$m := 1$

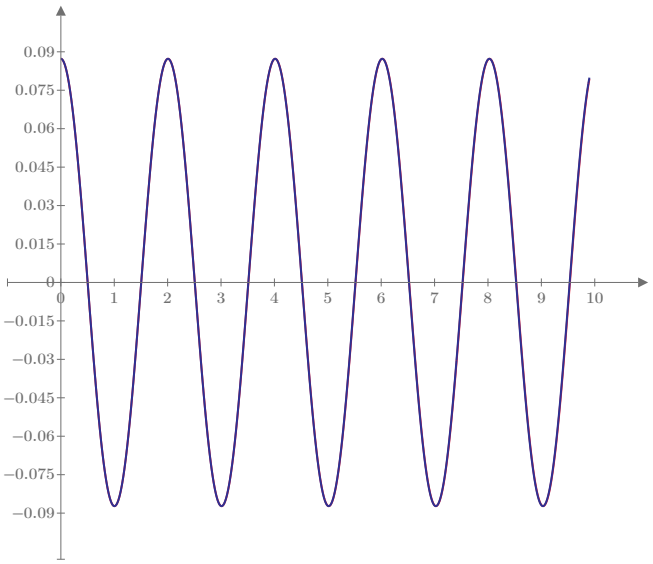
$l := 1$ $\quad v_0 := 2 \cdot \sqrt{g \cdot l}$ $\quad \varphi_0 := 5 \cdot \frac{\pi}{180}$ $\quad a := l$ $\quad g := 9.80665$ $\quad k := 0.5$ $\quad v_0 := 0$ $\quad y := \begin{bmatrix} v_0 \\ \varphi_0 \end{bmatrix}$ $\quad w_0 :=$

$$D(t, y) := \begin{bmatrix} -{w_0}^2 \cdot \sin\left(y_1\right) - k \cdot y_0 + a \cdot \sin\left(w_1 \cdot t\right) \\ y_0 \end{bmatrix}$$

$$Z := \text{rkfixed}\left(y, 0, 9.9, 2000, D\right)$$

$$D2(t, y) := \begin{bmatrix} -{w_0}^2 \cdot y_1 - k \cdot y_0 + a \cdot \sin\left(w_1 \cdot t\right) \\ y_0 \end{bmatrix}$$

$Z2 := \text{rkfixed}\left(y, 0, 9.9\right.$



$\left(Z^{\langle 0 \rangle}\right)_i$

$\left(Z2^{\langle 0 \rangle}\right)_i$

$\left(Z^{\langle 2 \rangle}\right)_i$

$\left(Z2^{\langle 2 \rangle}\right)_i$