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dgl.py

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```
# Euler Iteration der DGL  $d^2x/dt^2 = f(x, dx/dt, t)$ 
from math import *

def f(x,v,t):
    return -4*x - 4*v*abs(v)

t = 0 # Anfangszeit
dt = 0.01
x = 1 # Anfangswert
v = 0 # Anfangsgeschwindigkeit

while( t<20 ):
    v = v + f(x,v,t)*dt
    x = x + v*dt
    t = t + dt
    print( t, x, v)
```