3b average $\sum$ TWID digits $\approx 5.55\overline{5}$

in python make a Letter → # map

"I" → 9 ... etc

$\alpha \approx 0.63\overline{3}$

$\beta \approx 0.53\overline{3}$

$\gamma = 0.5$

[make system of 3 first order ODE's]

↓

(system of eqn's)

let $h = 0.1$?

$\frac{dy}{dt} = y' \quad \frac{dy'}{dt} = y'' \quad \frac{dy''}{dt} = \cos(3t) - \alpha y'' - \beta y y''$

let $u = \begin{bmatrix} y \\ y' \\ y'' \end{bmatrix}$ compute k_{1-4}

$k_1 = h \times f(t, u)$

$k_2 = h \times f\left(t + \frac{h}{2}, u + \frac{1}{2}k_1\right)$

$k_3 = h \times f\left(t + \frac{h}{2}, u + \frac{1}{2}k_2\right)$

$k_4 = h \times f(t + h, u + k_3)$

$u_{new} = u + \frac{1}{6}(k_1 + 2k_2 + 2k_3 + k_4)$