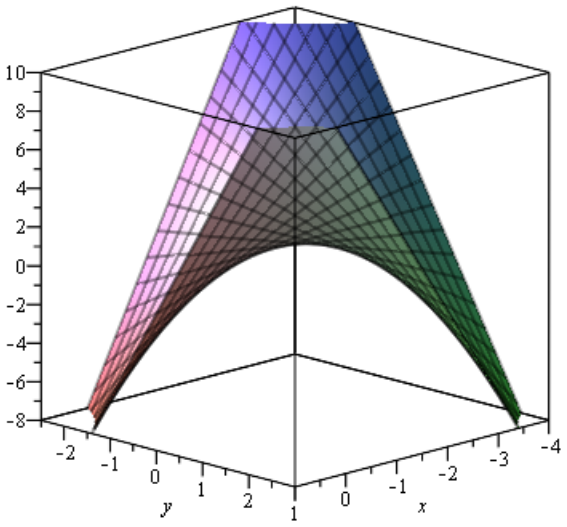
```
>
> restart; with(plots):
```

Pr. 0, soustava dvou lin. rovnic, jeden stacionární bod

$$z0 := 2\,x\,y - x + 3\,y$$

$$x = -\frac{3}{2},\ y = \frac{1}{2},\ sedlo$$

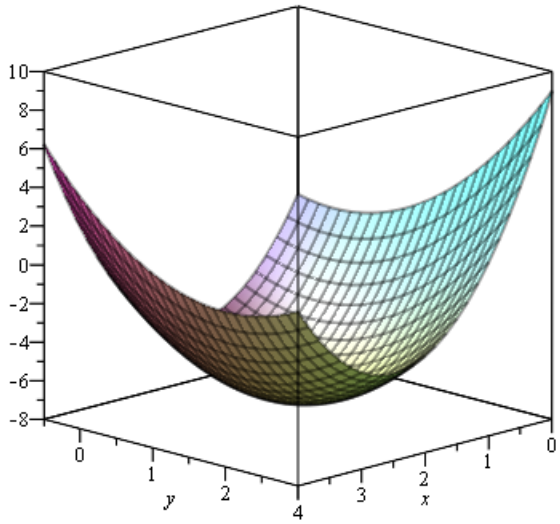



```
>
```

Pr. 1, soustava dvou lin. rovnic, jeden stacionární bod

$$z1 := 2\,x^2 + y^2 - x\,y - 7\,x$$

$$x = 2,\ y = 1,\ f_{\min} = -7$$

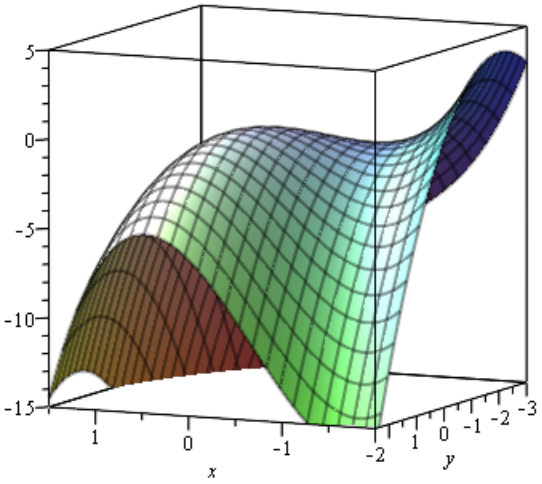


Pr. 2, soustava lin. a kvadr.rovnice, bez absol.lenu, dva stacion. body

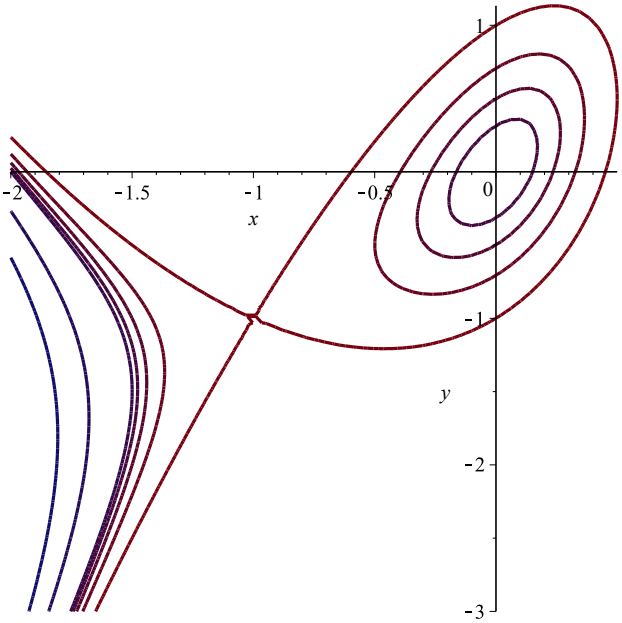
$$z2 := 2\,x\,y - 2\,x^3 - 4\,x^2 - y^2$$

$$x = 0,\ y = 0,\ f_{\max} = 0$$

$$x = -1,\ y = -1,\ \textit{sedlo}$$



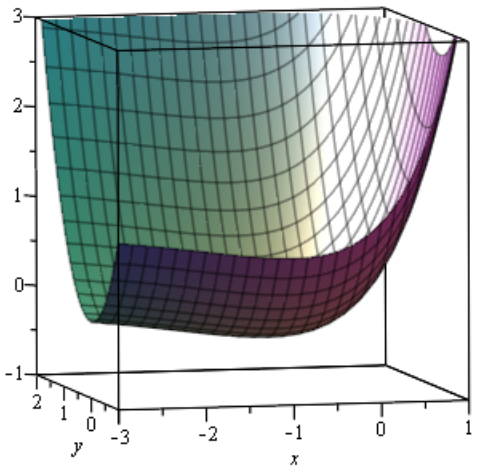
Izokivky



Pr. 3, dv samostatné rovnice (jedna lin., jedna s exp.), jeden stac. bod

$$z3 := x\,e^{x} + y^{2}$$

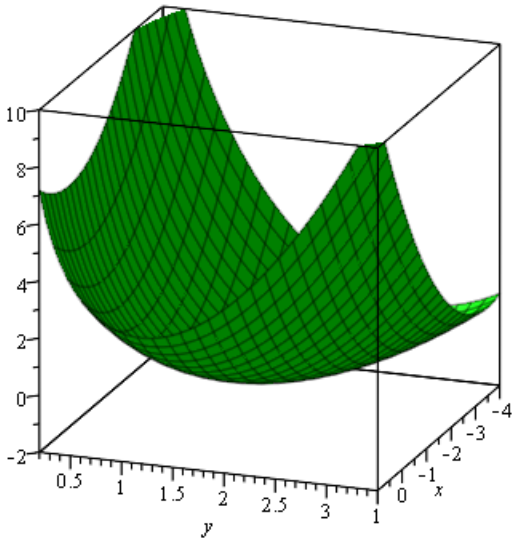
$$x = -1,\ y = 0,\ f_{\min} = -\frac{1}{e}$$



Pr. 4, jeden stacionární bod, POZOR: [2,-2] nepatí do def. oboru !

$$z4ZkA := 0.5\,x^2 + x\,y + y^2 - 4\ln(y)$$

$$x = -2,\ y = 2,\ f_{\min} = 2 - 4\ln(2)$$

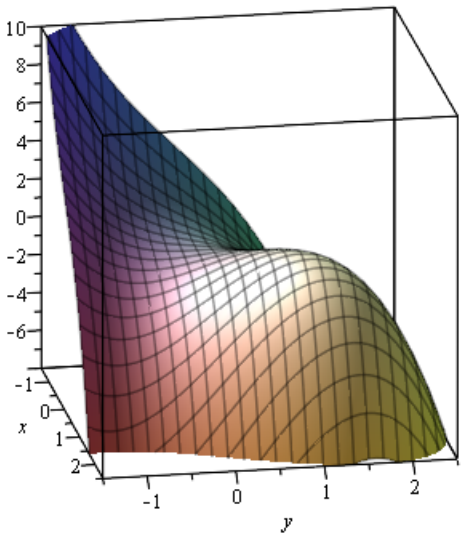


Pr. 5, soustava dvou kvadratických rovnic, dva stacion. body

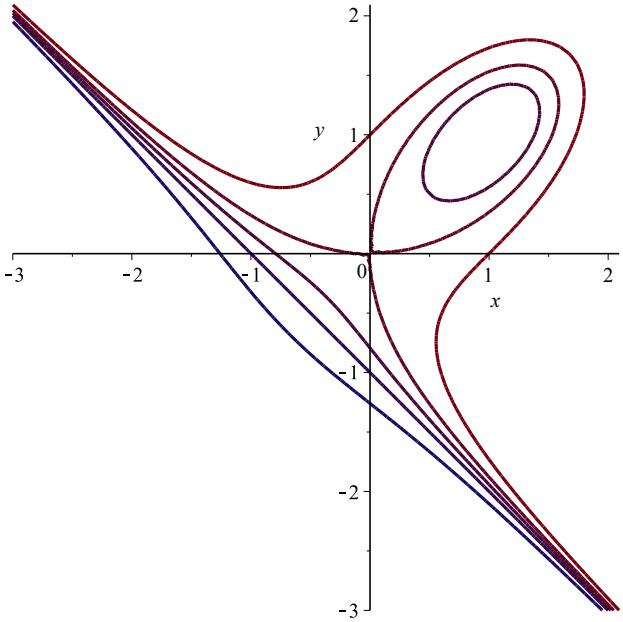
$$z5ZkA := 3\,x\,y - x^3 - y^3$$

$$x = 1,\ y = 1,\ f_{\max} = 1$$

$$x = 0,\ y = 0,\ sedlo$$



Izokivky

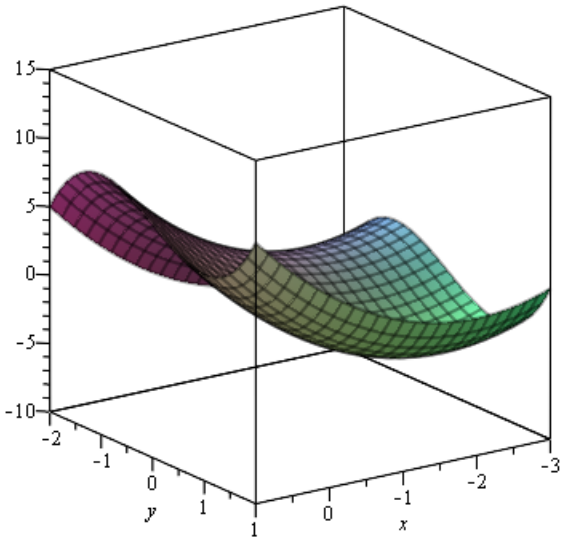


Pr. 6, dv samost. rovnice (lineární, kvadr.), dva stacion. body

$$z6 := x^2 + y^3 + 4x - 3y + 2$$

$$x = -2, y = 1, f_{\min} = -4$$

$$x = -2, y = -1, \textit{sedlo}$$



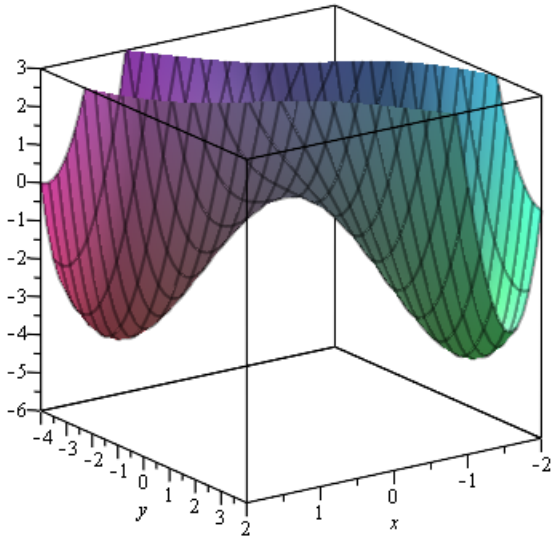
Pr. 7, ti stacionární body

$$z7 := x^4 + 4\,x\,y + y^2$$

$$x = \sqrt{2}\,,\ y = -2\,\sqrt{2}\,,\ f_{\min} = -4$$

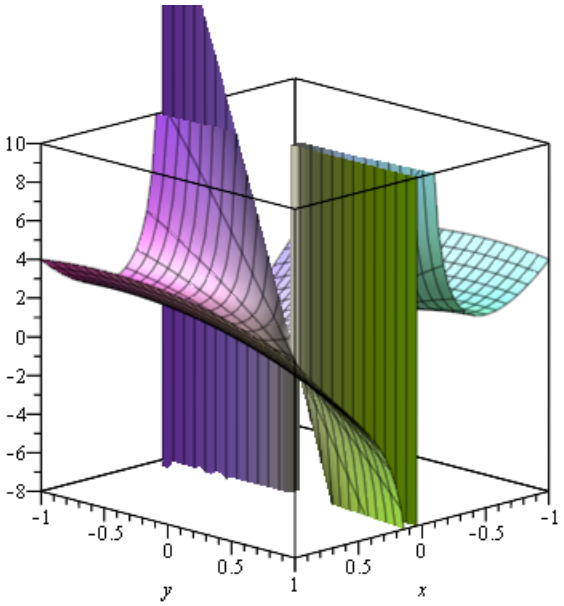
$$x = -\sqrt{2}\,,\ y = 2\,\sqrt{2}\,,\ f_{\min} = -4$$

$$x = 0,\ y = 0,\ \textit{sedlo}$$



Pr. 8, dva stacion. body:[1/2,-1], [-1/2, 1]. Oba jsou sedlové body, žádný extrém.

$$z8 := 4\,x^2 - y^2 - \frac{y}{x}$$



Pr. 9, jeden stacionární bod

$$z9 := y\sqrt{x} - y^2 - x + 9\,y$$

$$x = 9,\ y = 6,\ f_{\max} = 27$$