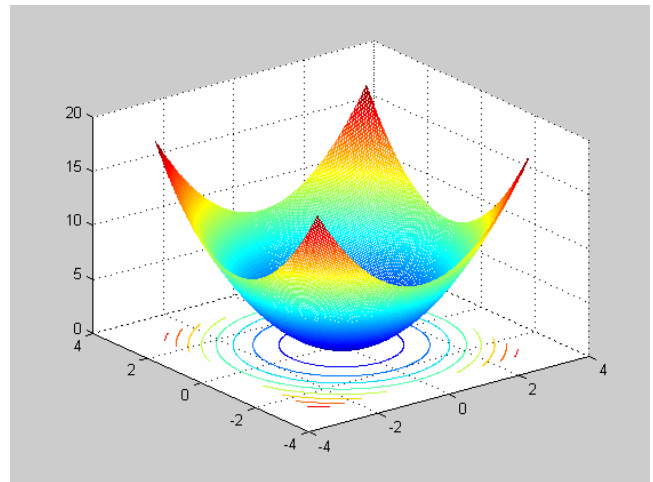


## Plochy druhého stupně

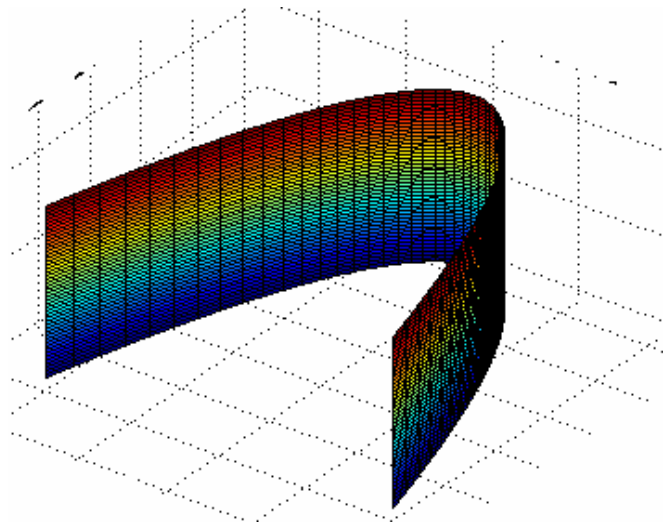
- $z = x^2 + y^2$

```
>> [x,y]=meshgrid(-3:0.025:3,-3:0.025:3);  
>> z=x.^2+y.^2;  
>> meshc(x,y,z);
```



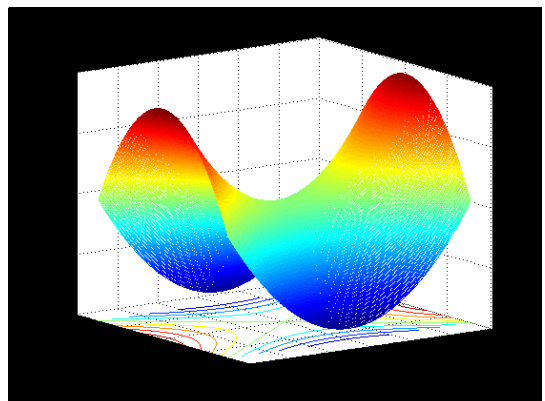
- $z = x^2$

```
>> ezgraph3('surf','t','t^2','s',[0 2 -1 1])
```

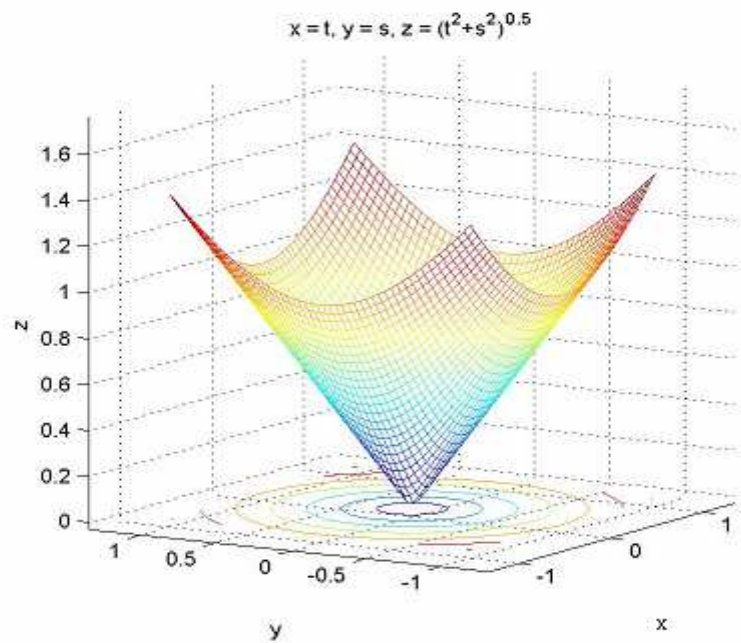


- $z = x^2 - y^2$

```
>> [x,y]=meshgrid(-3:0.025:3,-3:0.025:3);  
>> z=x.^2-y.^2;  
>> meshc(x,y,z);
```



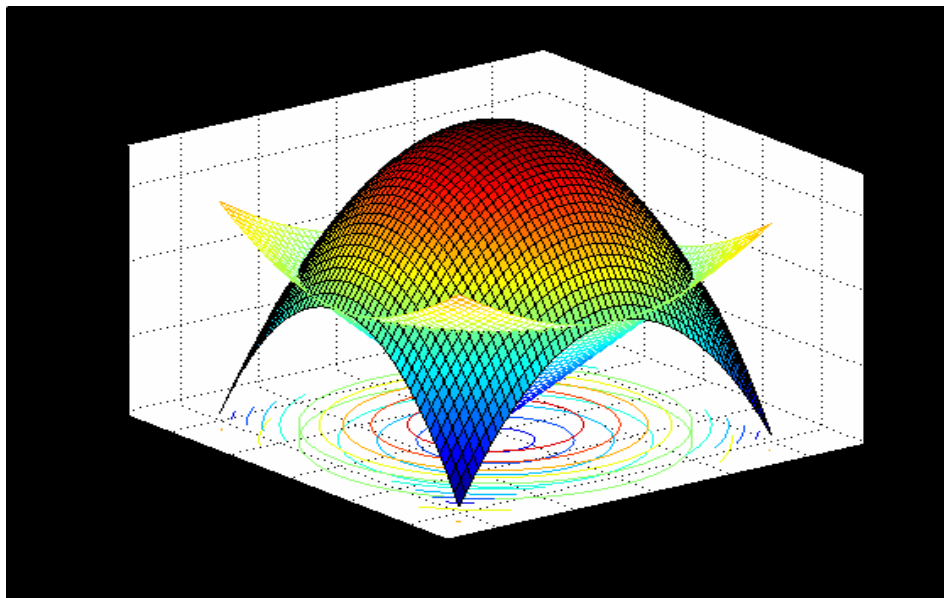
```
>> ezgraph3('meshc','t','s','(t^2+s^2)^(0.5)',[-1 1 -1 1]);
```



Príklad Znázorníme teleso ohraňované plochami:  $z = 2 - x^2 - y^2$  ,  $z = \sqrt{x^2 + y^2}$  .

Riešenie:

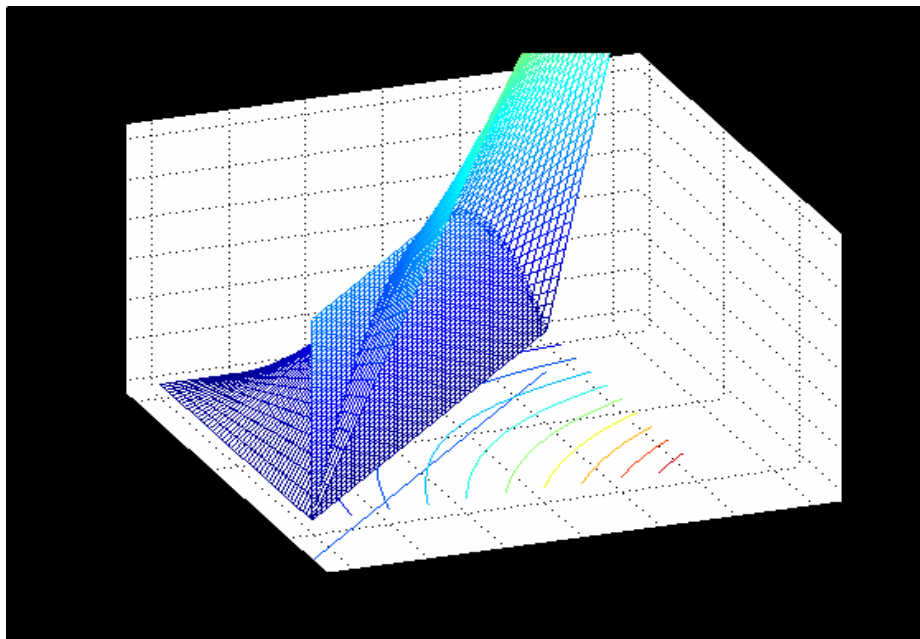
```
>> ezgraph3('surfc','t','s','2-t^2-s^2',[-1 1 -1 1]);  
>> hold on;  
>> ezgraph3('meshc','t','s','(t^2+s^2)^(0.5)',[-1 1 -1 1]);  
>> hold off;
```



Príklad Znázornime teleso ohraničené plochami:  $z = xy$ ,  $y = 1 - x$ ,  $z = 0$ .

Riešenie:

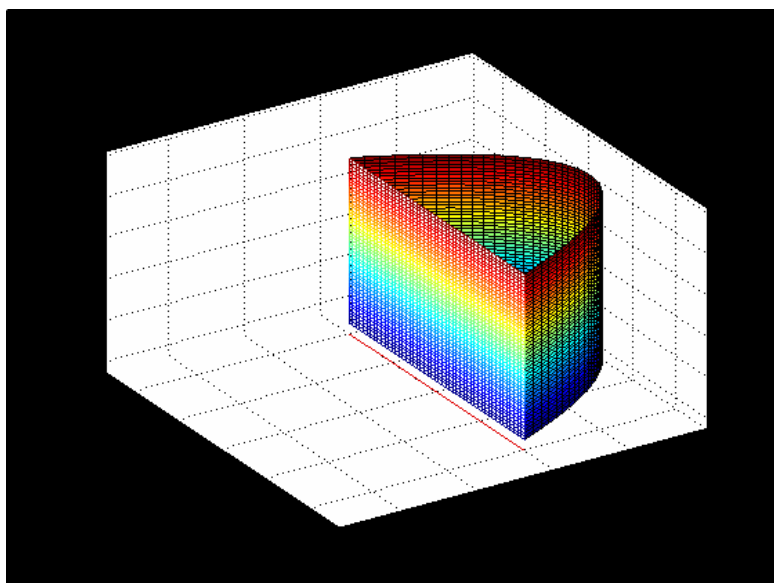
```
>> clear;  
>> ezgraph3('meshc','t','s','t*s',[0 1 0 1]);  
>> hold on;  
>> ezgraph3('meshc','t','1-t','s',[0 0.25 0 1]);  
>> hold off;
```



Príklad Znázornite teleso ohraničené plochami:  $y = x^2$ ,  $y = 1$ ,  $z = 0$ ,  $z = 2$ .

Riešenie:

```
>> clear;  
>> ezgraph3('surf','t','t^2','s',[0 2 -1 1]);  
>> hold on;  
>> ezgraph3('meshc','t','1','s',[0 2 -1 1]);  
>> hold off;
```



Niektoré ďalšie plochy sú uvedené v časti MA2.