Oscillatory differential equation solution:

ky´´ + Ty´ + Ly = Tx

First, we solve homogeneous equation: ky´´ + Ty´ + Ly = 0.

We solve quadratic equation: kt2 + Tt + L = 0,

there are 3 cases for t1, t2.

1. t1 = t2 = t are both equal real numbers, :

2. t1 t2 are both different real numbers:

3. t1 t2 are both complex conjugate numbers: , here a = t and .

Now, for ky´´ + Ty´ + Ly = Tx

for