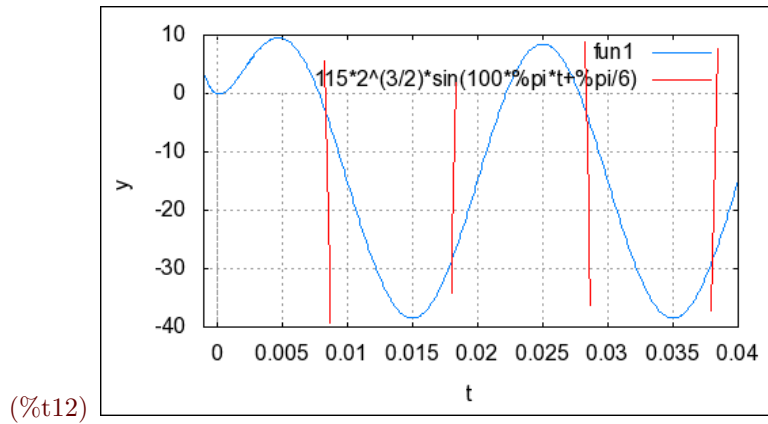


```
(%i1) w:2*pi*50;
      R:12;
      L:22*10^-3;
      Vm:230*sqrt(2);
      E:180;
      a:30*(%pi/180);
      V(t):=Vm*sin(w*t+a);
      C1:((Vm/L*1/((R/L)^2+w^2))*(w*cos(a)-(R/L)*sin(a))+E/R),numer;
      C2:(Vm/L*1/((R/L)^2+w^2)*((R/L)*sin(a)-w*cos(a))),numer;
      C3:(Vm/L*1/((R/L)^2+w^2)*((R/L)*cos(a)+w*sin(a))),numer;

(%o1) 100  $\pi$ 
(%o2) 12
(%o3)  $\frac{11}{500}$ 
(%o4)  $115 \cdot 2^{\frac{3}{2}}$ 
(%o5) 180
(%o6)  $\frac{\pi}{6}$ 
(%o7)  $V(t) := Vm \sin(wt + a)$ 
(%o8) 14.97547008795629
(%o9) 0.024529912043714
(%o10) 23.48840491677491

(%i11) 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"]);

(%o11)  $i(t) := C1 e^{-\frac{R}{L}t} + C2 \cos(wt) + C3 \sin(wt) - \frac{E}{R}$  plot2d : some values were clipped.
```



(%o12)

--> kill(all);