appVersion(4) = "0.99.6884.37264"

$$f(x) := x^2 \cdot \cos\left(x^2\right) - 2 \cdot \ln(x) + 3$$

$D(x, y) := [f(x)]$ $a := 1$ $b := 5$ $N := 100$

$I_1 := \text{rkfixed}([0], a, b, N-1, D)$

$I_2 := \text{Rkadapt}([0], a, b, N-1, D)$

$$I(u) := \int_a^u f(x)\,dx$$

$t := I_{1\,[1..N]\,1}$ $y := \overrightarrow{I(t)}$

Intel ODE Solvers Library:

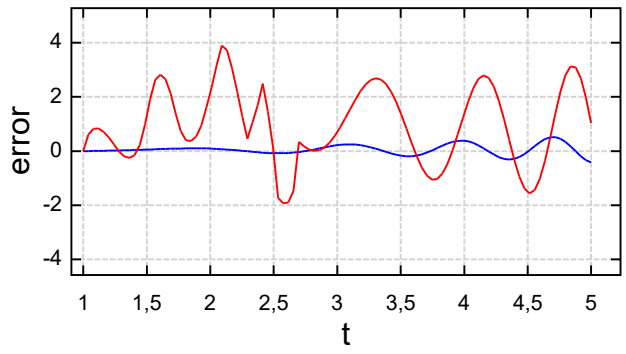
$I_3 := \text{rkm9mka}([0], a, b, N-1, D)$ $I_6 := \text{mk52lfa}([0], a, b, N-1, D)$

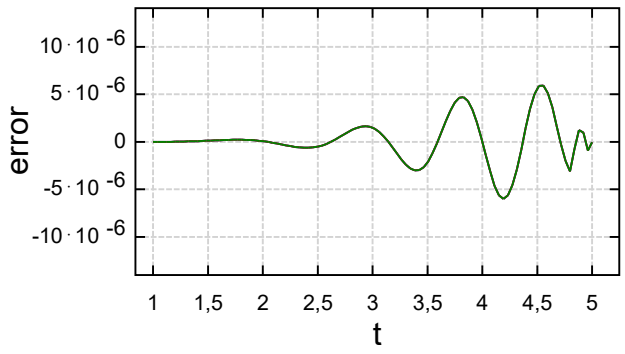
$I_4 := \text{rkm9mkn}([0], a, b, N-1, D)$ $I_7 := \text{mk52lfn}([0], a, b, N-1, D)$

$I_5 := \text{rkm9st}([0], a, b, N-1, D)$

$err_1 := I_{1\,[1..N]\,2} - y$ $err_3 := I_{3\,[1..N]\,2} - y$ $err_5 := I_{5\,[1..N]\,2} - y$ $err_7 := I_{7\,[1..N]\,2} - y$

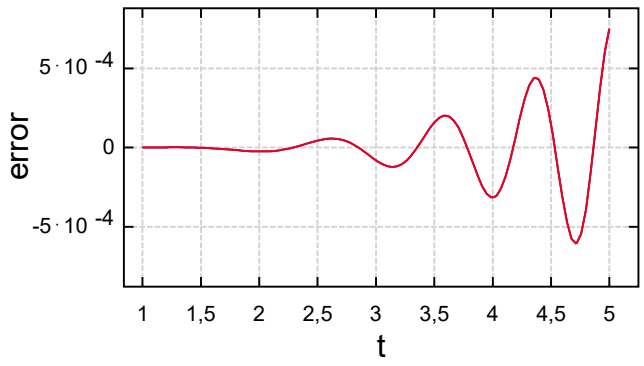
$err_2 := I_{2\,[1..N]\,2} - y$ $err_4 := I_{4\,[1..N]\,2} - y$ $err_6 := I_{6\,[1..N]\,2} - y$

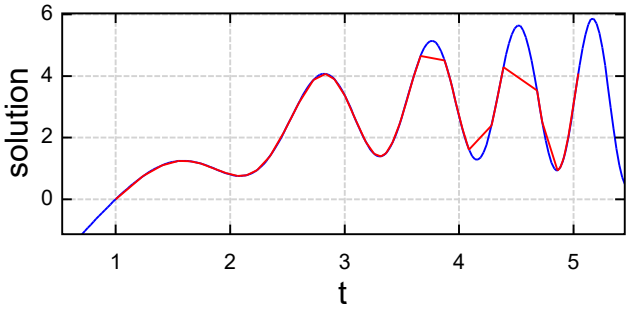




$\begin{cases} \text{augment}(t, err_1) \\ \text{augment}(t, err_2) \end{cases}$

$\begin{cases} \text{augment}(t, err_3) \\ \text{augment}(t, err_4) \\ \text{augment}(t, err_5) \end{cases}$





$\begin{cases} \text{augment}(t, err_6) \\ \text{augment}(t, err_7) \end{cases}$

$\begin{cases} I(u) \\ I_{2\,[1..N]\,\begin{bmatrix} 1 \\ 2 \end{bmatrix}} \end{cases}$