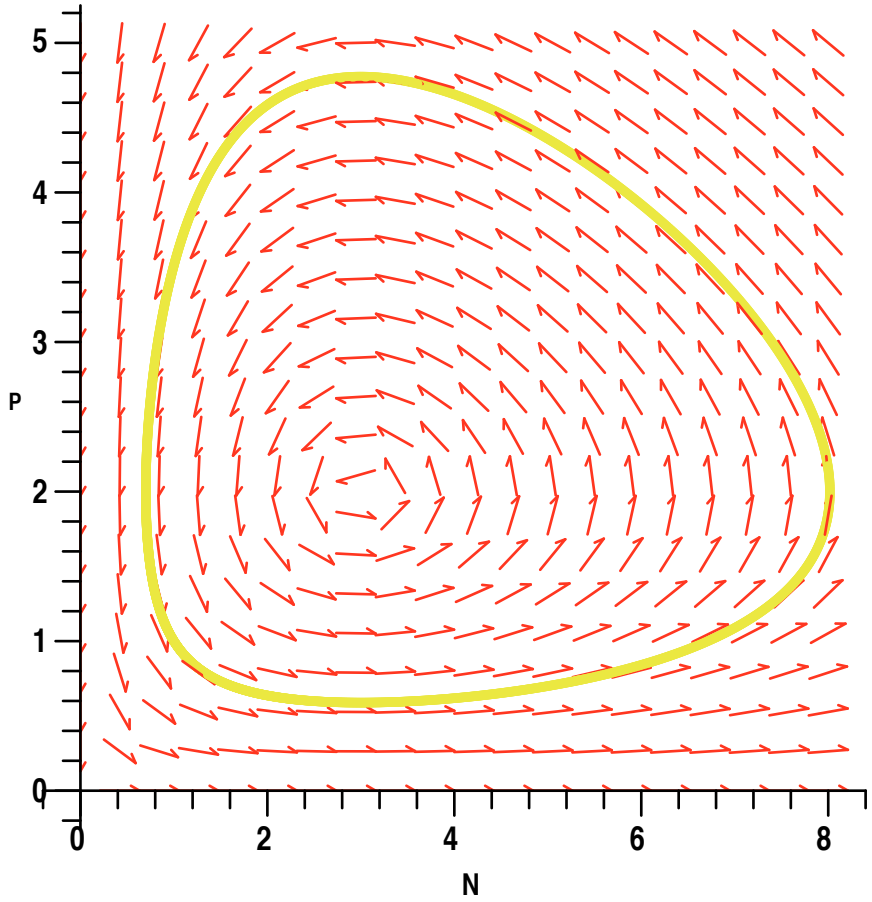
```
> with(DEtools):
> equation1 := diff(N(t), t) = 4*N(t)-2*N(t)*P(t);
> equation2 := diff(P(t), t) = -3*P(t)+N(t)*P(t);
```

$$equation1 := \frac{d}{dt} N(t) = 4\,N(t) - 2\,N(t)\,P(t)$$

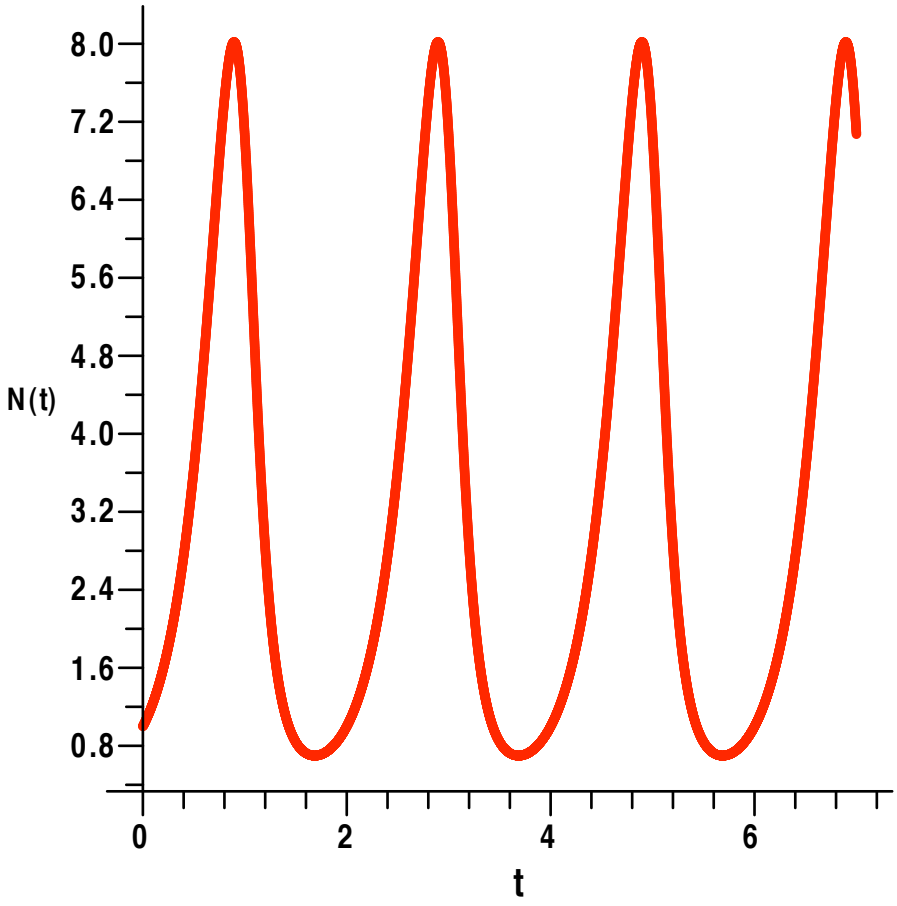
$$equation2 := \frac{d}{dt} P(t) = -3\,P(t) + N(t)\,P(t) \qquad (1)$$

```
> DEplot({equation1, equation2}, # Les equations du systeme
        {N(t), P(t)},           # Les variables en abscisse et
  ordonnee
        t = 0 .. 2,             # L'intervalle de temps
        N = 0 .. 8,             # L'echelle en abcsisses
        P = 0 .. 5,             # L'echelle en ordonnees
        [[N(0) = 1, P(0) = 1]], # La condition initiale
        stepsize = 0.1e-2);     # Le pas h
```



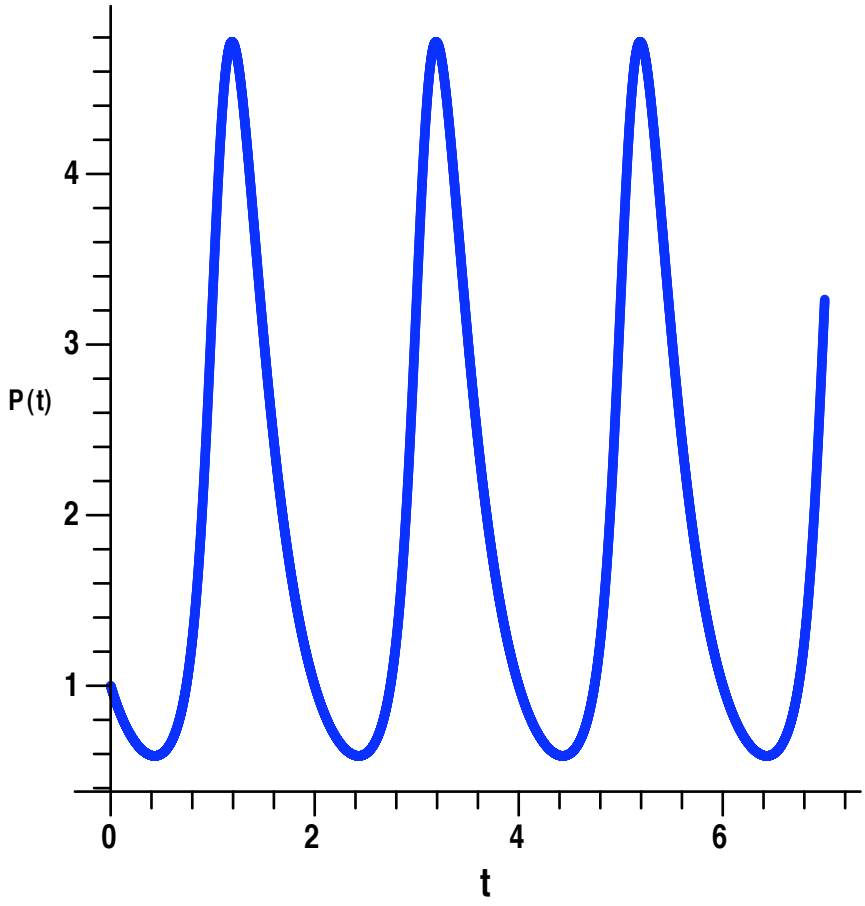

```
> DEplot({equation1, equation2},       # Les equations du systeme
```

```
        {N(t), P(t)},                    # Les variables en abscisse
et ordonnee
        t = 0 .. 7,                      # L'intervalle de temps,
l'echelle en ordonnees sera automatique
        [[N(0) = 1, P(0) = 1]],          # La condition initiale
        scene=[t,N(t)],                  # Les variables en abscisse
et ordonnee
        stepsize = 0.1e-2,               # Le pas h
        color=yellow, linecolor=red); # Les couleurs marchent mal
dans cette version
```

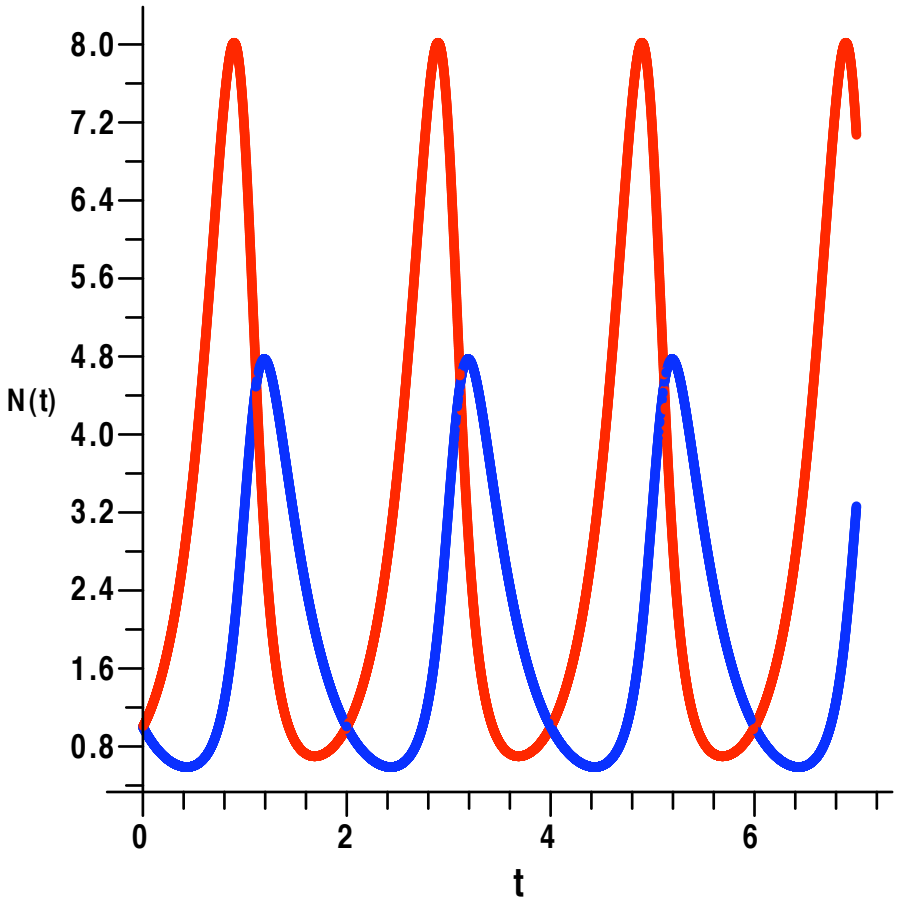



```
> DEplot({equation1, equation2}, # Les equations du systeme
        {N(t), P(t)},            # Les variables en abscisse et
ordonnee
        t = 0 .. 7,              # L'intervalle de temps
        [[N(0) = 1, P(0) = 1]], # La condition initiale
        scene=[t,P(t)],          # Les variables en abscisse et
ordonnee
        stepsize = 0.1e-2,       # Le pas h
```

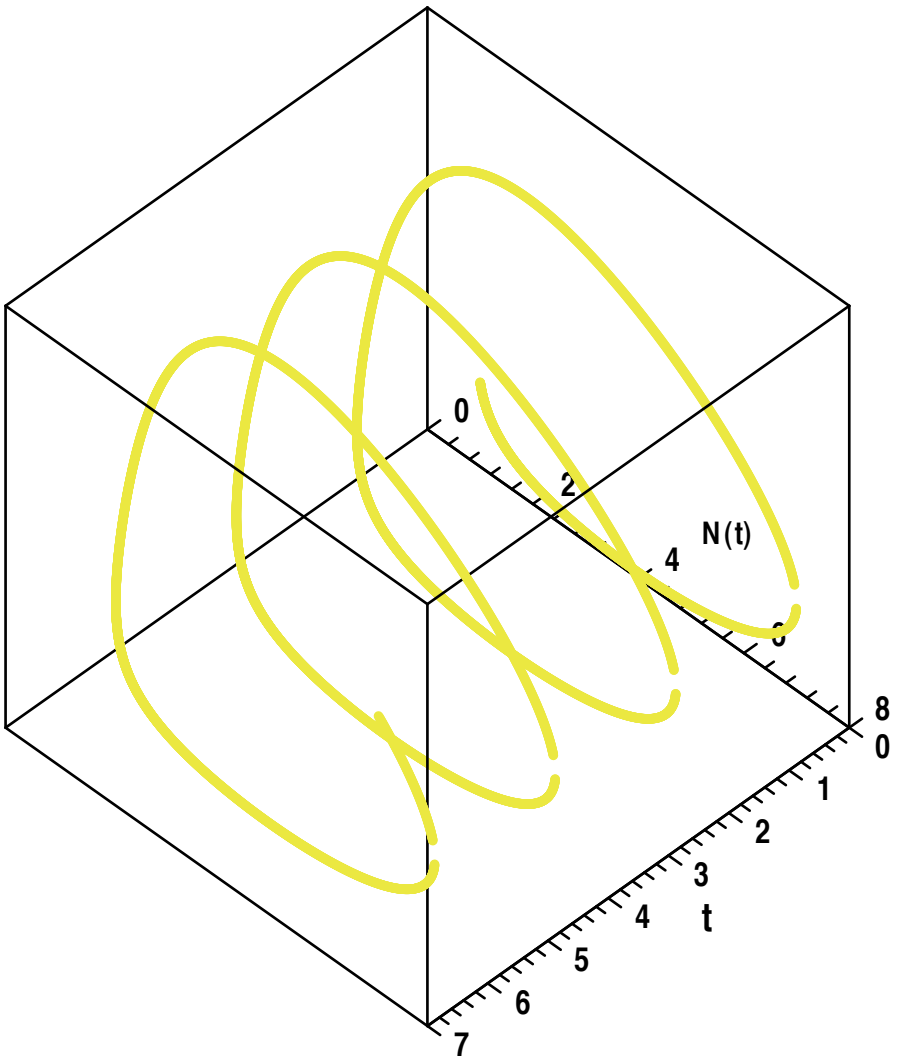
```
color=yellow, linecolor=blue);
```




```
> Nplot:=DEplot({equation1, equation2}, {N(t), P(t)}, t = 0 .. 7, [
  [N(0) = 1, P(0) = 1]], scene=[t,N(t)], stepsize = 0.1e-2, color=
  yellow, linecolor=red):
> Pplot:=DEplot({equation1, equation2}, {N(t), P(t)}, t = 0 .. 7, [
  [N(0) = 1, P(0) = 1]], scene=[t,P(t)], stepsize = 0.1e-2, color=
  yellow, linecolor=blue):
> plots[display](Nplot,Pplot);
```




```
> DEplot3d({equation1, equation2}, # Les equations du systeme
          {N(t), P(t)},           # Les variables en abscisse et
  ordonnee
          t = 0 .. 7,             # L'intervalle de temps
          N = 0 .. 8,             # L'intervalle concernant N
          P = 0 .. 5,             # L'intervalle concernant P
          [[N(0) = 1, P(0) = 1]], # La condition initiale
          stepsize = 0.1e-2);     # Le pas h
```


0
2
N(t)
4
8
0
1
2
3
4
t
5
6
7

>