In[1]:=
```
dir = NotebookDirectory[];
```

In[2]:=
```
SetDirectory[dir];
```

In[3]:=
```
<< DynamickeSystemy.m
```

In[4]:=
```
Chemostat
```

Out[4]=

Chemostat

$$N'(t)=\alpha_1 \frac{C(t)}{1+C(t)}N(t)-N(t)$$

$$C'(t)=\alpha_2-C(t)-\frac{C(t)}{1+C(t)}N(t)$$

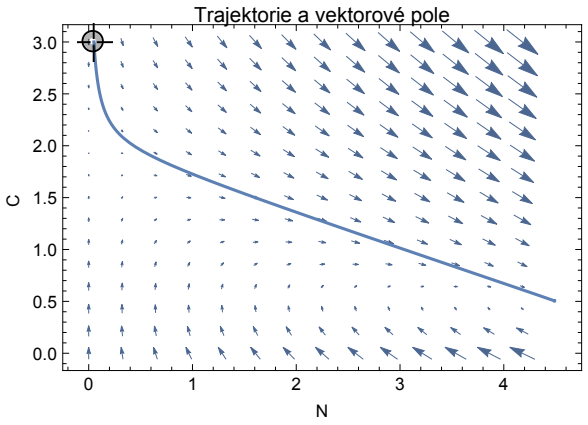
α_1

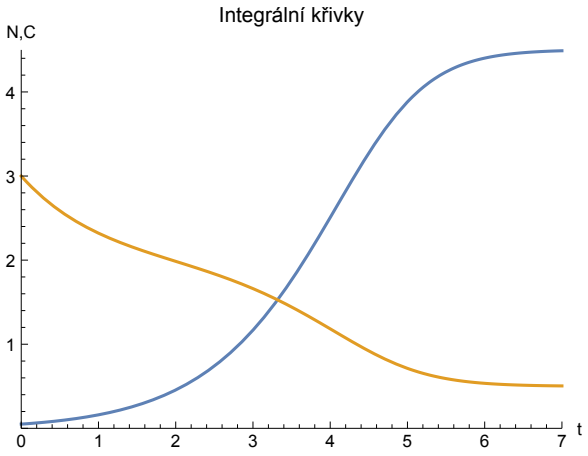
α_2

t1

Nmax

Cmax





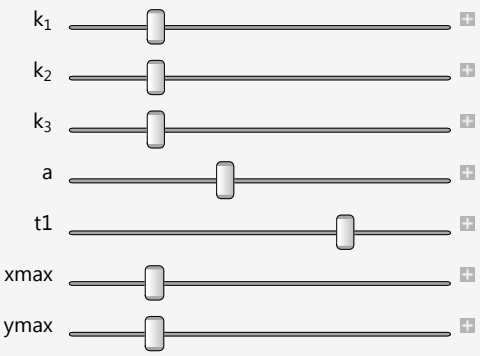
In[5]:= **BZ**

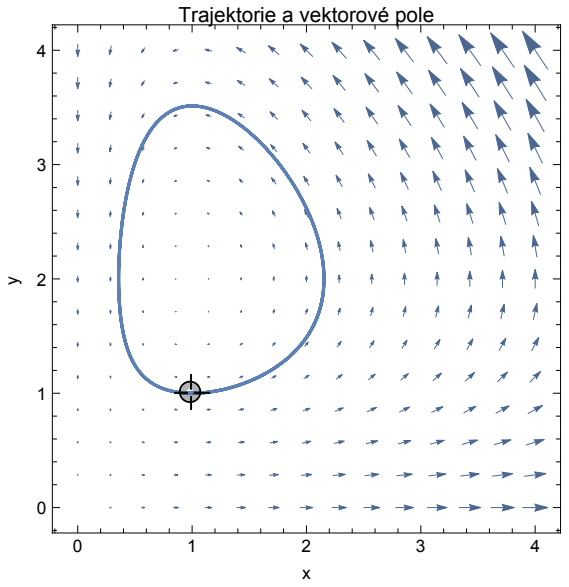
Out[5]=

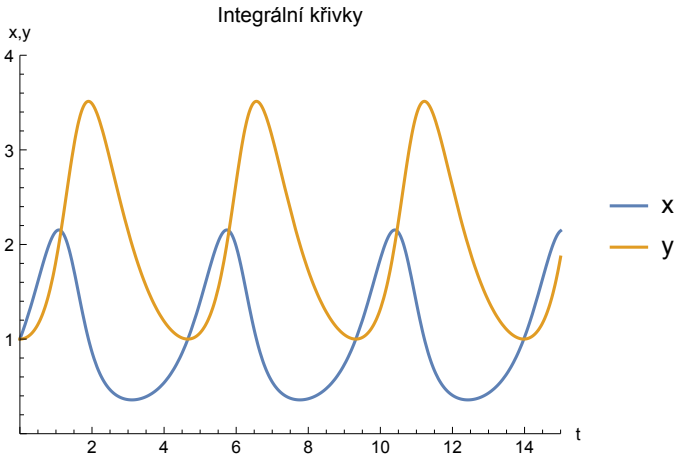
Bělousov–Žabotínského reakce

$x'(t)=a\,k_1\,x(t)-k_2 x(t)y(t)$

$y'(t)==k_2\,x(t)y(t)-k_3 y(t)$







In[6]:= **Sch**

Schnakenbergův systém

$x'(t)=x^2(t)y(t)-x(t)$

$y'(t)==a-x^2(t)y(t)$

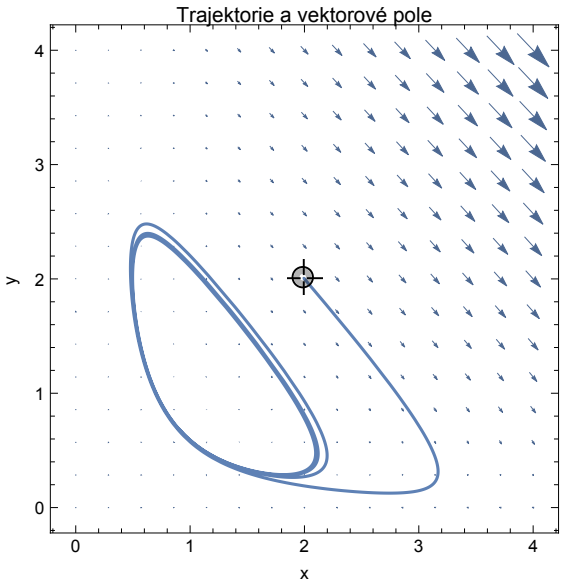
a

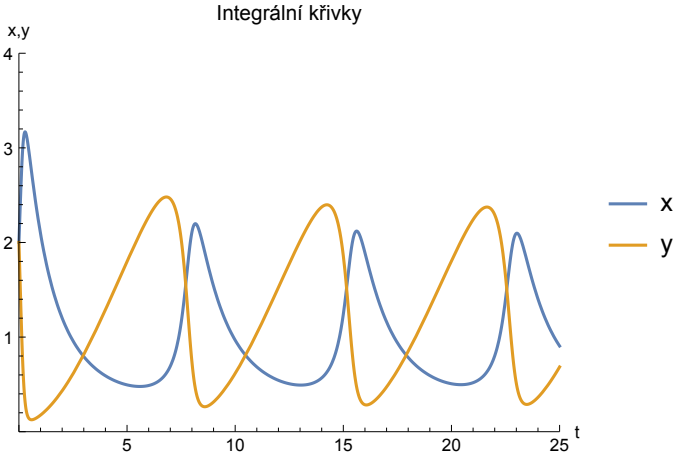
t1

xmax

ymax

Out[6]=





In[7]:= **SIR**

Out[7]=

SIR model

$S'(t)=-\beta\ S(t)\ I(t)$

$I'(t)==\beta\ S(t)\ I(t)-v\ I(t)$

$R'(t)=v\ I(t)$

N

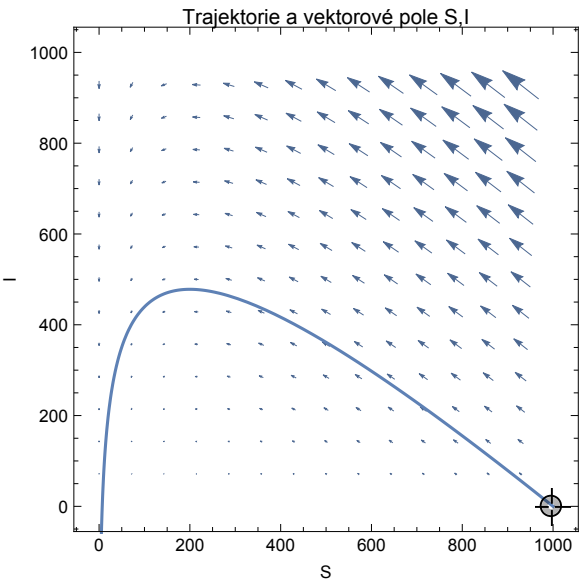
β

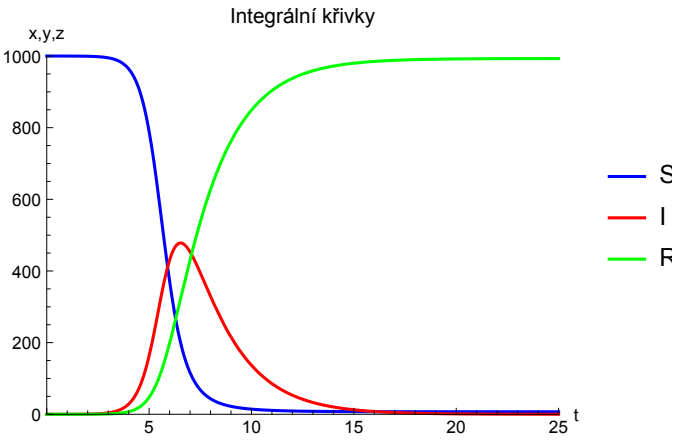
v

t1

Smax

Imax





5. $=R_0$

In[8]:= **SIRS**

Out[8]=

SIR model

$S'(t) = -\beta\ S(t)\ I(t)$

$I'(t) == \beta\ S(t)\ I(t) - v\ I(t)$

$R'(t) = v\ I(t)$

N

β

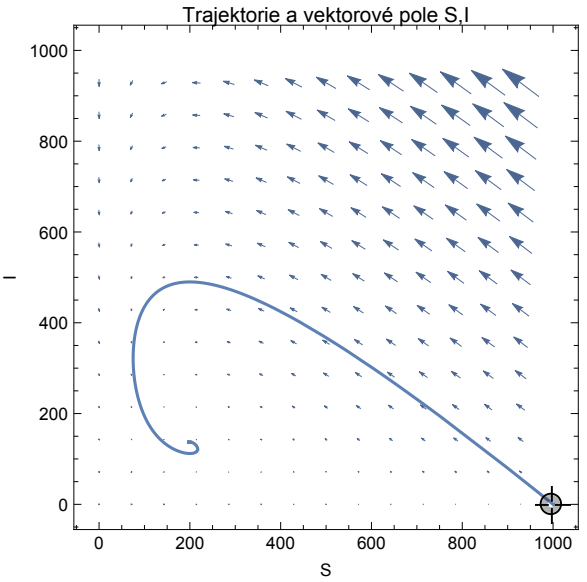
v

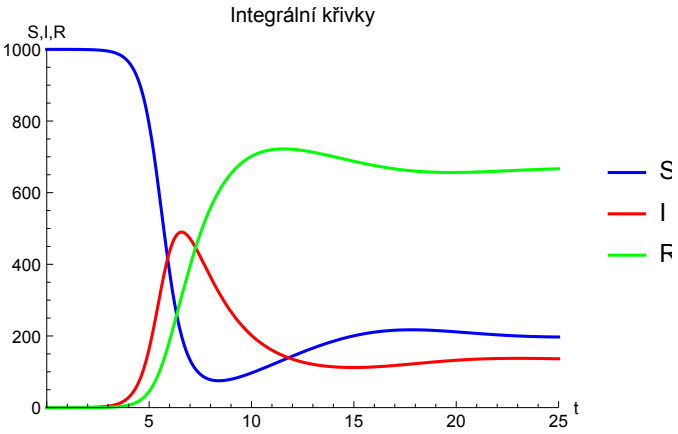
γ

t1

Smax

Imax





5. $=R_0$