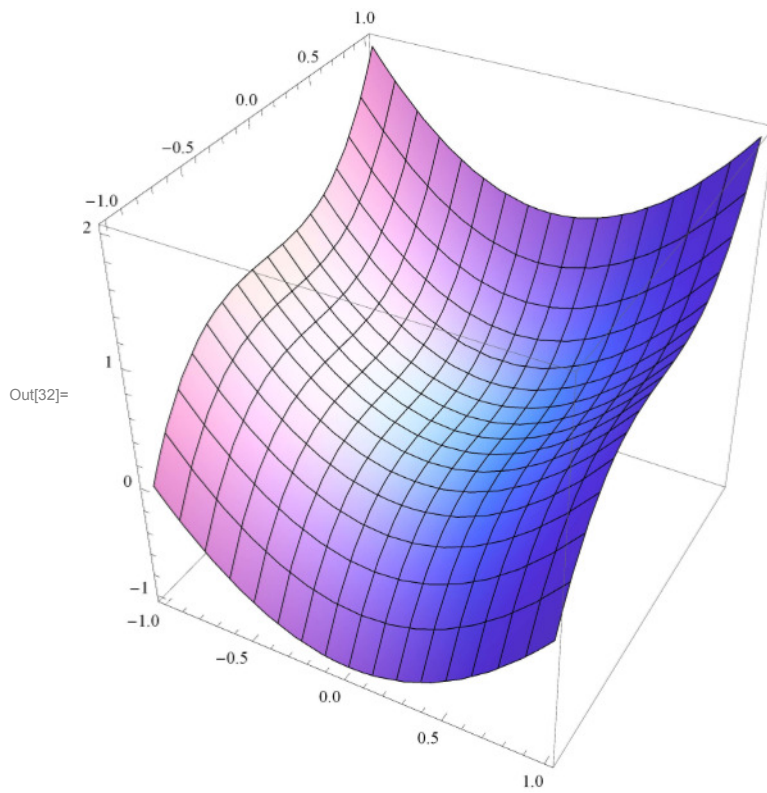
```
In[30]= Plot3D[Sqrt[2 - x^2 - y^2], {x, -1, 1},  
              {y, -1, 1}, BoxRatios -> {1, 1, 1}, PlotPoints -> 30]
```



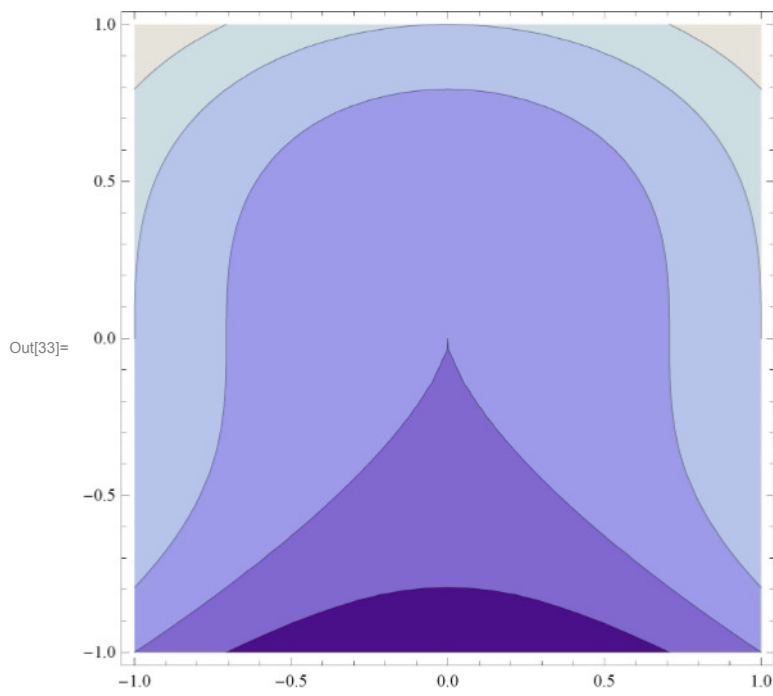
```
In[31]= ContourPlot[Sqrt[2 - x^2 - y^2], {x, -1, 1}, {y, -1, 1}]
```



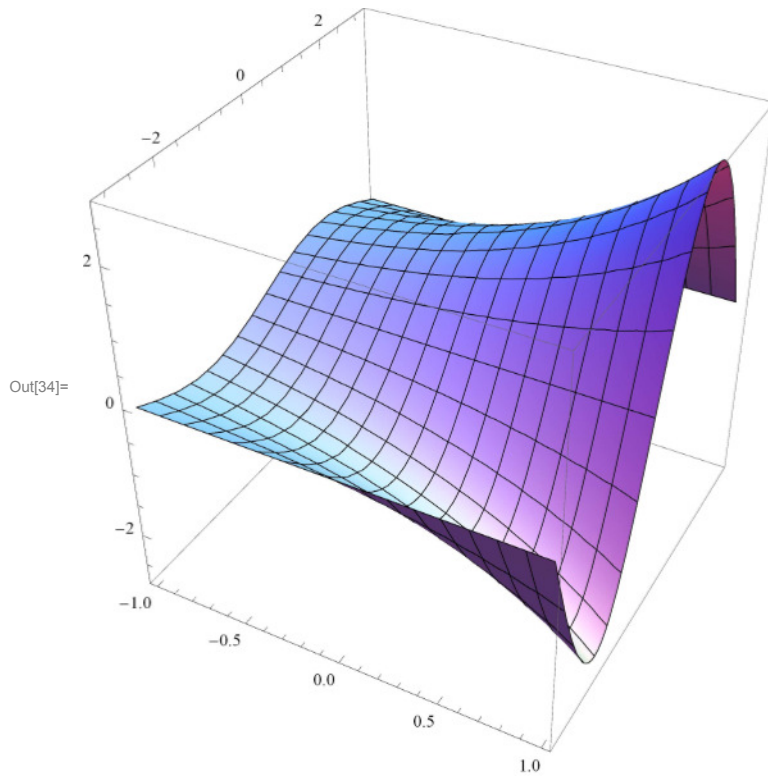
```
In[32]= Plot3D[x^2 + y^3, {x, -1, 1}, {y, -1, 1}, BoxRatios -> {1, 1, 1}]
```



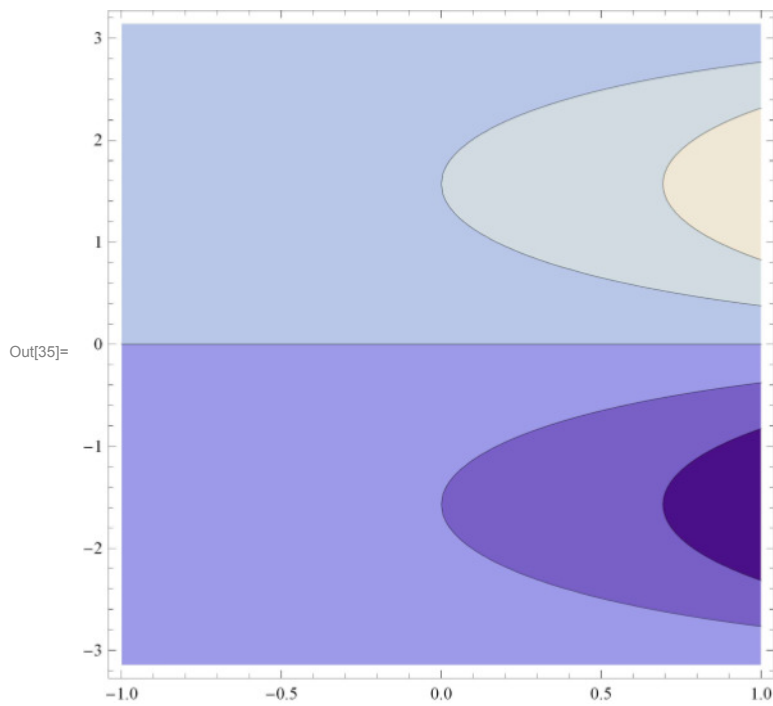
```
In[33]= ContourPlot[x^2 + y^3, {x, -1, 1}, {y, -1, 1}]
```



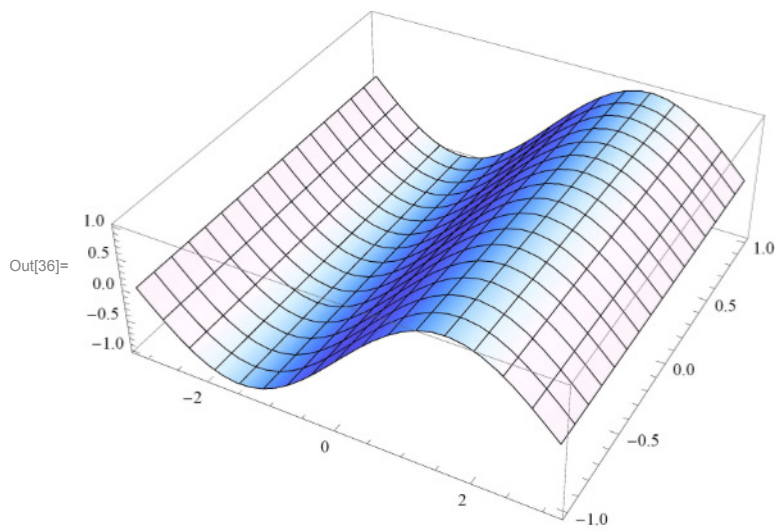
```
In[34]:= Plot3D[Exp[x] Sin[y], {x, -1, 1}, {y, -Pi, Pi}, BoxRatios -> {1, 1, 1}]
```



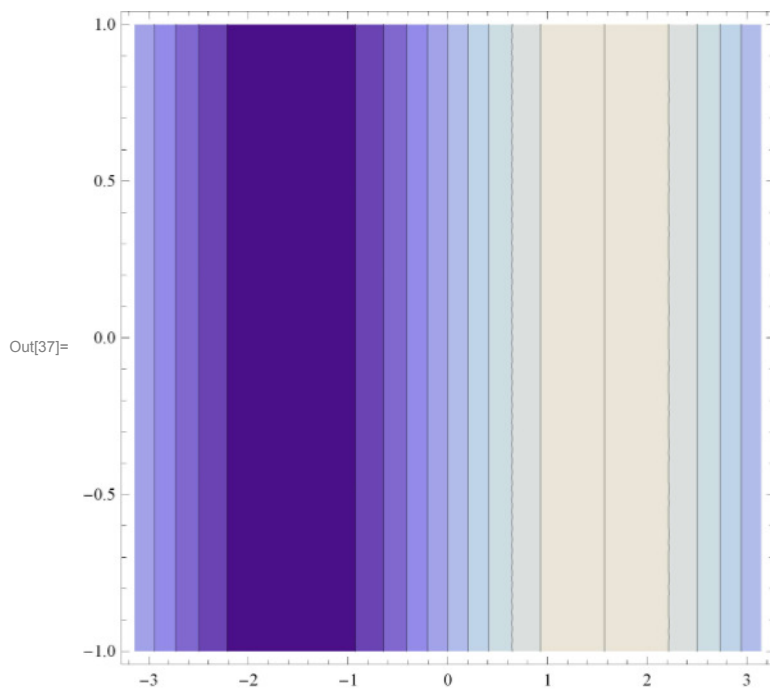
```
In[35]:= ContourPlot[Exp[x] Sin[y], {x, -1, 1}, {y, -Pi, Pi}]
```



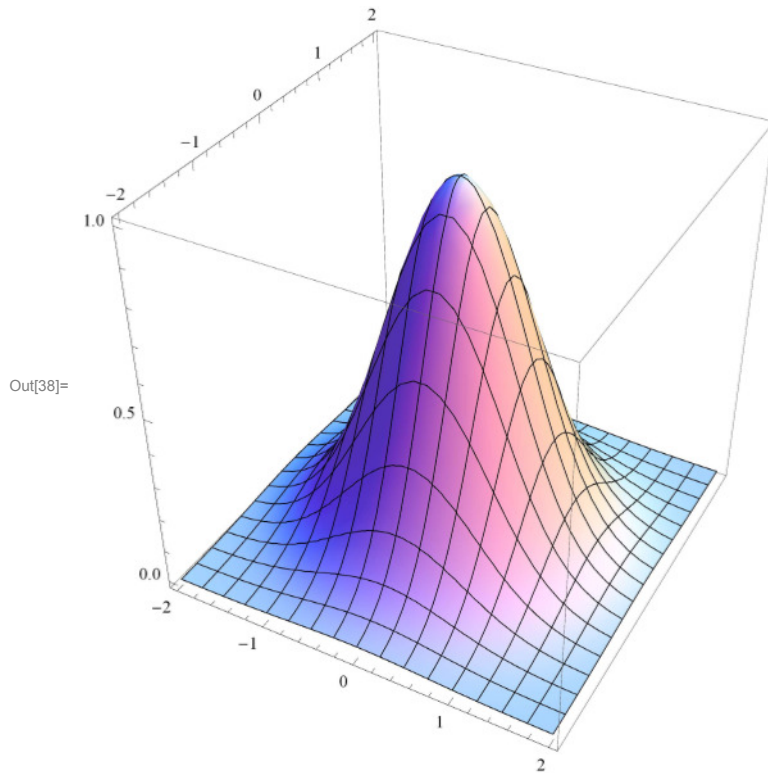
```
In[36]= Plot3D[Sin[x], {x, -Pi, Pi}, {y, -1, 1}, BoxRatios -> {1, 1, 1/3}, PlotPoints -> 30]
```



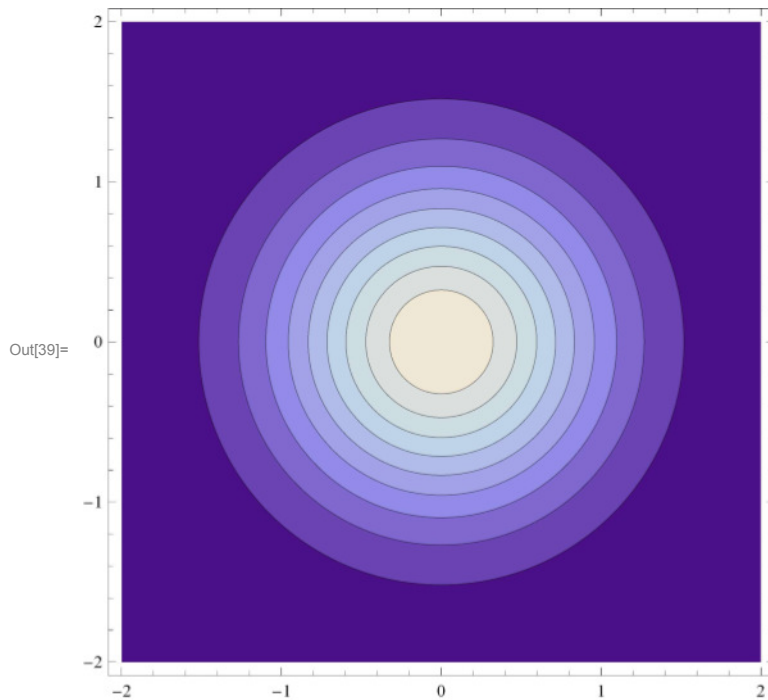
```
In[37]= ContourPlot[Sin[x], {x, -Pi, Pi}, {y, -1, 1}]
```



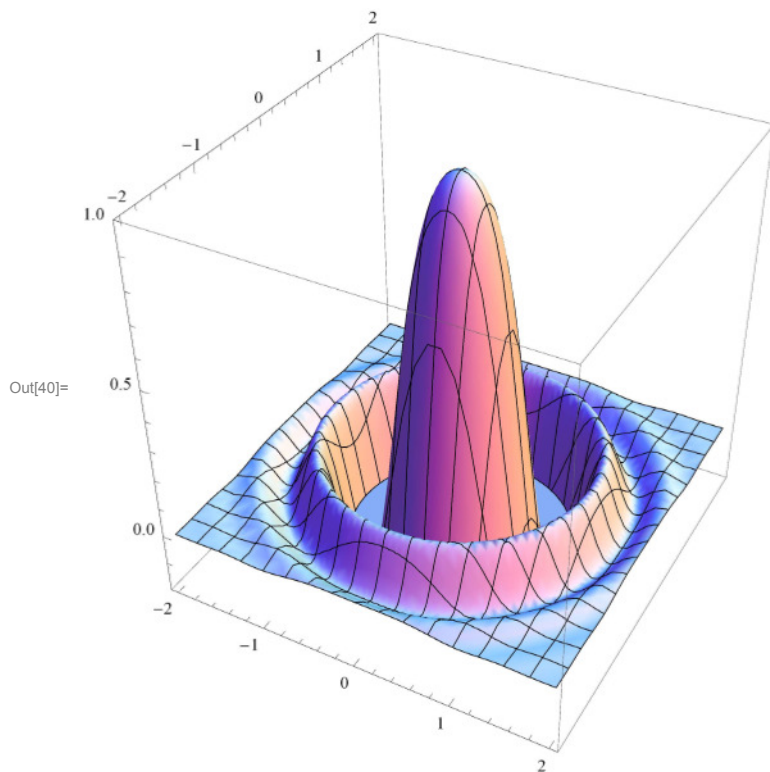

```
In[38]:= Plot3D[Exp[-x^2 - y^2], {x, -2, 2},  
             {y, -2, 2}, BoxRatios -> {1, 1, 1}, PlotPoints -> 30]
```



```
In[39]:= ContourPlot[Exp[-x^2 - y^2], {x, -2, 2}, {y, -2, 2}, PlotPoints -> 50]
```

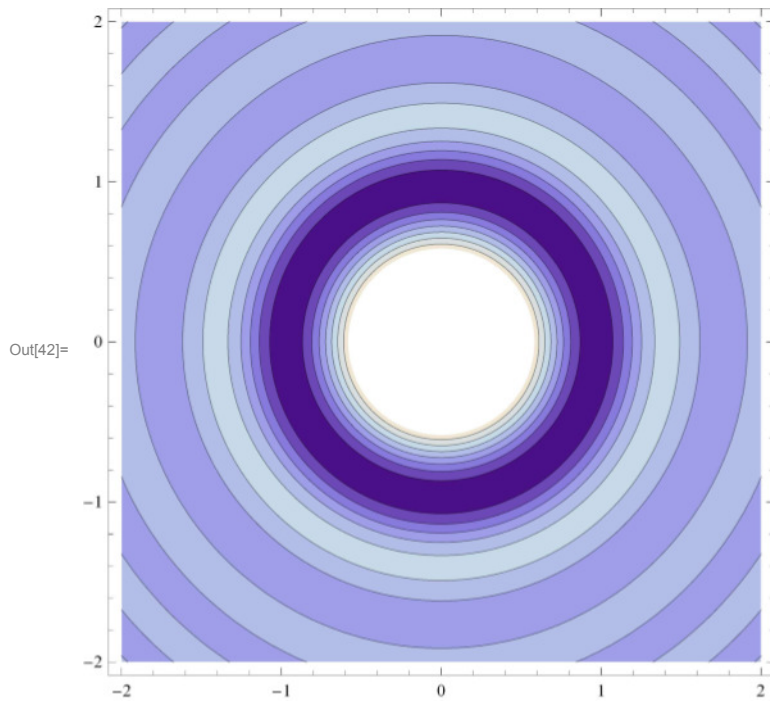


```
In[40]= Plot3D[Exp[-x^2 - y^2] Cos[3 (x^2 + y^2)], {x, -2, 2}, {y, -2, 2},  
BoxRatios -> {1, 1, 1}, PlotPoints -> 30, PlotRange -> {-0.2, 1}]
```



```
In[41]=
```

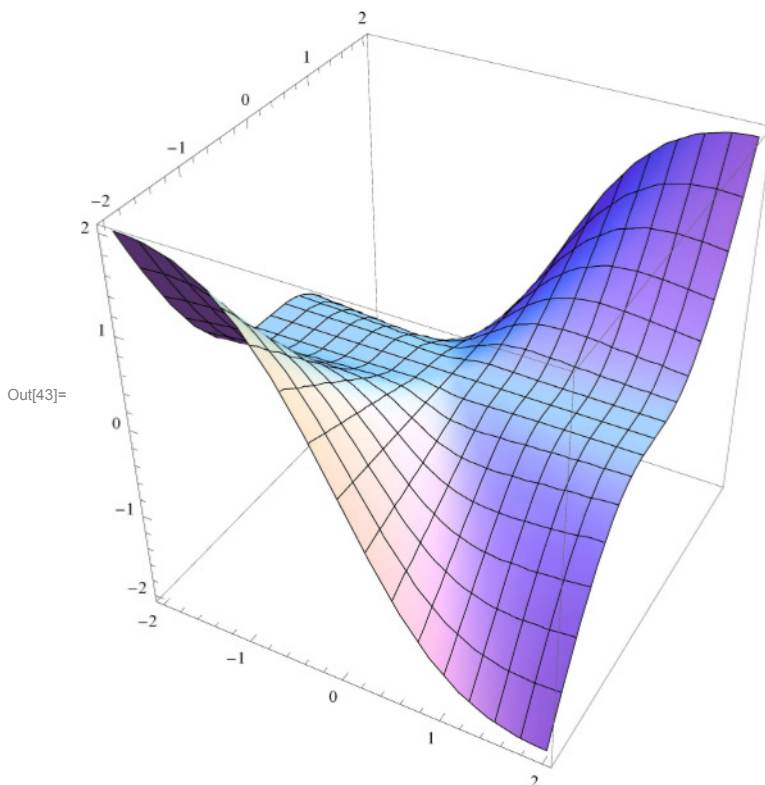
```
In[42]= ContourPlot[Exp[-x^2 - y^2] Cos[3 (x^2 + y^2)],  
{x, -2, 2}, {y, -2, 2}, PlotPoints -> 50]
```



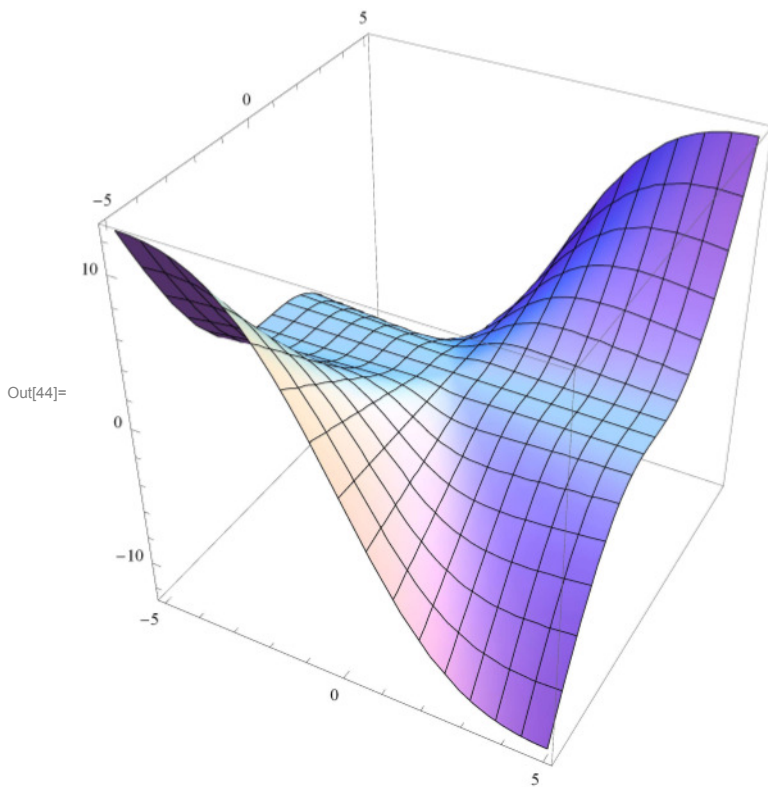
Funzioni reali di due variabili: grafici di funzioni positivamente omogenee

Delle prossime funzioni, positivamente omogenee, si traccia il grafico su quadrati centrati nell'origine, di diversa ampiezza. Si osserva che la forma del grafico è identica, per effetto dell'omogeneità.

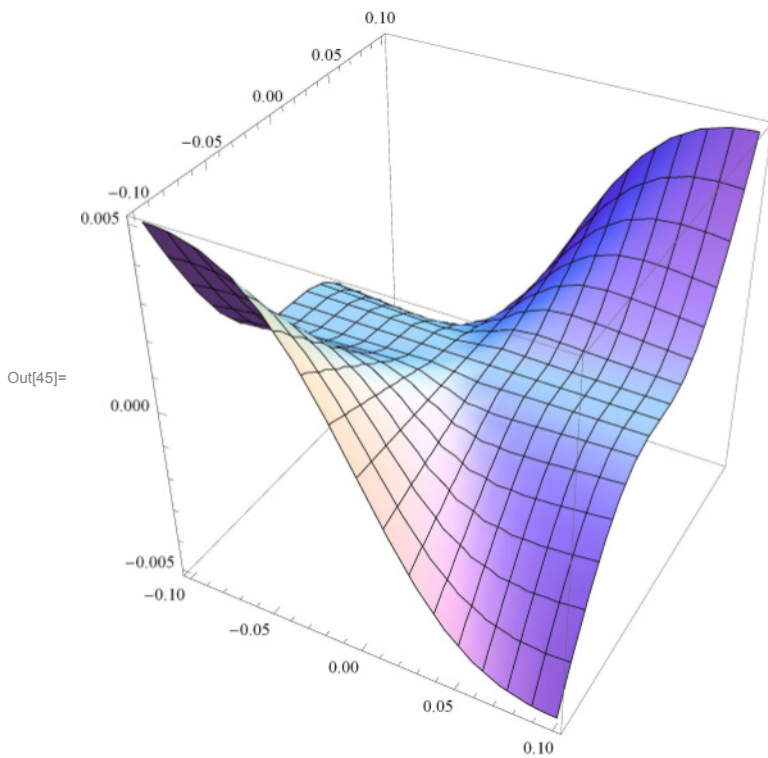
```
In[43]:= Plot3D[(x * y^3) / (x^2 + y^2), {x, -2, 2}, {y, -2, 2}, BoxRatios -> {1, 1, 1}]
```



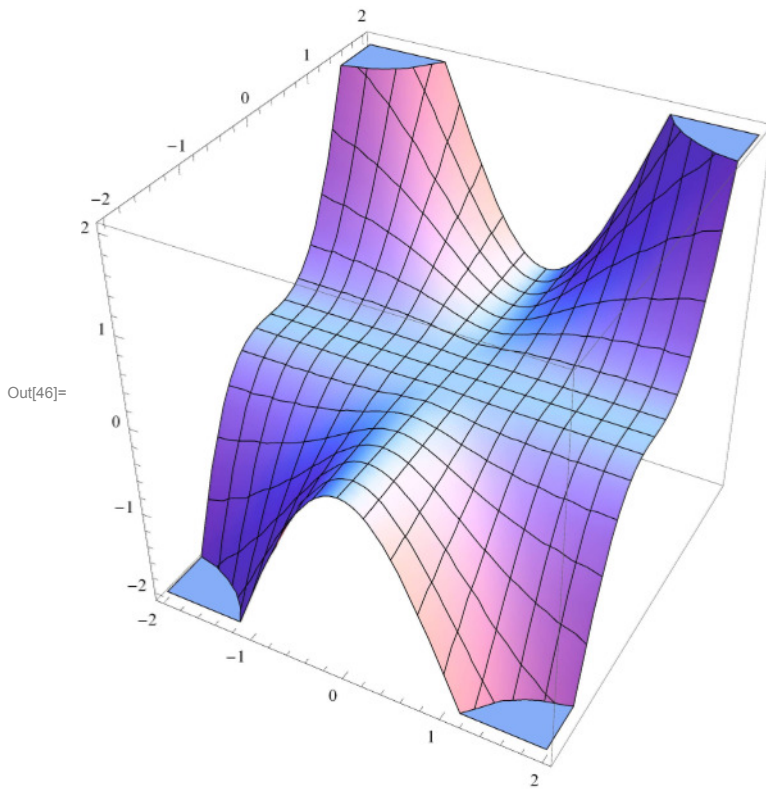
```
In[44]:= Plot3D[(x * y^3) / (x^2 + y^2), {x, -5, 5}, {y, -5, 5}, BoxRatios -> {1, 1, 1}]
```



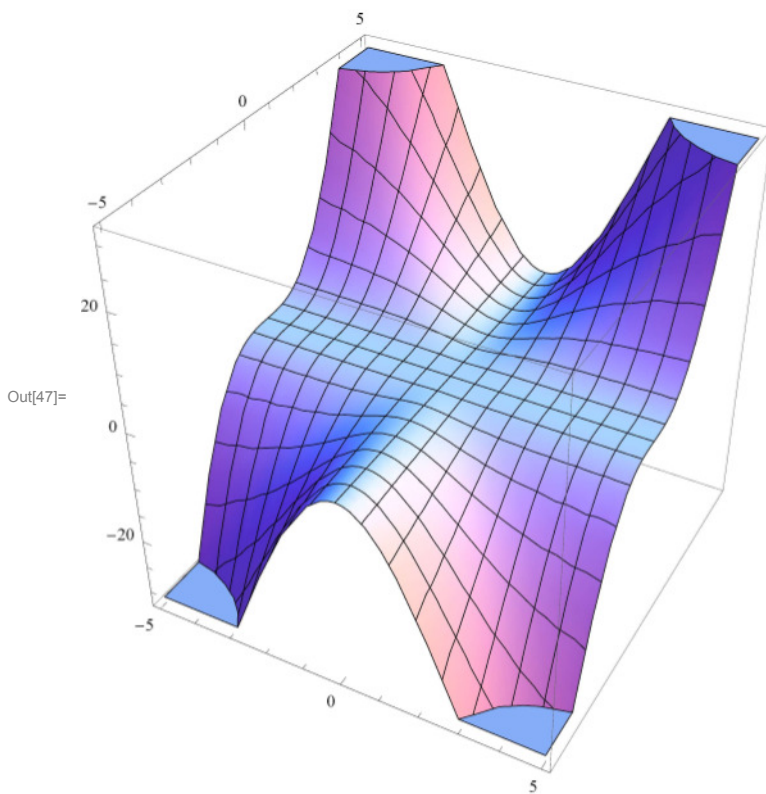
```
In[45]:= Plot3D[(x * y^3) / (x^2 + y^2), {x, -0.1, 0.1}, {y, -0.1, 0.1}, BoxRatios -> {1, 1, 1}]
```



```
In[46]:= Plot3D[(x^2 * y^3) / (x^2 + y^2), {x, -2, 2}, {y, -2, 2}, BoxRatios -> {1, 1, 1}]
```



```
In[47]:= Plot3D[(x^2 * y^3) / (x^2 + y^2), {x, -5, 5}, {y, -5, 5}, BoxRatios -> {1, 1, 1}]
```



```
In[48]= Plot3D[(x^2 * y^3) / (x^2 + y^2),  
  {x, -0.1, 0.1}, {y, -0.1, 0.1}, BoxRatios -> {1, 1, 1}]
```

Out[48]=

