

```

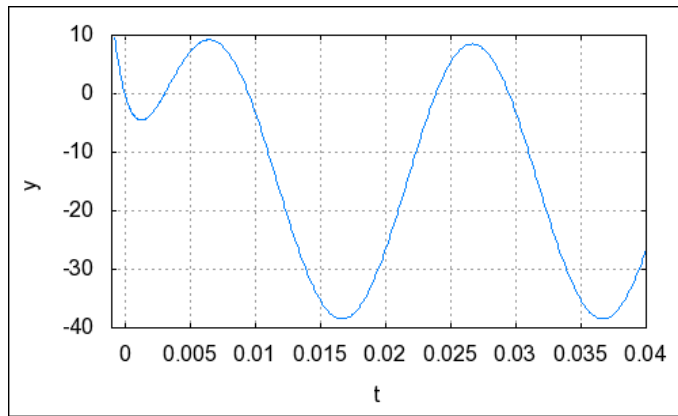
(%i52) w:2*%pi*50;
      R:12;
      L:22*10^-3;
      z2:R^2+(w*L)^2;
      Vm:230*sqrt(2);
      E:180;
      a:0*(%pi/180);
      V(t):=Vm*sin(w*t+a);
      C1:Vm/z2*(L*w*cos(a)-R*sin(a))+E/R,numer;
      C2:Vm/z2*(R*sin(a)-L*w*cos(a)),numer;
      C3:Vm/z2*(R*cos(a)+L*w*sin(a)),numer;

(%o52) 100  $\pi$ 
(%o53) 12
(%o54)  $\frac{11}{500}$ 
(%o55)  $\frac{121 \pi^2}{25} + 144$ 
(%o56) 115  $2^{\frac{3}{2}}$ 
(%o57) 180
(%o58) 0
(%o59)  $V(t) := Vm \sin(w t + a)$ 
(%o60) 26.722958931405
(%o61) - 11.722958931405
(%o62) 20.35382030832425

(%i63) i(t):=C1*%e^(-R/L*t)+C2*cos(w*t)+C3*sin(w*t)-(E/R);
      wxplot2d([i(t),V(t)], [t,-0.001,0.04], [y,-40,10], [gnuplot_preamble, "set grid"]);

(%o63)  $i(t) := C1 e^{\frac{-R}{L} t} + C2 \cos(w t) + C3 \sin(w t) - \frac{E}{R}$  plot2d : some values were clipped. plot2d :
some values were clipped.

```



(%t64)

(%o64)

--> `kill(all);`