

$$m:=1$$

$$l:=1 \qquad v_0:=2\cdot \sqrt{g\cdot l}$$

$$g:=9.80665$$

$$a:=l \qquad \boxed{v_0}:=0$$

$$\boxed{k}:=0.3$$

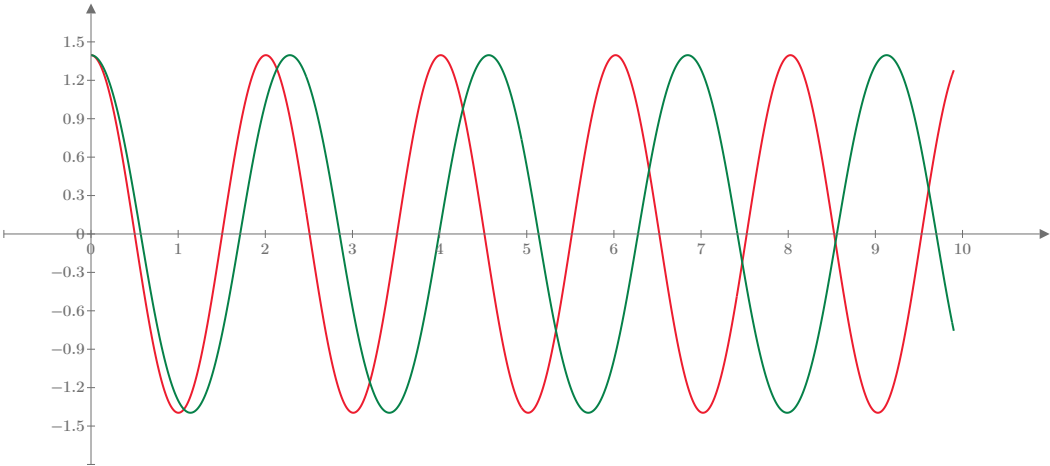
$$w_0:=$$

$$\varphi_0:=\frac{\pi}{180}\cdot 80$$

$$y:=\begin{bmatrix} v_0 \\ \varphi_0 \end{bmatrix}$$

$$D1(t,y):=\begin{bmatrix} -w_0^2\cdot \sin\left(y_1\right)-k\cdot y_0+a\cdot \sin\left(w_1\cdot t\right) \\ y_0 \end{bmatrix} \qquad Z1:=\text{rkfixed}(\,$$

$$D2(t,y):=\begin{bmatrix} -w_0^2\cdot y_1-k\cdot y_0 \\ y_0 \end{bmatrix} \qquad Z2:=\text{rkfixed}(\,$$



$$\frac{Z2^{(2)}}{Z1^{(2)}}$$

$$\frac{Z2^{(0)}}{Z1^{(0)}}$$