

Feuille 6

Sofia JIJON

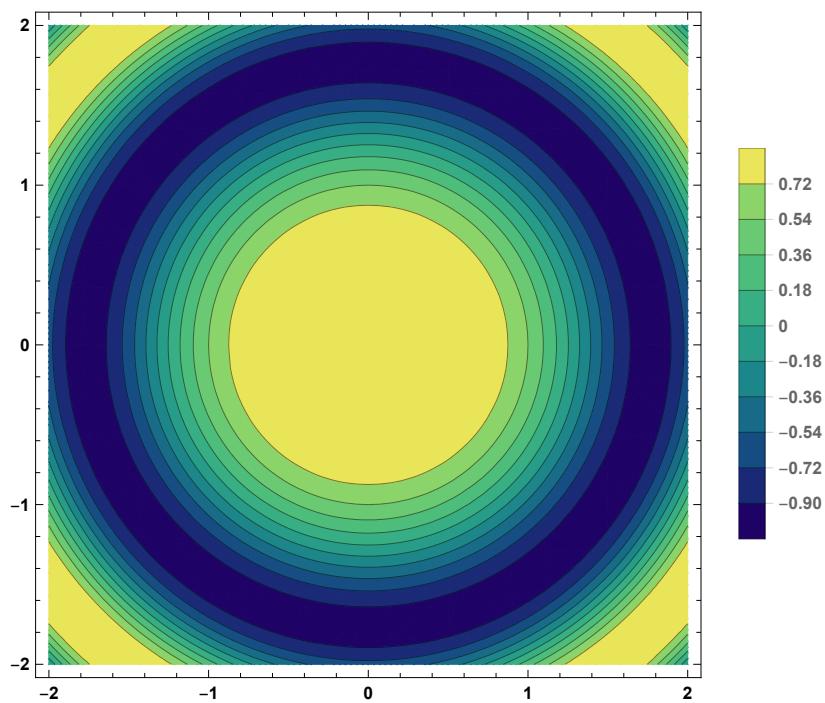
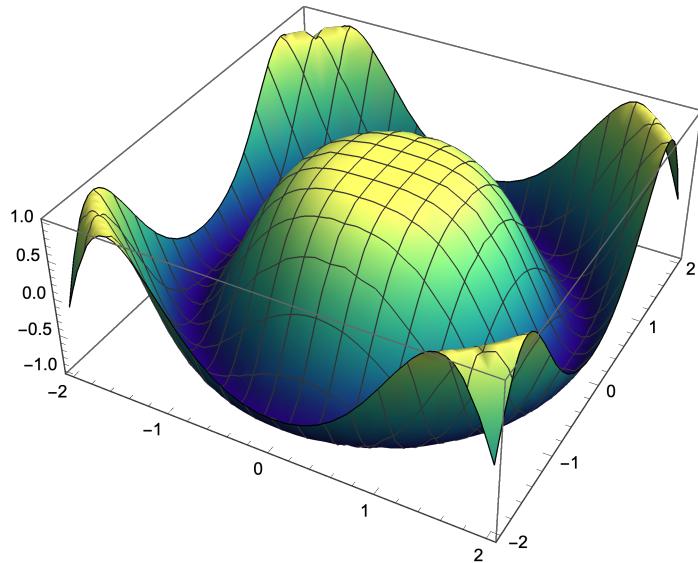
29 Novembre 2019

LU1MA001 - Groupe BGC 12.6

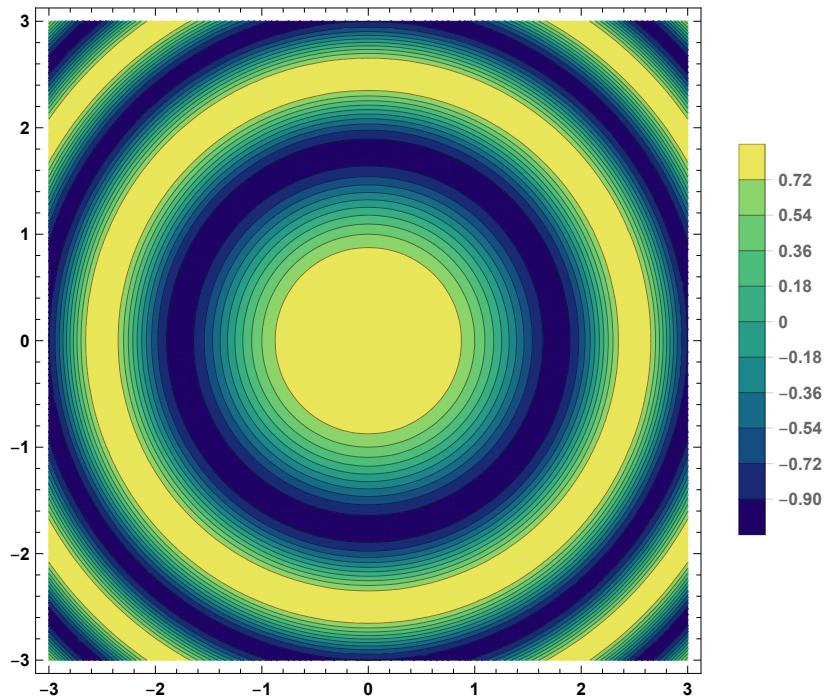
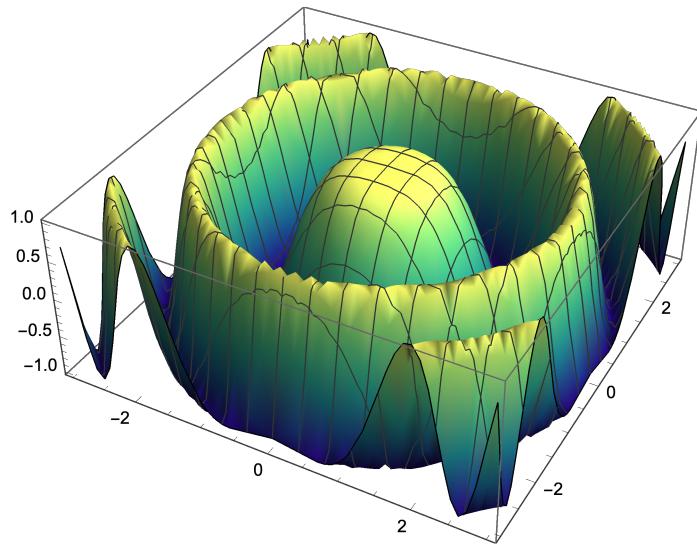
Figures Exercice 1

$$h(x,y) = \cos(x^2 + y^2)$$

```
L = 2;
Plot3D[Cos[x^2 + y^2], {x, -L, L},
{y, -L, L}, ColorFunction -> "BlueGreenYellow"]
ContourPlot[Cos[x^2 + y^2], {x, -L, L}, {y, -L, L}, Contours -> 10,
PlotLegends -> Automatic, ColorFunction -> "BlueGreenYellow"]
```



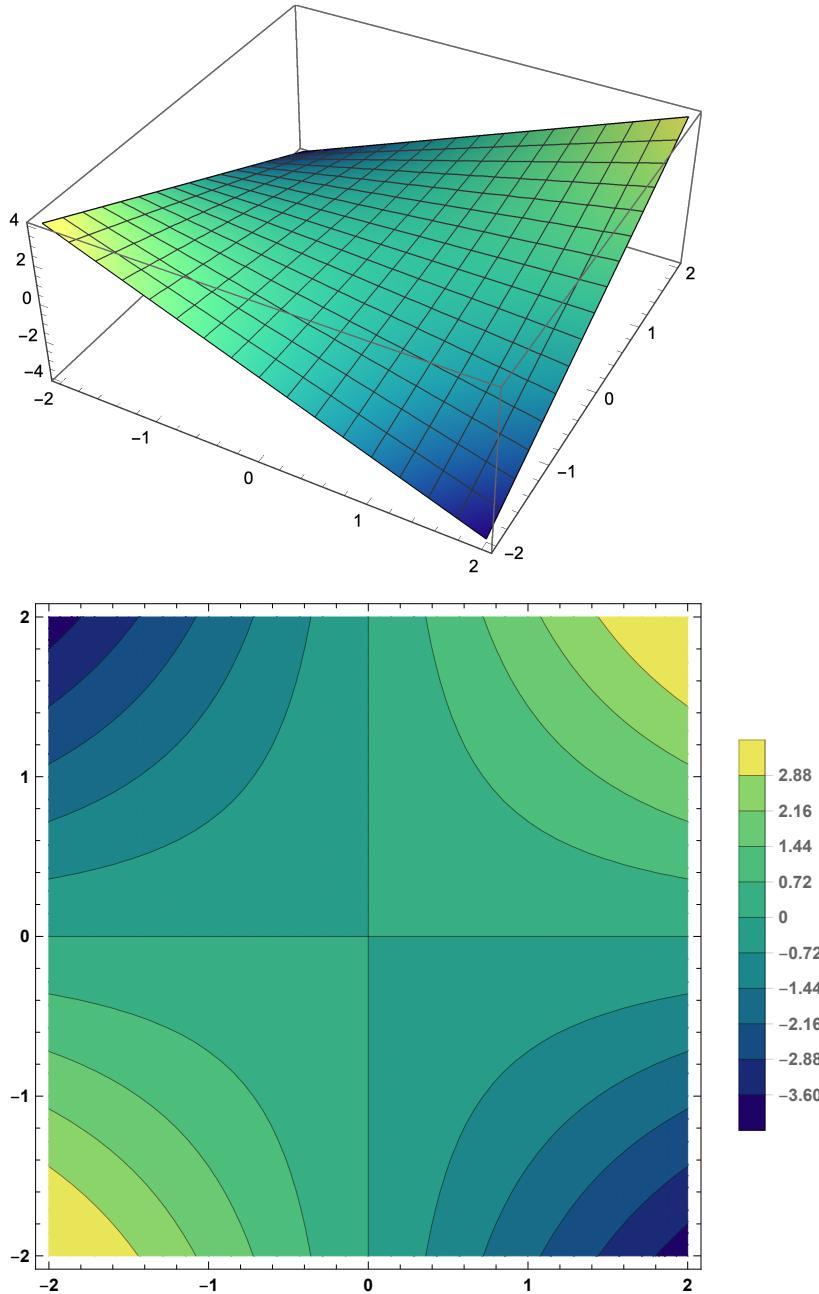
```
L = 3;
Plot3D[Cos[x^2 + y^2], {x, -L, L},
{y, -L, L}, ColorFunction -> "BlueGreenYellow"]
ContourPlot[Cos[x^2 + y^2], {x, -L, L}, {y, -L, L}, Contours -> 10,
PlotLegends -> Automatic, ColorFunction -> "BlueGreenYellow"]
```



Figures Exercice 2

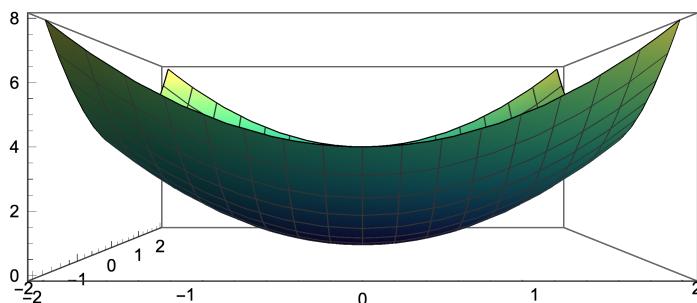
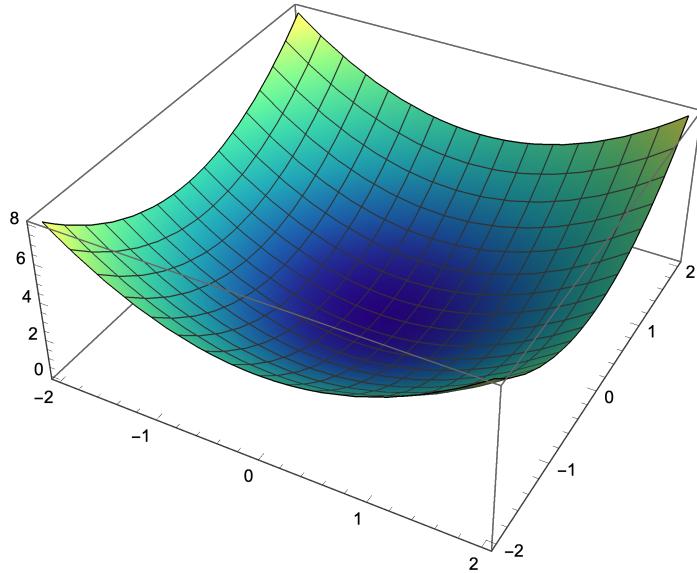
$$f_1(x,y) = xy$$

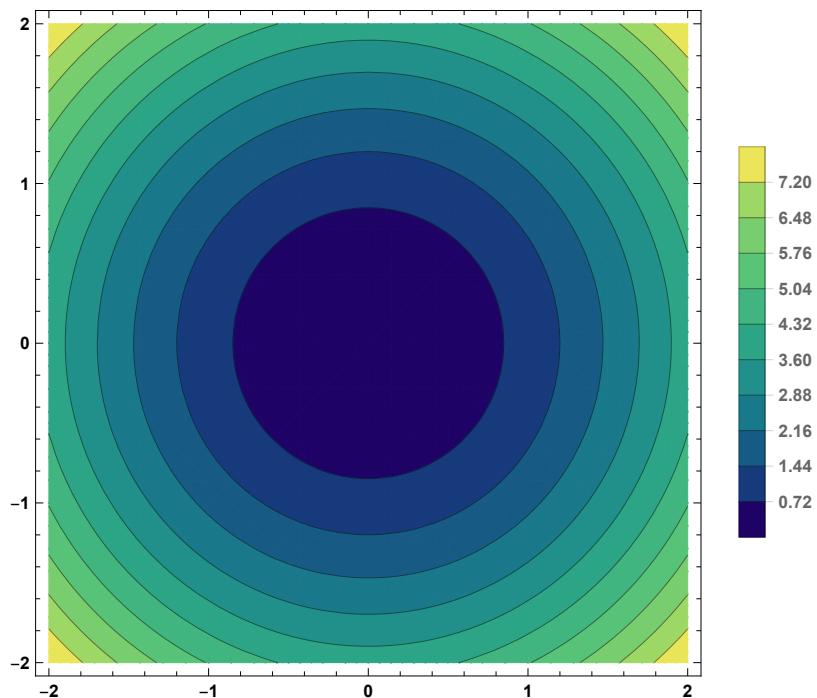
```
L = 2;
Plot3D[x y, {x, -L, L}, {y, -L, L}, ColorFunction -> "BlueGreenYellow"]
ContourPlot[x y, {x, -L, L}, {y, -L, L}, Contours -> 10,
PlotLegends -> Automatic, ColorFunction -> "BlueGreenYellow"]
```



$$f_2(x,y) = x^2 + y^2$$

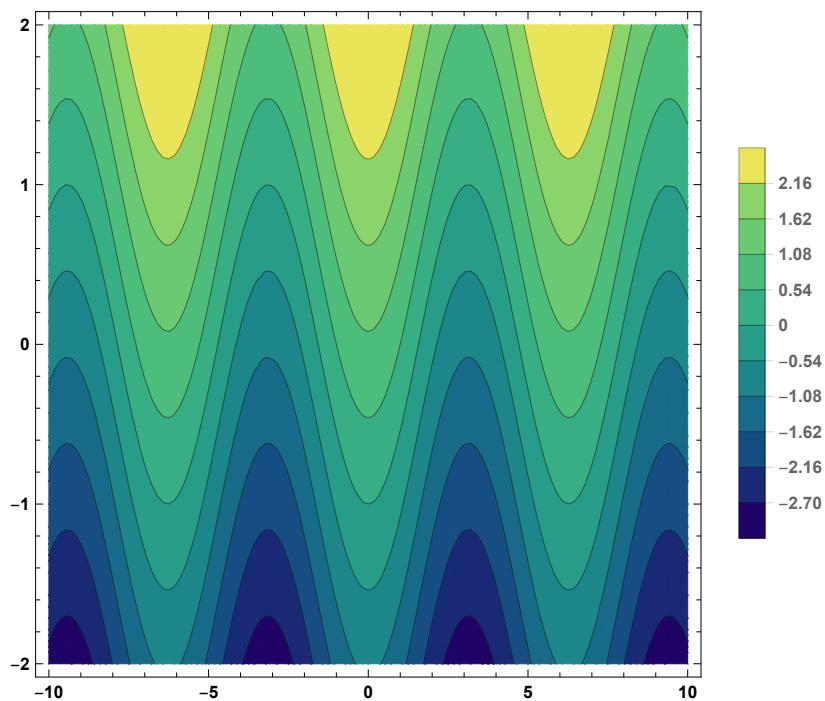
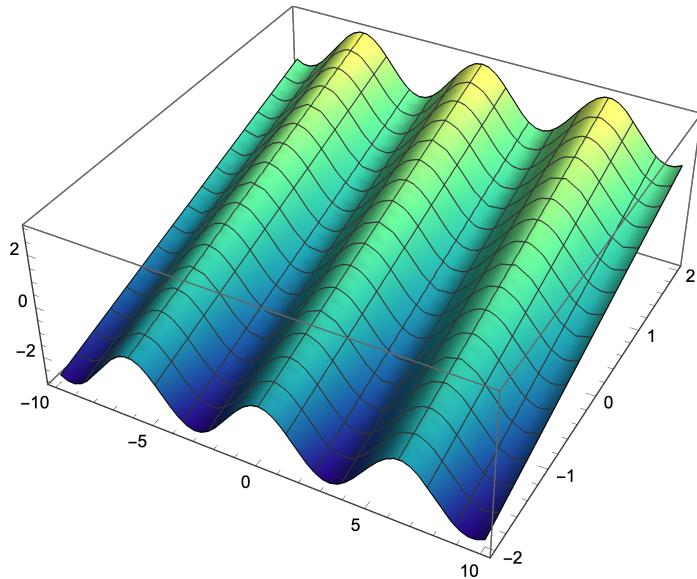
```
L = 2;
Plot3D[x^2 + y^2, {x, -L, L}, {y, -L, L}, ColorFunction → "BlueGreenYellow"]
Plot3D[x^2 + y^2, {x, -L, L}, {y, -L, L},
ColorFunction → "BlueGreenYellow", ViewPoint → Front]
ContourPlot[x^2 + y^2, {x, -L, L}, {y, -L, L}, Contours → 10,
PlotLegends → Automatic, ColorFunction → "BlueGreenYellow"]
```





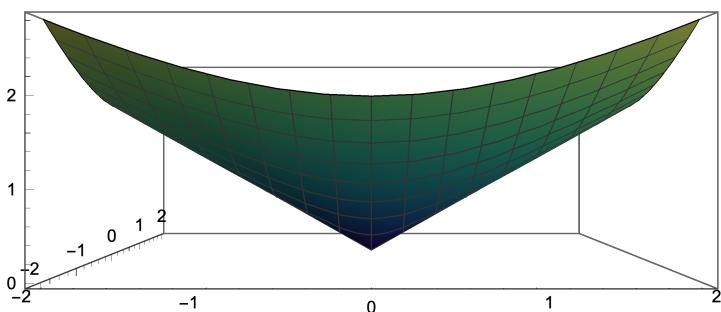
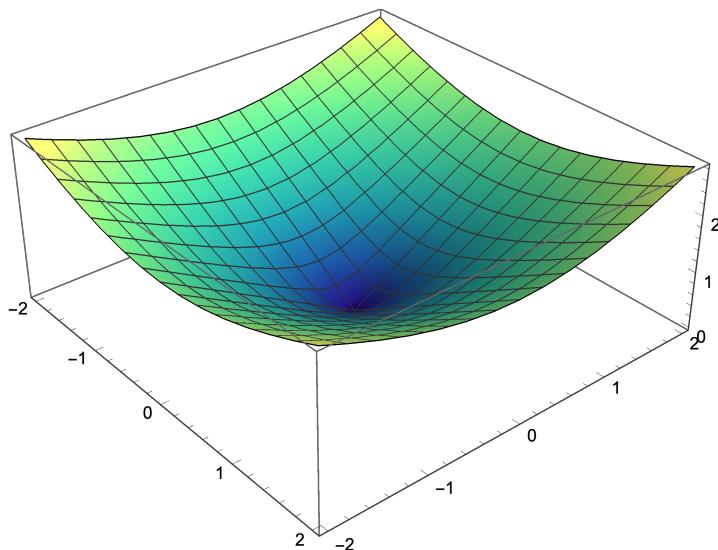
$$f_3(x,y) = \cos(x) + y$$

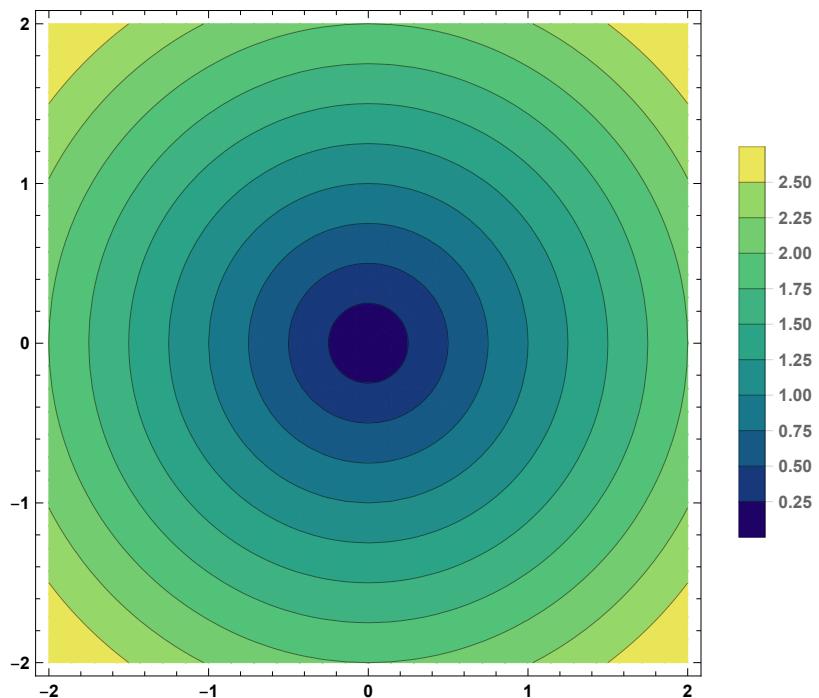
```
L = 2;  
Plot3D[Cos[x] + y, {x, -5 L, 5 L}, {y, -L, L}, ColorFunction → "BlueGreenYellow"]  
ContourPlot[Cos[x] + y, {x, -5 L, 5 L}, {y, -L, L}, Contours → 10,  
PlotLegends → Automatic, ColorFunction → "BlueGreenYellow"]
```



$$f_4(x,y) = \sqrt{x^2 + y^2}$$

```
L = 2;
Plot3D[Sqrt[x^2 + y^2], {x, -L, L},
{y, -L, L}, ColorFunction -> "BlueGreenYellow"]
Plot3D[Sqrt[x^2 + y^2], {x, -L, L}, {y, -L, L},
ColorFunction -> "BlueGreenYellow", ViewPoint -> Front]
ContourPlot[Sqrt[x^2 + y^2], {x, -L, L}, {y, -L, L}, Contours -> 10,
PlotLegends -> Automatic, ColorFunction -> "BlueGreenYellow"]
```





$$f_5(x,y) = x^2 - y^2$$

```
L = 2;  
Plot3D[x^2 - y^2, {x, -L, L}, {y, -L, L}, ColorFunction → "BlueGreenYellow"]  
ContourPlot[x^2 - y^2, {x, -L, L}, {y, -L, L}, Contours → 10,  
PlotLegends → Automatic, ColorFunction → "BlueGreenYellow"]
```

