appVersion(4) = "1.0.8348.30405"

$\Delta x_{21} := x2(t) - x1(t)$ $\Delta x_{12} := -\Delta x_{21}$ $\Delta y_{21} := y2(t) - y1(t)$ $\Delta y_{12} := -\Delta y_{21}$

$\Delta x_{31} := x3(t) - x1(t)$ $\Delta x_{13} := -\Delta x_{31}$ $\Delta y_{31} := y3(t) - y1(t)$ $\Delta y_{13} := -\Delta y_{31}$

$\Delta x_{32} := x3(t) - x2(t)$ $\Delta x_{23} := -\Delta x_{32}$ $\Delta y_{32} := y3(t) - y2(t)$ $\Delta y_{23} := -\Delta y_{32}$

$F(n\#, u\#, v\#) :=$

$s := \text{var2str}\left(\dfrac{G \cdot m_u \cdot \Delta n_{uv}}{\sqrt{\Delta x_{uv}^{\,2} + \Delta y_{uv}^{\,2}}^{\,3}}\right)$

$s := \text{strrep}(s, \text{num2str}(u), \text{num2str}(u\#))$

$s := \text{strrep}(s, \text{num2str}(v), \text{num2str}(v\#))$

$\text{str2num}(\text{strrep}(s, \text{num2str}(n), \text{num2str}(n\#)))$

$\begin{bmatrix} x1(t) & y1(t) \\ x2(t) & y2(t) \\ x3(t) & y3(t) \end{bmatrix}$ funvec

$G := 1$ $m_1 := 30$ $m_2 := 2$ $m_3 := 0.5$ $t_{end} := 1$

$x1(0) = 0$ $x1'(0) = -1$ $x2(0) = -3$ $x2'(0) = 1$ $x3(0) = -3.1$ $x3'(0) = 2$

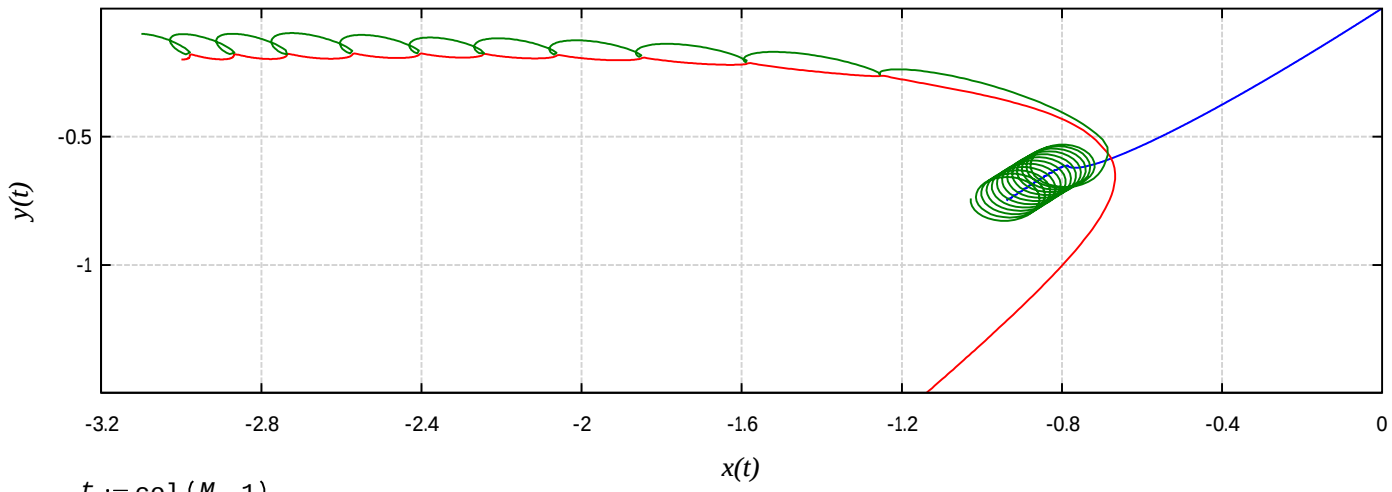
$y1(0) = 0$ $y1'(0) = -1$ $y2(0) = -0.2$ $y2'(0) = 0$ $y3(0) = -0.1$ $y3'(0) = 0$

$x1''(t) = F(x, 2, 1) + F(x, 3, 1)$ $y1''(t) = F(y, 2, 1) + F(y, 3, 1)$

$x2''(t) = F(x, 1, 2) + F(x, 3, 2)$ $y2''(t) = F(y, 1, 2) + F(y, 3, 2)$

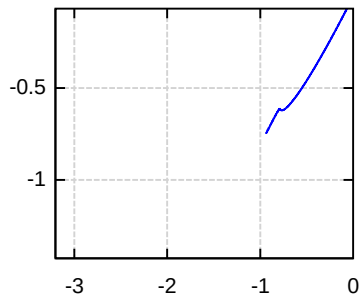
$x3''(t) = F(x, 1, 3) + F(x, 2, 3)$ $y3''(t) = F(y, 1, 3) + F(y, 2, 3)$

$M := \text{Rkadapt}(funvec, t_{end}, 1100)$



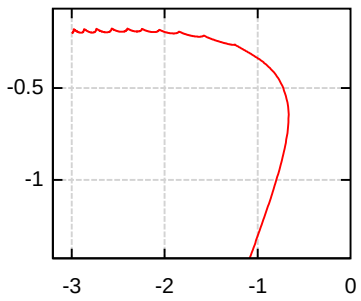
$t := \text{col}(M, 1)$

$m_1 = 30$



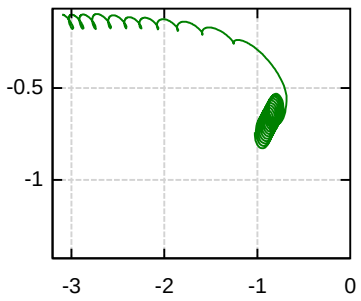
$\begin{bmatrix} x1(t) \\ y1(t) \end{bmatrix}$

$m_2 = 2$



$\begin{bmatrix} x2(t) \\ y2(t) \end{bmatrix}$

$m_3 = 0.5$



$\begin{bmatrix} x3(t) \\ y3(t) \end{bmatrix}$