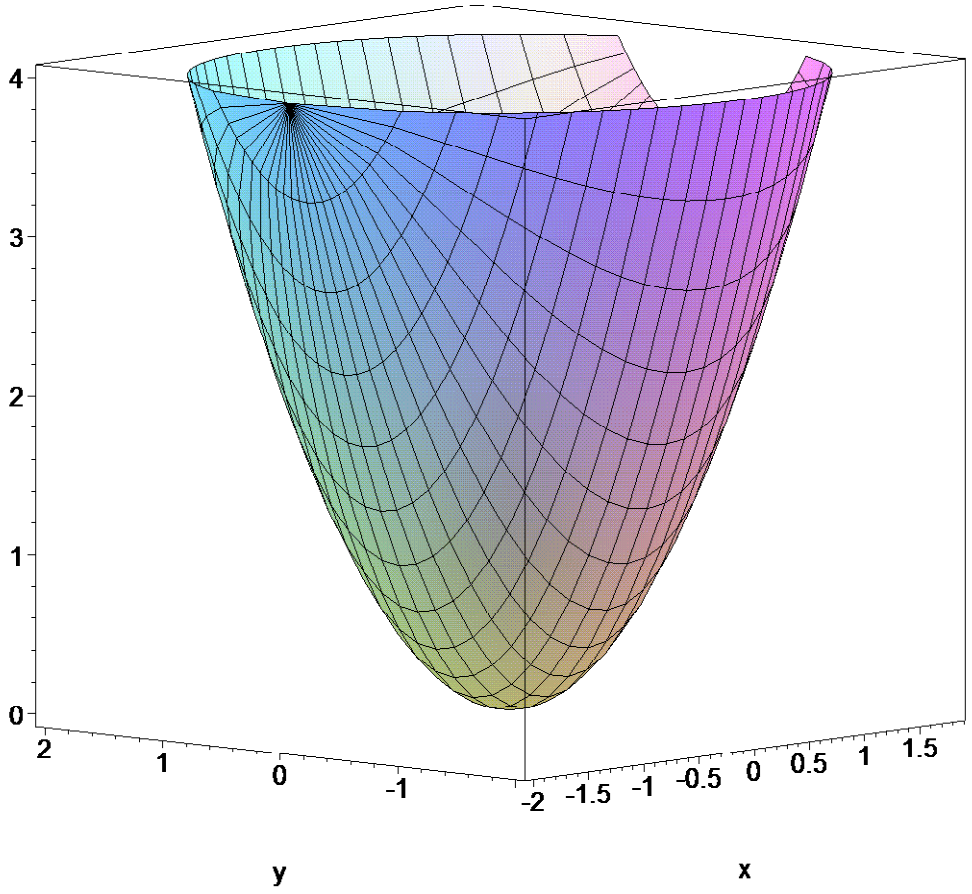
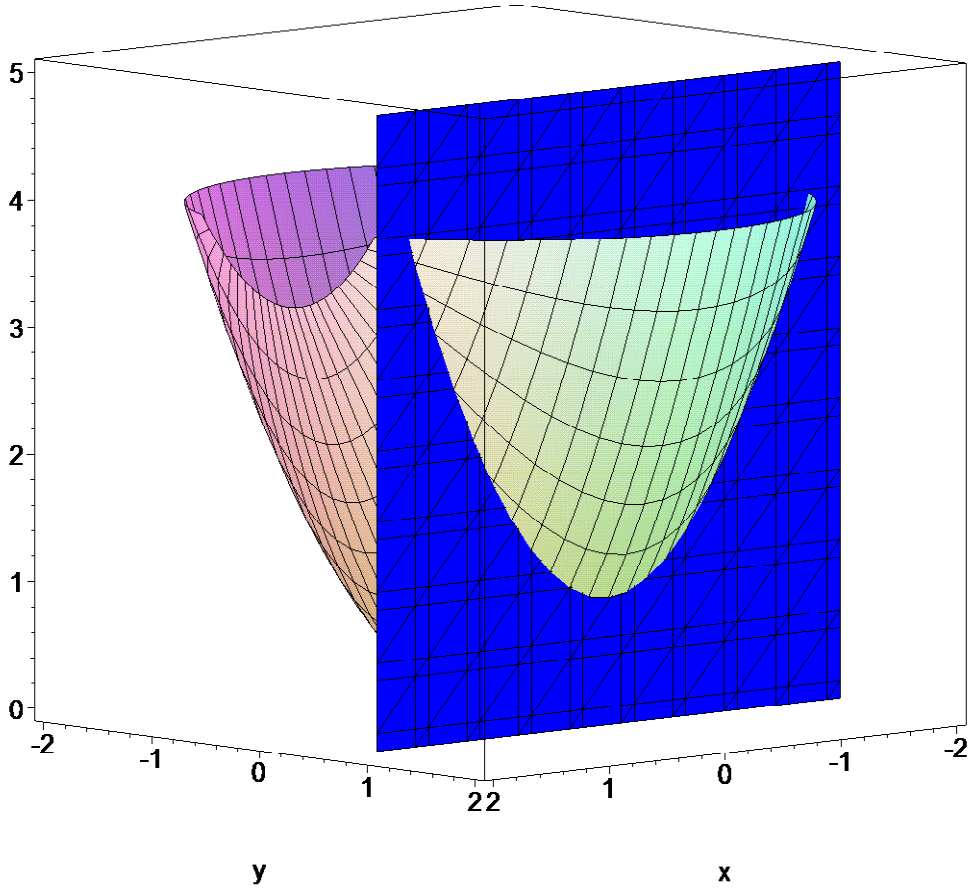
```
> with(plots):
> a:=plot3d(x^2 + y^2 ,
  x=-2..2,y=-sqrt(4-x^2)..sqrt(4-x^2),axes=bo
  xed):
> display(a);
```

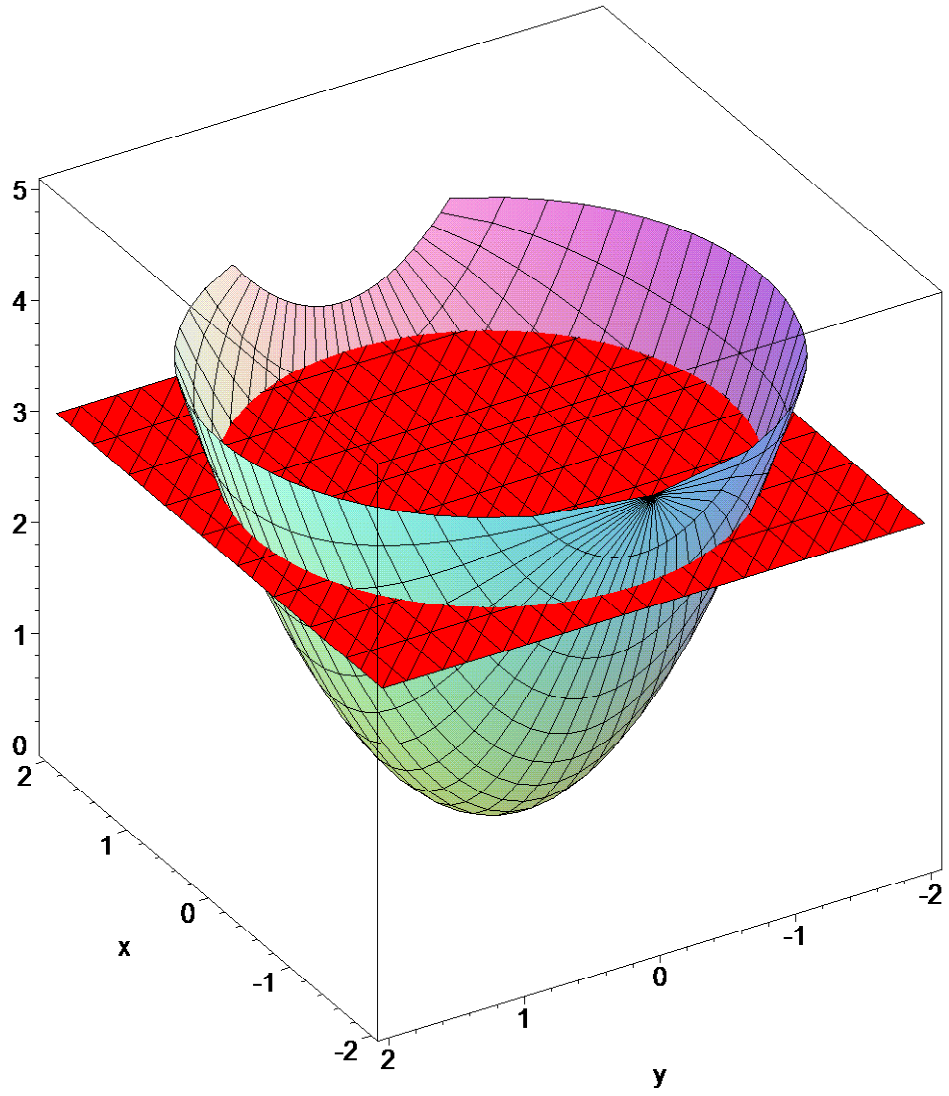



```
> b:=implicitplot3d(y=1,x=-2..2,y=-2..2,z=0..
  5,color=blue):
```

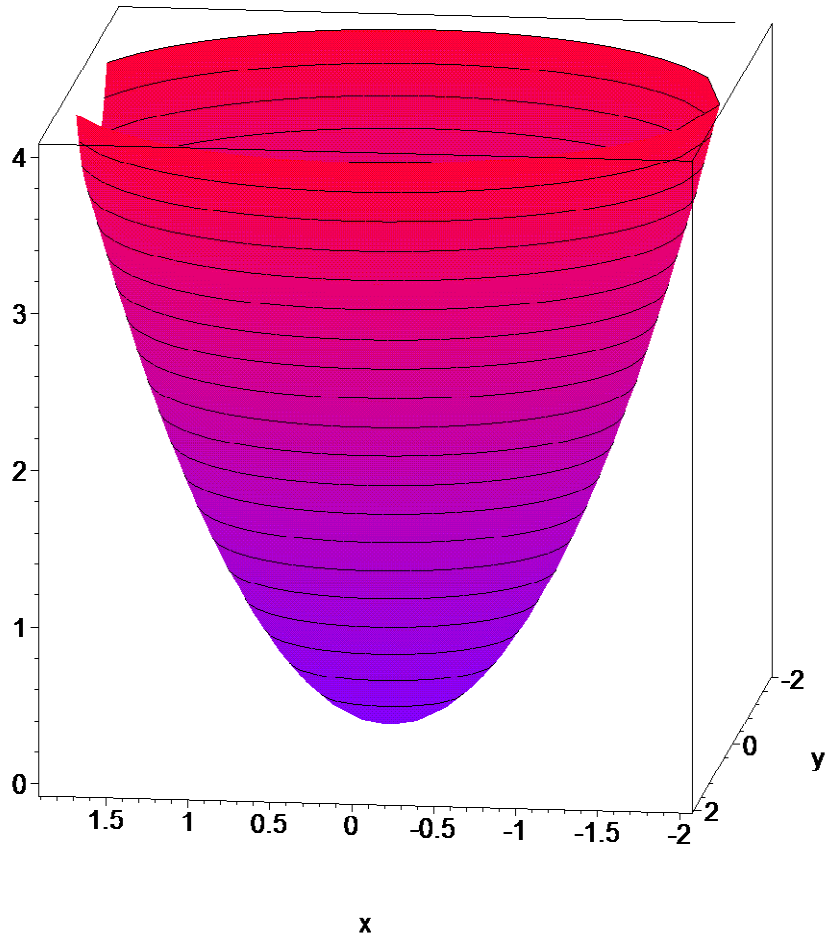
```
> display(a,b);
```




```
> c:=implicitplot3d(z=3,x=-2..2,y=-2..2,z=0..
  5,color=red):
> display(a,c);
```



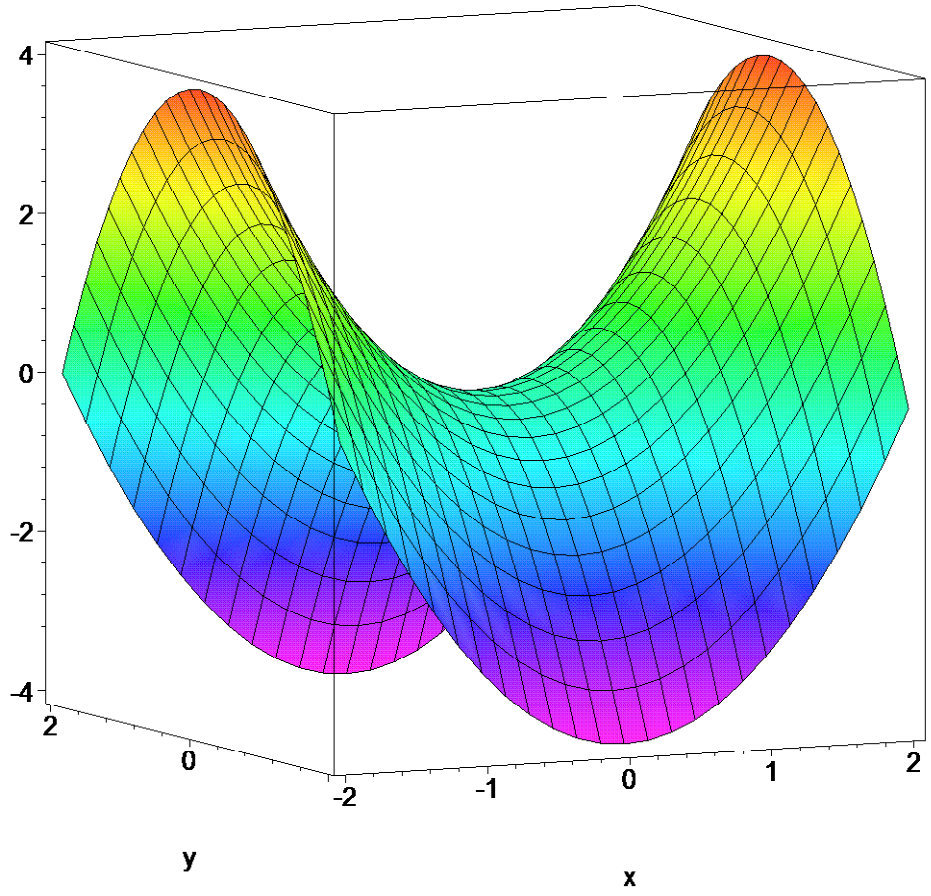

```
> display(a,style=patchcontour,shading=z);
```



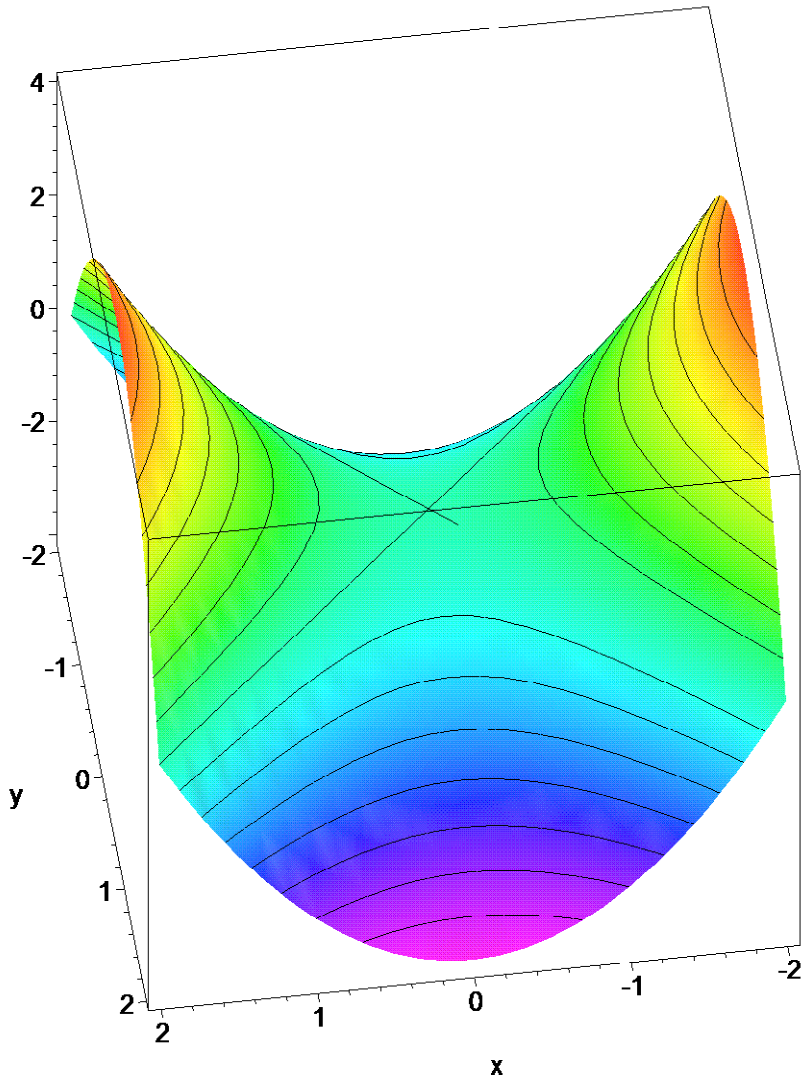
Saddle

```
> f := (x,y) -> x^2 - y^2;
> plot3d(f(x,y), x=-2..2, y=-2..2, axes=BOX,
  shading=ZHUE);
```

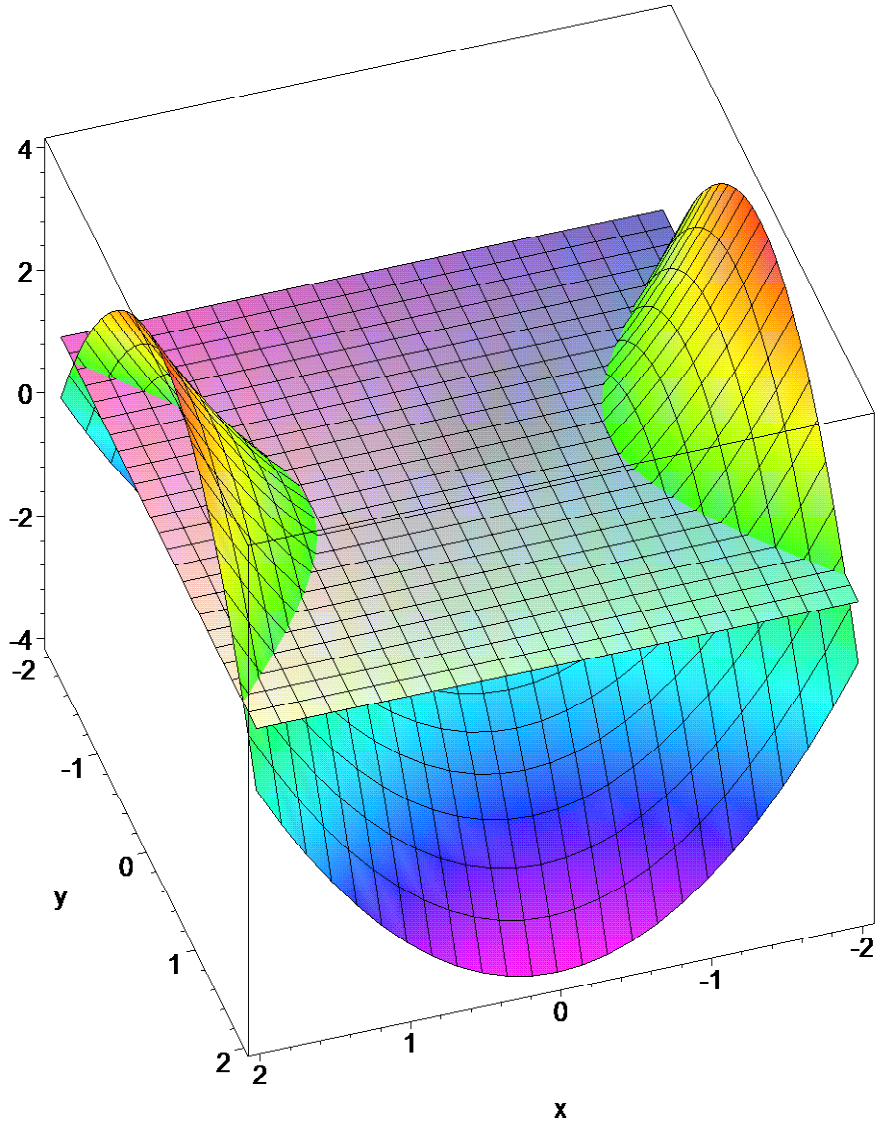
$$f := (x, y) \to x^2 - y^2$$



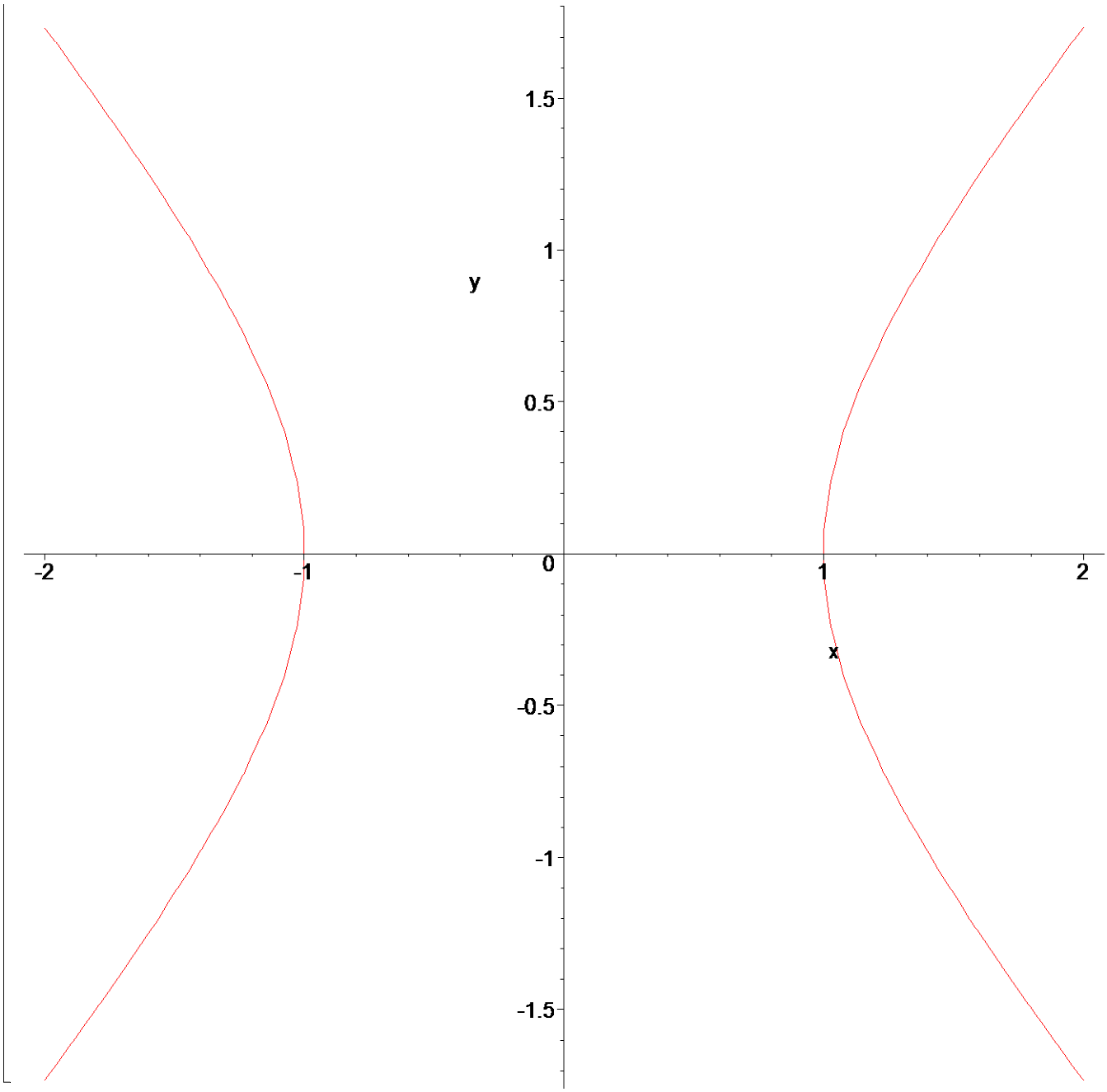

```
> plot3d(f(x,y), x=-2..2, y=-2..2, axes=BOX,
  shading=ZHUE, style=patchcontour);
```



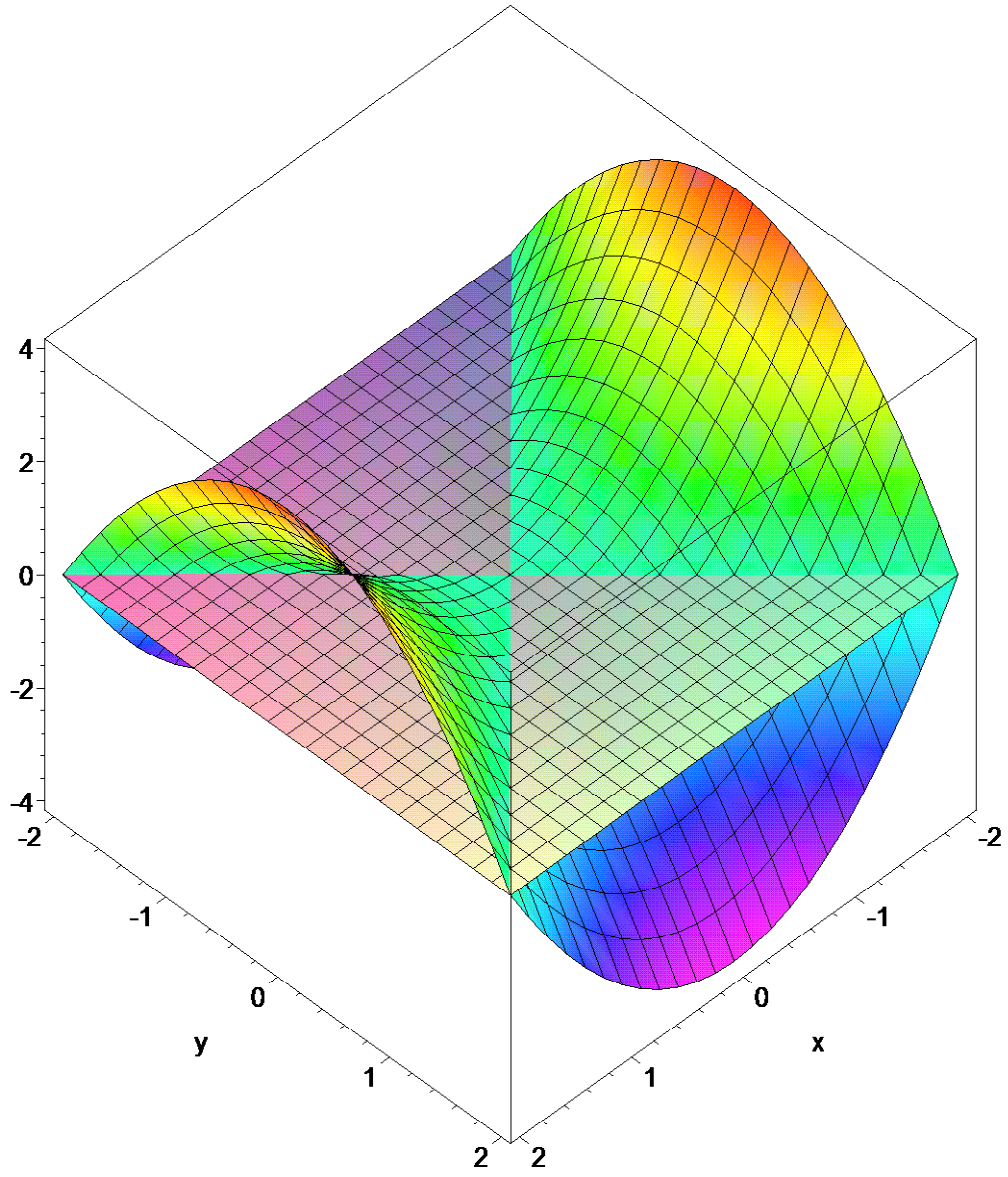

```
> p1:=plot3d(1,x=-2..2,y=-2..2): # The plane
  z=1
> g:=plot3d(f(x,y), x=-2..2, y=-2..2,
  axes=BOX, shading=ZHUE, style=patch): # the
  orginal graph
> display({p1,g});
```



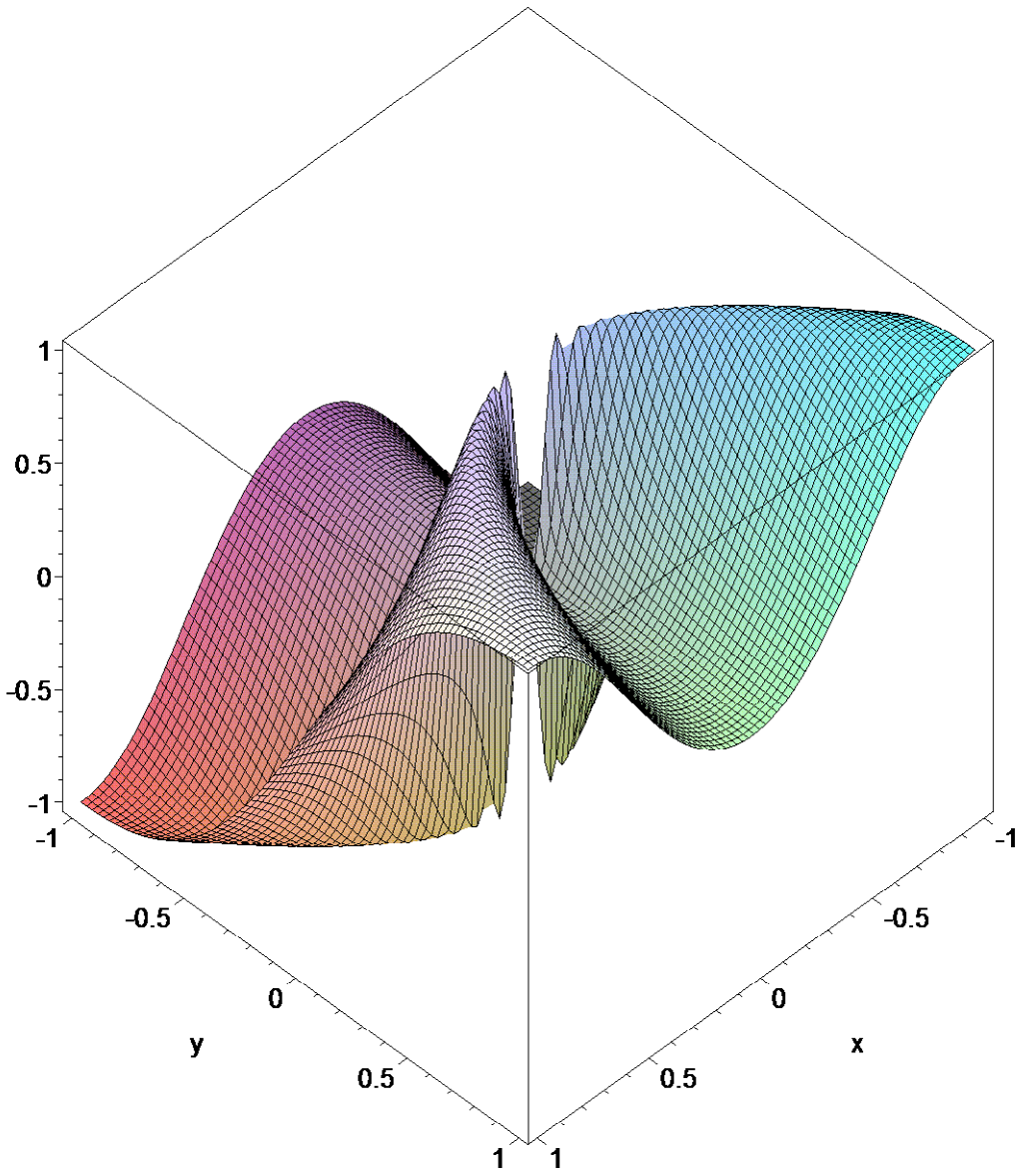

```
> implicitplot(f(x,y)=1,x=-2..2,y=-2..2); #
  The level curve f = 1. Relate to the above
  graph
```




```
> p0:=plot3d(0,x=-2..2,y=-2..2):
> display({p0,g});
```




```
> plot3d(2*x^2*y/(x^4 +
  y^2),x=-1..1,y=-1..1,grid=[80,80],axes=boxe
  d);
```


1
0.5
0
-0.5
-1
-1
-0.5
0
0.5
1
y
1
0.5
0
-0.5
-1
x

>